

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

Road No./County:

United States Route (US) 36 and Raider Road, Henry

Designation Number(s):

2000152

Project
Description/Termini:

Intersection improvement project at US 36 and Raider Road, in Henry County, Indiana. The project will extend from 0.07 mile west of Raider Road to 0.08 mile east of Raider Road, and from 0.08 mile south of US 36 to 0.06 mile north of US 36.

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


Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

 12/29/2023

INDOT DE Initials and Date

N/A

INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Name and Organization of CE/EA Preparer:

Chad Kelly, Kaskaskia Engineering Group, LLC

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Part I – Public Involvement

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

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

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

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

Notice of Survey letters were mailed to potentially affected property owners near the project area on December 16, 2021, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Survey letter is included in Appendix G, page 1.

Pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4), the public will be provided an opportunity to comment on FHWA's finding of "No Historic Properties Affected". Upon release of the CE for public involvement, a legal advertisement will be placed in a local publication soliciting public input on FHWA's Section 106 effects finding. Comments from the public will be accepted for 30 days following the publication of the notice. If any substantive comments are received during this period, the appropriate Section 106 documents will be revised. The Cultural Resources section (Section D below) will be revised following the comment period.

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. INDOT has decided to forgo the offering of a public hearing and will hold a public hearing for this project. A legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

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

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

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

Sponsor of the Project: Indiana Department of Transportation (INDOT) INDOT District: GreenfieldLocal Name of the Facility: US 36 and Raider RoadFunding Source (mark all that apply): Federal ☒ State ☒ Local ☐ Other* ☐

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

PURPOSE AND NEED:

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

Per the November 12, 2019, Engineering Assessment Report, (Appendix I, pages 1 to 32), the need for this project is due to the above average crash severity at the existing intersection. Between 2016-2018, there were 13 crashes at the US 36 and Raider Road intersection with ten crashes resulting in injury (six incapacitating and four non-incapacitating). Per RoadHAT 3.0 analysis (INDOT traffic engineering safety modeling software) of 2016-2018 crash data, the most recent data available at the time of this analysis, the index of crash frequency (ICF) is 1.61 (well above average) and the index of crash cost (ICC) is 2.40. These indices compare the crash cost and crash frequency for this intersection to intersections with similar volumes, roadway classifications, and control type throughout Indiana. The ICF and ICC exceed the threshold of 1.00 set by INDOT's Office of Traffic Safety, flagging the intersection as a safety concern.

The purpose of the project is to reduce crash potential, improve the ICF and ICC to below 1.00, and provide a long-term solution to ensure safe and sufficient operation of the intersection.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Henry Municipality: GreenfieldLimits of Proposed Work: The project will occur at the intersection of US 36 and Raider Road, extending from 0.07 mile west of Raider Road to 0.08 mile east of Raider Road, and from 0.08 mile south of US 36 to 0.06 mile north of US 36.Total Work Length: 0.29 Mile(s) Total Work Area: 1.75 Acre(s)Is an Interstate Access Document (IAD)¹ required?

If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?

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

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

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

The INDOT and the Federal Highway Administration (FHWA) intend to proceed with this intersection improvement project.

The project is located at the intersection of US 36 and Raider Road, approximately 0.05 mile west of reference post 100 in Sections 17 and 20, Township 18 North, Range 9 East, Fall Creek Township, Henry County, Indiana (Appendix B, page 1).

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US 36 and Raider Road are two-lane rural Major Collectors. The existing US 36 and Raider Road cross sections consist of one 12-foot lane in each direction with 5-foot aggregate shoulders. The project is located in a rural area consisting of predominantly agricultural land with forested tracts. The northeast and northwest quadrants of the intersection include single-family residences with various out-buildings. Further adjacent to the northeast of the residence in the northeast quadrant is Shenandoah school complex, which includes the High School, Middle School, and Elementary School and associated athletic fields and parking. Per the November 12, 2019, Engineering Assessment Report, the intersection experiences elevated crash rates with a pattern of severe left turn and right-angle crashes. Crash data from 2016 to 2018 was analyzed at this intersection. During this time period, there were 13 crashes, of which, ten of these crashes resulted in injury, and of those six were incapacitating, and four were non-incapacitating (Appendix I, page 23). The remaining three crashes resulted in property damage only. This resulted in the RoadHAT analysis and the aforementioned ICF value of 1.61 and ICC value of 2.40 in the purpose and need section.

The preferred alternative for this project will convert the existing intersection into a single lane roundabout. The approach alignments will be curved to facilitate traffic calming approaching the circulatory roadway. Proposed roadway elements include 12-foot travel lanes with a mix of open and curbed shoulders. A central island and truck apron will be provided, as well as exterior truck aprons to facilitate turning movements. Additionally, drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Intersection improvements will also include new lighting, pavement markings, signage, and landscaping to better delineate the revised approaches at the intersection. The project will require approximately 1.75 acres of permanent right-of-way (ROW), and approximately 0.12 acre of temporary ROW. Anticipated impacts include tree removal affecting terrestrial habitat. Since the project will disturb at least one acre of soil, a Construction Stormwater General Permit (CSGP) will be required. Every effort to avoid, minimize, and/or mitigate project impacts will be made. Preliminary project plans are included in Appendix B (pages 14 to 41). Please note, as project design advanced, it has been identified that utility relocation may be required and reevaluation of any affected areas will be documented in the final environmental document.

The proposed maintenance of traffic (MOT) will include a full closure of US 36 and Raider Road when school is not in session, utilizing a state detour (Appendix B, pages 20 to 21). The MOT for the project is discussed in further detail in the MOT During Construction section of this document.

The project will reduce crash potential, improve the ICF and ICC to below 1.00, and provide a long-term solution to ensure safe and efficient operation of the intersection. This improves overall safety in the area and meets the purpose and need.

The construction limits extend from approximately 0.07 mile west of Raider Road to 0.08 mile east of Raider Road, and from 0.08 mile south of US 36 to 0.06 mile north of US 36, which are the logical termini for the project since these are the rational end points of the transportation improvement and subsequent review of its environmental impacts. This project demonstrates independent utility because it will improve the intersection as an independent project and does not depend on any other planned projects.

OTHER ALTERNATIVES CONSIDERED:

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

Traffic Signal: Installation of a traffic signal was considered. This alternative will require dedicated left turn lanes at all approaches; however, the volumes at this intersection do not meet any of the traffic signal warrants from the Manual on Uniform Traffic Control Devices (MUTCD). This alternative theoretically reduces total crashes, but results in an increase in rear end crashes, and the predominant pattern of left turn crashes remains. This alternative will not address the purpose and need. Therefore, this alternative was discarded from further consideration.

No Build: The no build alternative does not address the safety concerns of the intersection. If no action is taken, the intersection safety issues will persist. The severe right angle and left turn crashes will not be addressed with the no build alternative. This would not address the purpose and need. Therefore, this alternative was discarded from further consideration.

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

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

X

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

ROADWAY CHARACTER:

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

Name of Roadway US 36
 Functional Classification: Major Collector
 Current ADT: 4,360 (2025) Design Year ADT: 4,811 (2045)
 Design Hour Volume (DHV): 490 Truck Percentage (%) 16
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	2 through lanes		2 through lanes	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	5	ft.	4	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: ☐ Urban ☐ Suburban ☒ Rural
 Topography: ☒ Level ☐ Rolling ☐ Hilly

Name of Roadway Raider Road
 Functional Classification: Major Collector
 Current ADT: 1,909 (2025) Design Year ADT: 1,947 (2045)
 Design Hour Volume (DHV): 214 Truck Percentage (%) 50
 Designed Speed (mph): 55 Legal Speed (mph): 55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	2 through lanes		2 through lanes	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	5	ft.	4	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: ☐ Urban ☐ Suburban ☒ Rural
 Topography: ☒ Level ☐ Rolling ☐ Hilly

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BRIDGES AND/OR SMALL STRUCTURE(S):

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

Structure/NBI Number(s): _____ Sufficiency Rating: _____
(Rating, Source of Information)

	Existing	Proposed
Bridge/Structure Type:		
Number of Spans:		
Weight Restrictions:	ton	ton
Height Restrictions:	ft.	ft.
Curb to Curb Width:	ft.	ft.
Outside to Outside Width:	ft.	ft.
Shoulder Width:	ft.	ft.

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

Adjacent to the west of the project area on US 36 is a single-span concrete bridge (Str. 036-33-06618; NBI 011740) over Deer Creek that is 84 feet in length, with an out-to-out width of 46.5 feet. Per a review of the INDOT Historic Bridges Inventory, this structure is not listed as a select or non-select historic structure.

Adjacent to the south of the project area on Raider Road is culvert CLV 036-033-100.21, a plastic liner round culvert with a pipe width of 15 inches.

No work associated with the bridge, or the culvert, is anticipated as part of this project.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?		X
Is a temporary roadway proposed?		X
Will the project involve the use of a detour or require a ramp closure? (describe below)	X	
Provisions will be made for access by local traffic and so posted.	X	
Provisions will be made for through-traffic dependent businesses.	X	
Provisions will be made to accommodate any local special events or festivals.	X	
Will the proposed MOT substantially change the environmental consequences of the action?		X
Is there substantial controversy associated with the proposed method for MOT?		X
Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below)		X
Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below).		X

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

The MOT for the project will require a full closure of US 36 with a detour, occurring when school is not in session. The detour includes SR 109, I-69, SR 67, and SR 3, adding nearly 20.8 miles of commuter travel. Additionally, there will be a full closure of Raider Road with a detour, utilizing West County Road 400 North, North County Road 850 West, and West County Road 575 North. This detour of Raider Road will add nearly 4.1 miles of commuter travel. No pedestrian MOT is planned due to the absence of existing pedestrian facilities at the intersection. The detours will remain for the duration of construction for the project, approximately one construction season. MOT plans are included in Appendix B, pages 20 to 21.

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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.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 457,050.87 (FY 2022-2024) Right-of-Way: \$ 35,000 (FY 2024) Construction: \$ 2,221,733.78 (FY 2025)

Anticipated Start Date of Construction: Summer 2025

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.598	0.123
Commercial	0	0
Agricultural	1.152	0
Forest	0	0
Wetlands	0	0
Other:	0	0
Other:	0	0
Other:	0	0
Other:	0	0
TOTAL	1.75	0.12

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

The existing ROW is approximately 40 feet on each side of centerline on US 36 and 10 feet each side of centerline on Raider Road and consists of mowed grasses and scrub shrub typical of being adjacent to a rural roadway. Areas of proposed ROW include residential acreage at the northwest and northeast quadrants of the intersection, and agricultural acreage at the southwest and southeast quadrants of the intersection.

The project requires approximately 1.75 acres of permanent ROW consisting of residential and forested land in the northwest quadrant of US 36 and Raider Road, residential and mowed grasses in the northeast quadrant of US 36 and Raider Road, and roadside vegetation in the southwest and southeast quadrants of US 36 and Raider Road. The project will also require 0.12 acre of temporary ROW consisting of mowed vegetation associated with residential land in the northeast quadrant. Required ROW amounts are subject to change, due to potential further design changes for utility relocations. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline. ROW locations are denoted in the project plans in Appendix B (pages 14 to 41).

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

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

SECTION A - EARLY COORDINATION:

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

Early coordination letters were sent on March 15, 2023 (Appendix C, pages 1 to 2).

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Agency	Date Sent	Response Date	Appendix
Federal Highway Administration (FHWA)	March 15, 2023	No response received	N/A
Indiana Geological and Water Survey (IGWS) (Automated Response)	March 15, 2023	March 15, 2023	Appendix C, pages 3 to 4
U.S. Department of Housing and Urban Development (HUD)	March 15, 2023	No response received	N/A
Natural Resources Conservation Service (NRCS)	February 1, 2023	No response received	N/A
Indiana Department of Environmental Management (IDEM) – Wetlands and Stormwater Programs	March 15, 2023	No response received	N/A
IDEM - Groundwater Section	March 15, 2023	March 15, 2023	Appendix C, pages 5 to 6
Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW)	March 15, 2023	April 13, 2023	Appendix C, pages 7 to 8
National Park Service (NPS)	March 15, 2023	No response received	N/A
INDOT Greenfield Environmental Section Manager (Supervisor)	March 15, 2023	No response received	N/A
INDOT Project Manager	March 15, 2023	No response received	N/A
U.S. Army Corps of Engineers (USACE)	March 15, 2023	No response received	N/A
Henry County Planning Commission - Floodplain and Zoning Administrator	March 15, 2023	No response received	N/A
Henry County Council – President	March 15, 2023	No response received	N/A
Henry County Emergency Management – EMA Director	March 15, 2023	No response received	N/A
Henry County Highway Department – Highway Engineer	March 15, 2023	No response received	N/A
Henry County – Surveyor	March 15, 2023	No response received	N/A
Henry County – Sheriff	March 15, 2023	No response received	N/A
Northern District Henry County Commissioner	March 15, 2023	No response received	N/A
Shenandoah School Corporation – Superintendent	March 15, 2023	No response received	N/A
Shenandoah School Corporation – Transportation	March 15, 2023	No response received	N/A
Shenandoah High School - Principal	March 15, 2023	No response received	N/A
Shenandoah Middle School - Principal	March 15, 2023	No response received	N/A
Middletown Town Council - President	March 15, 2023	No response received	N/A
Town of Middletown – Eastern Indiana Regional Planning Commission Representative	March 15, 2023	No response received	N/A
Middletown Fire Department	March 15, 2023	No response received	N/A
Town of Sulfur Springs	March 15, 2023	No response received	N/A
Jefferson Township (Sulphur Springs) Fire Department	March 15, 2023	May 10, 2023	Appendix C, pages 9 to 11
Middletown Police Department	March 15, 2023	No response received	N/A
Sulphur Springs Christian Church	March 15, 22023	No response received	N/A

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White Union Christian Church	March 15, 2023	No response received	N/A
Church of God	March 15, 2023	No response received	N/A
East Elementary School – Superintendent	March 15, 2023	No response received	N/A
Fall Creek Township Trustee	March 15, 2023	No response received	N/A
Spring Valley Campground	March 15, 2023	No response received	N/A
Belgian Horse Winery	March 15, 2023	No response received	N/A

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

SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

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

Presence

X

Impacts

Yes	No
	X

Total stream(s) in project area: 356 Linear feet Total impacted stream(s): 0 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
Deer Creek	Perennial	356	0	Located under US 36, southwest to northeast, likely Water of the US (Appendix F)

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

Based on the desktop review, the aerial map of the project area, and the Red Flag Investigation (RFI) report (Appendix E), there are four streams, rivers, watercourses, or other jurisdictional features within the 0.5-mile search radius. There is one stream, river, watercourse, or other jurisdictional feature within or adjacent to the project area. That number was confirmed by the site visit on October 12-13, 2022, by Kaskaskia Engineering Group, LLC (KEG).

Deer Creek is listed as impaired for E. Coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. This is included as a firm commitment in the Environmental Commitments section of this CE document.

No Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways or National Rivers Inventory waterway are present within or adjacent to the project area.

A *Waters of the U.S. Determination Report* was initially approved by INDOT Ecology and Waterway Permitting Office (EWPO) on April 13, 2023. Due to project design changes, an updated report was approved by INDOT EWPO on December 8, 2023. Please refer to Appendix F, page 1 for the updated *Waters of the U.S. Determination Report*. It was determined that one likely perennial jurisdictional

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stream is located within the investigated area with the potential to be impacted by the project. The USACE makes all final determinations regarding jurisdiction.

Deer Creek is a perennial stream that flows beneath US 36 that eventually flows into the White River, a Section 10 Navigable River. A defined ordinary high water mark (OHWM) was observed that was approximately 17.5 feet wide and approximately 1.33 feet deep. Upstream drainage comes from agricultural fields and rural residential structures. Approximately 356 linear feet (LF) of the stream is within the investigated area. No direct or indirect impacts to Deer Creek are anticipated since the limits of construction for this project end approximately 60 feet east of the toe of slope. Therefore, no impacts are expected.

IDNR-DFW responded on April 13, 2023, with recommendations regarding riparian habitat, and excavation and erosion control standards (Appendix C, pages 7 to 8). All applicable recommendations are included in the Environmental Commitments section of this CE document.

Open Water Feature(s)

Reservoirs
Lakes
Farm Ponds
Retention/Detention Basin
Storm Water Management Facilities
Other: _____

Presence

X

Impacts

Yes	No
	X

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E), there is one open water feature within the 0.5-mile search radius. There are no open water features within or adjacent to the project area, which was confirmed by the site visit on October 12-13, 2022, by KEG.

A *Waters of the U.S. Determination Report* was approved by INDOT Ecology and Waterway Permitting Office (EWPO) on April 13, 2023. Due to project design changes, an updated report was approved by INDOT EWPO on December 8, 2023. Please refer to Appendix F, page 1 for the updated *Waters of the U.S. Determination Report*. It was determined that no jurisdictional open water features were located within the investigated area and will be impacted by the project. The USACE makes all final determinations regarding jurisdiction.

The open water feature was not within or adjacent to the project area. No direct or indirect impacts to the open water feature are anticipated. Therefore, no impacts are expected.

Wetlands

Presence

X

Impacts

Yes	No
	X

Total wetland area: _____ Acre(s) Total wetland area impacted: _____ Acre(s)

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

Wetlands (Mark all that apply)

Wetland Determination
Wetland Delineation
USACE Isolated Waters Determination

Documentation

X

ESD Approval Dates

April 13, 2023

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

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

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

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E), there are nine wetlands within the 0.5-mile search radius. There are no wetlands within or adjacent to the project area, which was confirmed by the site visit on October 12-13, 2022, by KEG.

A *Waters of the U.S. Determination Report* was approved by INDOT Ecology and Waterway Permitting Office (EWPO) on April 13, 2023. Due to project design changes, an updated report was approved by INDOT EWPO on December 8, 2023. Please refer to Appendix F, page 1 for the updated *Waters of the U.S. Determination Report*. It was determined that no jurisdictional wetlands were located within the investigated area and will be impacted by the project. The USACE makes all final determinations regarding jurisdiction.

No wetlands were identified within or adjacent to the project area. No direct or indirect impacts are anticipated to wetlands are anticipated. Therefore, no impacts are expected.

IDNR-DFW responded on April 13, 2023, with standard recommendations regarding wetland impacts (Appendix C, pages 7 to 8). All applicable recommendations are included in the Environmental Commitments section of this CE document.

Terrestrial Habitat

Presence

X

Impacts

Yes

No

X

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Total terrestrial habitat in project area: 2.45 Acre(s) Total tree clearing: 0.27 Acre(s)

Describe types of terrestrial habitat (i.e. forested, grassland, farmland, lawn, etc.) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Based on a desktop review, a site visit on October 12-13, 2022, by KEG, and the aerial map of the project area (Appendix B, page 1), there are agricultural fields, shrubs, and trees, typical of a rural setting, surrounding the project area. The dominant species include Tall fescue (*Festuca arundinaces*), Kentucky bluegrass (*Poa pratensis*), amur honeysuckle (*Lonicera maackii*), black walnut (*Juglans nigra*), red mulberry (*Morus rubra*), European ash (*Fraxinus excelsior*), white mulberry (*Morus alba*), and giant fox tail (*Setaria faberi*). Of the total 2.45 acres of terrestrial habitat in the project area, approximately 1.75 acre of terrestrial habitat will be disturbed due to construction of the single lane roundabout. Disturbed areas will be re-seeded post-construction to return the site as close as possible to pre-construction conditions. An estimated three trees (0.27 acre), two near the northeast corner of the project area and one near the southeast corner of the project area, will be removed. The dominate species of trees to be removed include black walnut (*Juglans nigra*) and European ash (*Fraxinus excelsior*). Avoidance alternatives would not be practical as the project limits have been constrained to the smallest area possible to complete the project. Mitigation is not anticipated.

The IDNR-DFW responded on April 13, 2023, regarding tree removal dates, revegetation, and erosion control (Appendix C, pages 7 to 8). All applicable recommendations are included in the Environmental Commitments section of this CE document.

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Protected Species

Federally Listed Bats

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

Yes	No
X	

Determination Received for Listed Bats from USFWS: NE ☐ NLAA ☒ LAA ☐

Other Species not included in IPaC

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

Yes	No
	X
	X

Migratory Birds

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

Yes	No
	X
	X

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

Based on a desktop review and the RFI report (Appendix E), completed by KEG on July 19, 2022, the IDNR Henry County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated April 13, 2023 (Appendix C, pages 7 to 8), the Natural Heritage Program's Database has been checked and 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. An INDOT 0.5-mile bat review occurred on July 7, 2022, and did not indicate the presence of endangered bat species in or within the project area.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 12 to 19). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional listed species were generated in the IPaC species list other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Rangewide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between the FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on November 8, 2023, and based on the responses provided, the project was found to "May Affect – Not Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C, pages 20 to 33). INDOT reviewed and verified the effect finding on November 9, 2023, 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, lighting, and tree removal Avoidance and Minimization Measures (AMMs) are applicable to this project. AMMs and/or commitments are included as firm commitments in the Environmental Commitments section of this document.

Due to a design change, project information will be resubmitted through the USFWS's IPaC portal and a new species list and effect determination key will be completed. Results of these will be provided in the final environmental document.

Geological and Mineral Resources

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

Yes	No
	X
	X
	X

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

Discuss if project is located in Potential Karst Features Area of Indiana and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Describe if any impacts will occur to any karst features. Include discussion of karst

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study/report was completed and results. (Karst investigation must comply with the current Karst MOU and coordinated and reviewed by INDOT EWPO)

Based on a desktop review and the Indiana Karst Region Map, the project is not located in the designated Indiana Karst Region as outlined in the most current *Protection of Karst Features during Project Development and Construction*. According to the topo map of the project area (Appendix B, page 1) and the RFI report (Appendix E), there are no karst features identified within or adjacent to the project area. In the early coordination response on March 15, 2023, the IGWS did not indicate that karst features exist in the project area (Appendix C, pages 3 to 4). IGWS did indicate moderate liquefaction potential, one percent annual chance flood hazard, high potential bedrock resource, low potential sand and gravel resource, and petroleum exploration wells. The RFI report identified five petroleum wells located within 0.5 mile of the project area (Appendix E). The features will not be affected because the project is not within the vicinity of these wells. Response from IGWS has been communicated with the designer on November 3, 2023. No impacts are expected.

SECTION C – OTHER RESOURCES

Drinking Water Resources

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

Presence

Impacts

Yes

No

Is the project located in the St. Joseph Sole Source Aquifer (SSA):

If Yes, is the FHWA/EPA SSA MOU Applicable?

If Yes, is a Groundwater Assessment Required?

Yes

No

	X

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

This project is located in Henry County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA/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.

In an early coordination letter dated March 15, 2023, IDEM stated the project is not located within a wellhead area (Appendix C, page 5 to 6). No impacts are expected.

The IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on October 30, 2023, by KEG. No wells are located near this project. Therefore, no impacts are expected.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by KEG on October 30, 2023, this project is not located in an Urban Area Boundary. No impacts are expected.

Based on a desktop review, a site visit on October 12-13, 2022, by KEG, and the aerial map of the project area (Appendix B, page 1), no public water systems were identified. Therefore, no impacts are expected.

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Floodplains

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

Presence

X
X

Impacts

Yes	No
X	
X	

If applicable, indicate the Floodplain Level?

Level 1 ☐ Level 2 ☐ Level 3 ☒ Level 4 ☐ Level 5 ☐

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

Based on a desktop review of The IDNR's Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) by KEG on October 3, 2023, and the RFI report, this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 12). An early coordination letter was sent on March 15, 2023, to the local Floodplain Administrator. The Floodplain Administrator did not respond within the 30-day time frame. Ditch grading at each corner of the intersection with conveyance toward the stream, curb turnouts, and catch basins will cause 0.014 acre of permanent impacts below flood elevation (BFE) and 0.024 acre of temporary impacts BFE. This project will not require a Construction in a Floodway (CIF) permit, because the work falls under the category of drainage maintenance according to coordination with INDOT Ecology and Waterway Permitting Office (EWPO). This project qualifies as Category 3 per the current INDOT CE Manual, which states the modifications to drainage structures included in this project will result in an insubstantial change in their capacity to carry flood water. This change could cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any substantial adverse impacts on the natural and beneficial floodplain values; they will not result in substantial change in flood risks or damage; and they do not have substantial potential for interruption or termination of emergency service or emergency routes; therefore, it has been determined that this encroachment is not substantial.

Farmland

Agricultural Lands
Prime Farmland (per NRCS)

Presence

X

Impacts

Yes	No
X	

Total Points (from Section VII of CPA-106/AD-1006*) _____

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

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

Based on a desktop review, a site visit on October 12-13, 2023, by KEG, and the aerial map of the project area (Appendix B, page 1), there is farmland as defined by the Farmland Protection Policy Act adjacent to the project. The project will likely convert less than 0.5 acre of farmland in the southwest and southeast quadrants of the project area. The farmland that will likely be converted to a transportation use for this project will be impacted because the roadway ROW will be expanded to address engineering design and erosion control constraints. There are no practicable avoidance alternatives that provide adequate geometrics to address current design requirements or protection from erosion control constraints. An early coordination letter was sent on March 15, 2023, to NRCS. NRCS did not respond within the 30-day time frame. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

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SECTION D – CULTURAL RESOURCES

Minor Projects PA	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
	<input type="text"/>	<input type="text"/>	<input checked="" type="checkbox"/>

Full 106 Effect Finding

No Historic Properties Affected ☒ No Adverse Effect ☐ Adverse Effect ☐

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) ☐ Archaeology ☐ NRHP Bridge(s) ☐

Documentation Prepared (mark all that apply)

APE, Eligibility and Effect Determination
800.11 Documentation
Historic Properties Report or Short Report
Archaeological Records Check and Assessment
Archaeological Phase Ia Survey Report
Archaeological Phase Ic Survey Report
Other:

☒
☒
☒
☐
☒
☐
☐

ESD Approval Date(s)

December 28, 2023
December 28, 2023
May 8, 2023

October 13, 2023

SHPO Approval Date(s)

May 30, 2023

November 1, 2023

Memorandum of Agreement (MOA)

☐

MOA Signature Dates (List all signatories)

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

Area of Potential Effects (APE): Pursuant to 36 CFR 800.16(d), the APE for aboveground resources included properties adjacent to and/or within view of the project (Appendix D, page 10). The APE for archaeology included all existing and proposed ROW (Appendix D, page 69).

Coordination with Consulting Parties: Early coordination was initiated on November 14, 2022, with a letter inviting organizations and individuals to become consulting parties (Appendix D, page 16). The Indiana State Historic Preservation Officer (SHPO) from IDNR Division of Historic Preservation (DHPA) is a designated consulting party. The following is a list of the organizations formally invited to become a consulting party (those who agreed to be consulting parties are shown in bold),

- **State Historic Preservation Officer (automatic consulting party)**
- **Delaware Tribe of Indians**
- **Eastern Shawnee Tribe of Oklahoma**
- **Miami Tribe of Oklahoma**
- Peoria Tribe of Indians of Oklahoma
- Pokagon Band of Potawatomi Indians
- Shawnee Tribe
- **Indiana Landmarks Eastern Regional Office**
- Henry County Historical Society and Museum
- Middletown/Fall Creek Township Historical Society
- Preserve Henry County, Inc.

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- Henry County Historian
- **Henry County Commissioners**
- Henry County Planning Commission
- Henry County Highway Department

The following is a summary of the comments of the consulting parties following the distribution of the early coordination materials:

- November 15, 2022: An email from a Henry County Commissioner was received regarding potential safety concerns for the project (Appendix D page 22).
- November 15, 2022: An email from another Henry County Commissioner commented on the project with displeasure and recommended using a traffic light (Appendix D, page 24).
- November 15, 2022: An email from a third Henry County Commissioner received noting displeasure with the project (Appendix D, page 26).
- November 15, 2022: The Tribal Historic Preservation Officer (THPO) of the Delaware Tribe of Indians commented that there are no known religious or culturally significant sites within the selected project area and no objections to the proposed project. The THPO also added that if any archaeological or historical materials (artifacts, subsurface features, etc.) are discovered during the implementation of this project that work in the immediate area be halted until an archaeologist can view and assess the finds. Additionally, the THPO requested that if any human remains are inadvertently discovered during the project that work will cease immediately and inform the Delaware Tribe of Indians of the discovery (Appendix D, page 28).
- November 16, 2022: An email from the Indiana Landmarks Eastern Regional Office accepted the consulting party status and commented regarding concerns related to the Fall Creek District School on the northwest corner of US 36 and Raider Road (Appendix D, page 30).
- November 18, 2022: A follow-up email from a Henry County Commissioner requesting reasoning for the project after reviewing accident report data via the Henry County Highway Superintendent (Appendix D, page 33).
- November 21, 2022: The Miami Tribe of Oklahoma THPO offered no objection to the project. The THPO requested immediate consultation if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of the project (Appendix D, page 34).
- November 30, 2022: A letter from SHPO stated that they were unaware of any additional consulting parties that should be invited to participate in the Section 106 process beyond those whom already invited. If ROW is to be taken from a potentially historic property, owners of the property should be invited as soon as possible (Appendix D, page 35).
- December 27, 2022: The Eastern Shawnee Tribe of Oklahoma THPO stated that the project proposes no adverse effect or endangerment to known sites of interest of the Eastern Shawnee Tribe of Oklahoma. Additionally, the THPO requested if the project inadvertently discovers an archaeological site or object(s) to contact the Eastern Shawnee Tribe of Oklahoma, as well as appropriate state agencies within 24 hours (Appendix D, page 37).

Archaeology: Staff for Weintraut & Associates (W&A) conducted a Phase Ia records check on January 30, 2023, and a field reconnaissance on February 8, 2023. An *Archaeology Phase Ia Reconnaissance Report (AR)* was prepared, which identified two new archaeological sites - 12HN524 and 12HN525 (Appendix D, page 68). Both sites were found to lack deposits or features with the potential to yield important features or information that would satisfy National Register eligibility. W&A recommended project clearance and no further archeological investigations necessary for the sites.

The AR was distributed to consulting parties on October 16, 2023.

On November 1, 2023, the SHPO responded to the AR with concurrence of the finding that further archaeological investigation of the portion of sites 12HN524 and 12 HN525 surveyed for the project are unlikely to produce additional important information and no further work in these areas is warranted (Appendix D, page 54). Additionally, the SHPO noted that the unsurveyed portion of the sites remain unevaluated for inclusion in the National Register and that if the project boundaries changes at the site locates, further archaeological investigation will be necessary to delineate the site

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boundaries and provide an evaluation. The SHPO also requested that the surveyed limits be clearly marked at sites 12HN524 and 12HN525 so that the unsurveyed portions of the sites are avoided by all ground-disturbing project activities. No other consulting party responses were received.

A project design change will necessitate an expansion of the project area and APE, since cultural resource efforts were initiated. Therefore, an Addendum to the AR will be prepared and included in the final approved environmental document.

Historic Properties: W&A prepared a *Historic Property Short Report (HPSR)* that determined there are no properties listed in the NRHP, and no resources were recommended eligible for listing in the NRHP for the purpose of this project.

The HPSR was distributed to consulting parties on May 8, 2023. On May 12, 2023, Indiana Landmarks responded and asked if the Fall Creek District School would be undisturbed by the project. In response, project designers stated the former school/residence will be left undisturbed. Current plans would reconstruct some of its driveway and remove a few feet of its concrete sidewalk near US 36. Additionally, permanent and temporary ROW is anticipated to be required at this property. SHPO responded on May 30, 2023, and agreed with the HPSR's conclusions and recommendations (Appendix D, page 45). No other consulting party responses were received.

The project design change that will necessitate an expansion of the project area and APE will not result in any additional property identification and evaluation; therefore, an addendum to the HPSR is not anticipated.

Documentation Finding: INDOT, acting on behalf of FHWA, issued a "No Historic Properties Affected" finding on December 28, 2023 (Appendix D, page 1).

Consulting parties were notified of the finding on December 28, 2023 (Appendix D, page 73), and provided 30 days to comment on the effect finding. This document will be revised once the comment period has been completed.

Public Involvement: Pursuant to 36 CFR 800.2(d), 800.3(e) and 800.6(a)(4), the public will be provided an opportunity to comment on FHWA's finding of "No Historic Properties Affected". Upon release of the CE for public involvement, a legal advertisement will be placed in a local publication soliciting public input on FHWA's Section 106 effects finding. Comments from the public will be accepted for 30 days following the publication of the notice. If any substantive comments are received during this period, the appropriate Section 106 documents will be revised. The Cultural Resources section will be revised following the comment period.

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

	<u>Presence</u>	<u>Use</u>	
		Yes	No
Parks and Other Recreational Land			
Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	X	<input type="checkbox"/>	X
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Evaluations</u>			
<u>Prepared</u>			
Programmatic Section 4(f)	<input type="checkbox"/>		
"De minimis" Impact	<input type="checkbox"/>		

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Individual Section 4(f)

Any exception included in 23 CFR 774.13

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

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

Based on a desktop review, the aerial map of the project area (Appendix B, page 1), and the RFI report (Appendix E), there are two potential 4(f) resources located within the 0.5 mile search radius. According to additional research and by the site visit on October 12-13, 2022, by KEG, there is one Section 4(f) resource located within or adjacent to the project area. The Shenandoah School complex, specifically the high school, includes a publicly-owned baseball field that is open for public use adjacent to the northeast quadrant of the project area. No direct or indirect impacts to the baseball field or supporting features are anticipated since the construction limits for the project are nearly 300 feet southwest. The project will not use this resource by taking permanent ROW and will not indirectly use the resource in such a way that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Access to the facility will be maintained throughout construction. Therefore, no 4(f) use is expected.

Section 6(f) Involvement

Section 6(f) Property

Presence

Use

Yes

No

☐☐☐

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

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits the 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 two properties in Henry County (Appendix I, page 33). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

Is the project in the most current STIP/TIP?

Is the project located in an MPO Area?

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

If Yes, then:

Is the project in the most current MPO TIP?

Is the project exempt from conformity?

If No, then:

Is the project in the Transportation Plan (TP)?

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

Yes

No

X

X
X

Location in STIP:

Name of MPO (if applicable):

Location in TIP (if applicable):

FY 2024-2028,
Initial, September 1, 2023

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Level of MSAT Analysis required?

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

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

This project is included in the Fiscal Year (FY) 2024-2028 Statewide Transportation Improvement Program (STIP) (Appendix H, pages 1 to 2).

This project is located in Henry County, which is currently in attainment for all criteria pollutants according to IDEM. Therefore, the conformity procedures of 40 CFR 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.

SECTION G - NOISE

Noise

Yes

No

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

Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____

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

This project is a Type III project. In accordance with 23 CFR 772 and the INDOT Traffic Noise Analysis Procedure, this action does not require a formal noise analysis.

SECTION H - COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

Will the proposed action comply with the local/regional development patterns for the area?

Yes

No

Will the proposed action result in substantial impacts to community cohesion?

Will the proposed action result in substantial impacts to local tax base or property values?

Will construction activities impact community events (festivals, fairs, etc.)?

Does the community have an approved transition plan?

If No, are steps being made to advance the community's transition plan?

Does the project comply with the transition plan? (explain in the discussion below)

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

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

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

The 2018 Comprehensive Plan for Henry County (<http://www.henryco.net/PlanningCommission.aspx>) was reviewed by KEG on October 30, 2023. The Plan has adopted a strategy to assist with ensuring the built environment contributes to the safety of the community. An action item for this strategy is to implement infrastructure improvements near the county's schools (i.e., the Shenandoah school complex northeast of the project area). The project is not anticipated to negatively affect community cohesion, the local tax

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base, or property values, since transportation within the community and connectivity to community resources will not be permanently affected.

On October 3, 2023, KEG reviewed www.indianafestivals.org for any special events or festivals in Henry County throughout the year. The following one special event or festival was noted: Christmas Walk, held in early December annually. If this event is held during the proposed construction activities, the commute times to events may be impacted causing a short-term impact. Announcements regarding construction activities will be published on the INDOT social media pages and coordination with the community will occur to minimize disruption to the extent possible.

US 36 will close for approximately one construction season. Delays shall occur during construction but will cease with project completion. Temporary community and economic impacts will occur due to increased travel time and expense; therefore, no long-term negative impacts to the community or its economy are expected.

On September 14, 2012, Henry County adopted the 2010 ADA Standards for Accessible Design <http://www.henryco.net/ADATitle9Compliance.aspx>. The Henry County ADA Comprehensive Plan is currently being updated, with an anticipated approval by the end of 2023. The draft plan includes Title VI assurances with INDOT and FHWA standards.

Public Facilities and Services

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

Based on a desktop review, the aerial map of the project area (Appendix B, page 1), and the RFI report (Appendix E) there are three public facilities within the 0.5-mile search radius. There is one public facility within or adjacent to the project area, which was confirmed by the site visit on October 12-13, 2023, by KEG. The Shenandoah school complex is located adjacent to the northeast quadrant of the project area. An early coordination letter was sent on March 15, 2023, to the Shenandoah School Corporation, as well as Shenandoah High School and Shenandoah Middle School. No responses were received within the 30-day time frame. No direct impacts are anticipated, as full closure of US 36 and Raider Road are not planned when school is in session. Indirect impacts are anticipated as construction will likely cause delays, but no adverse indirect impacts are expected. Therefore, no impacts are expected. Access to all properties will be maintained during construction. Please note, coordination with utilities is ongoing and utility relocation may be required.

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

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

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

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an EJ Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent ROW. The project will require 1.75 acres of permanent ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Henry County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 9758,

Indiana Department of Transportation

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Route US 36

Des. No. 2000152

Henry County. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2021 ACS 5-Year Estimates was obtained from the U.S. Census website (<https://data.census.gov/cedsci/>) on October 31, 2023, by KEG. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (2021: US Census Bureau, ACS 5-Year Estimates)

	COC – Henry County	AC-1 – Census Tract 9758, Henry County
Percent Minority	7	5
125% of COC	9	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	14	8
125% of COC	17	AC < 125% COC
EJ Population of Concern		No

AC-1, Census Tract 9758, Henry County has a percent minority of 5% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain minority populations of EJ concern.

AC-1, Census Tract 9758, Henry County has a percent low-income of 8% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain low-income populations of EJ concern.

The census data sheets, map, and calculations can be found in Appendix I, pages 34 to 37. The project will result in positive impacts to all populations within the project area in the form of improved traffic flow and connectivity. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?
Is a BIS or CSRS required?

Yes

No

	X
	X

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

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

No relocations of people, businesses, or farms will take place as a result of this project.

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

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

Documentation

X

Date RFI concurrence by INDOT SAM (if applicable): November 29, 2022

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

Based on a review of GIS and available public records, the RFI was completed on July 19, 2022, by KEG and INDOT SAM provided their concurrence on November 29, 2022 (Appendix E). One Leaking Underground Storage (LUST) site is located within 0.5 mile of the project area. One National Pollutant Discharge Elimination System (NPDES) facility is located within 0.5 mile of the project area. One NPDES Pipe Location is located within 0.5 mile of the project area. Due to a project design change that expanded the project limits and ROW acquisition, following INDOT SAM concurrence of the RFI on November 29, 2022, a subsequent review of Hazardous

Indiana Department of Transportation

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Material Concerns was completed by KEG on December 21, 2023 (Appendix E, page 12). One additional NPDES facility was determined to be located within 0.5 mile of the project area. None of the hazmat sites identified will impact the project. Further investigation for hazardous material concerns or regulated substances is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required**Army Corps of Engineers (404/Section10 Permit)**

Nationwide Permit (NWP)

Regional General Permit (RGP)

Individual Permit (IP)

Other

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Individual Permit (IP)

Isolated Wetlands

Rule 5

Other

IN Department of Natural Resources

Construction in a Floodway

Navigable Waterway Permit

Other

Mitigation Required**US Coast Guard Section 9 Bridge Permit****Others (Please discuss in the discussion below)**

X

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

Per coordination with INDOT EWPO on June 27, 2023, and INDOT Stormwater Specialists on November 8, 2023, a Construction Stormwater General Permit (CSGP) will be required. This project will not require a CIF permit since the project falls under the category of drainage maintenance.

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

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

Firm:

1. If the scope of work or permanent or temporary ROW amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT Greenfield District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to

Indiana Department of Transportation

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Route US 36

Des. No. 2000152

any construction that would block or limit access (INDOT ESD)

3. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army Corps of Engineers permit. (INDOT ESD)
4. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
5. 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)
6. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
7. Tree Removal AMM2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS and IDNR)
8. Tree Removal AMM3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
9. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
10. 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)
11. Deer Creek is listed as impaired for E. Coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. (INDOT SAM)

Further Consideration:

12. Impacts to non-wetland forest of one (1) acre or more in a rural or urban area should be mitigated at a minimum 2:1 ratio based on area of impact. Impacts to non-wetland forest under one (1) acre but at least 0.10 acre in a rural or urban area should be mitigated at a minimum 1:1 ration based on area of impact. Impacts under 0.10 acre in a rural area typically do not require mitigation or additional plantings beyond seeding and stabilizing disturbed area, though there are exceptions for high quality habitat sites. Impacts under 0.10 acre in an urban area should be mitigated by replacing trees that are 10" diameter-at-breast height (dbh) or greater by planting five trees, 1" to 2" in dbh, for each tree which is removed that is 10" dbh or greater (IDNR-DFW)

Categorical Exclusion Level 2
US 36
DES 2000152, Intersection Improvement
Henry County, Indiana

APPENDICES

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APPENDIX A

INDOT Supporting Documents

Categorical Exclusion Level Thresholds

A-1

	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 Impacts³	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 Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	“No Effect”, “Not likely to Adversely Affect” (With select AMMs ⁶)	“Not likely to Adversely Affect” (With any AMMs or commitments)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic ⁷
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 ⁸
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ⁹
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹⁰
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 Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

⁷ 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.

⁸ Potential for causing a disproportionately high and adverse impact.

⁹ 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.

¹⁰ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

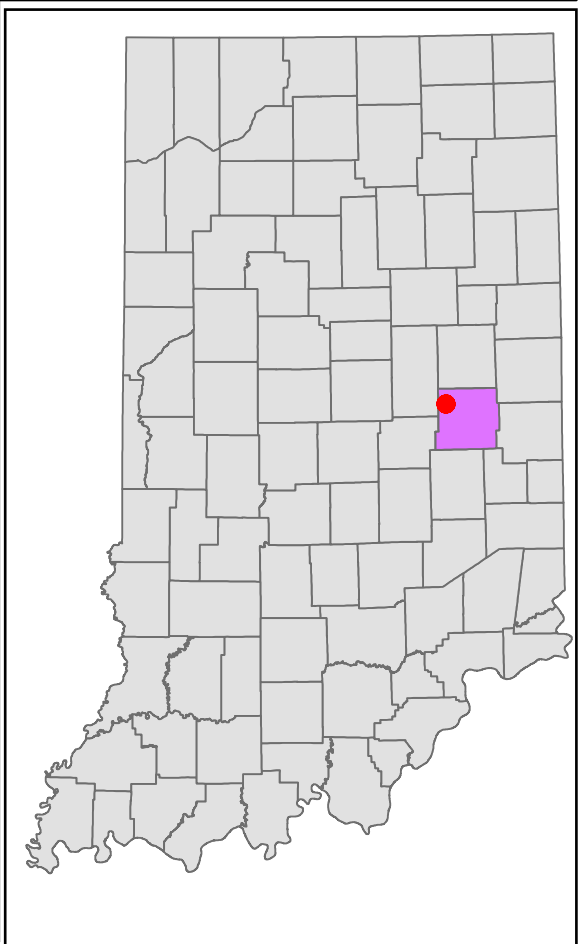
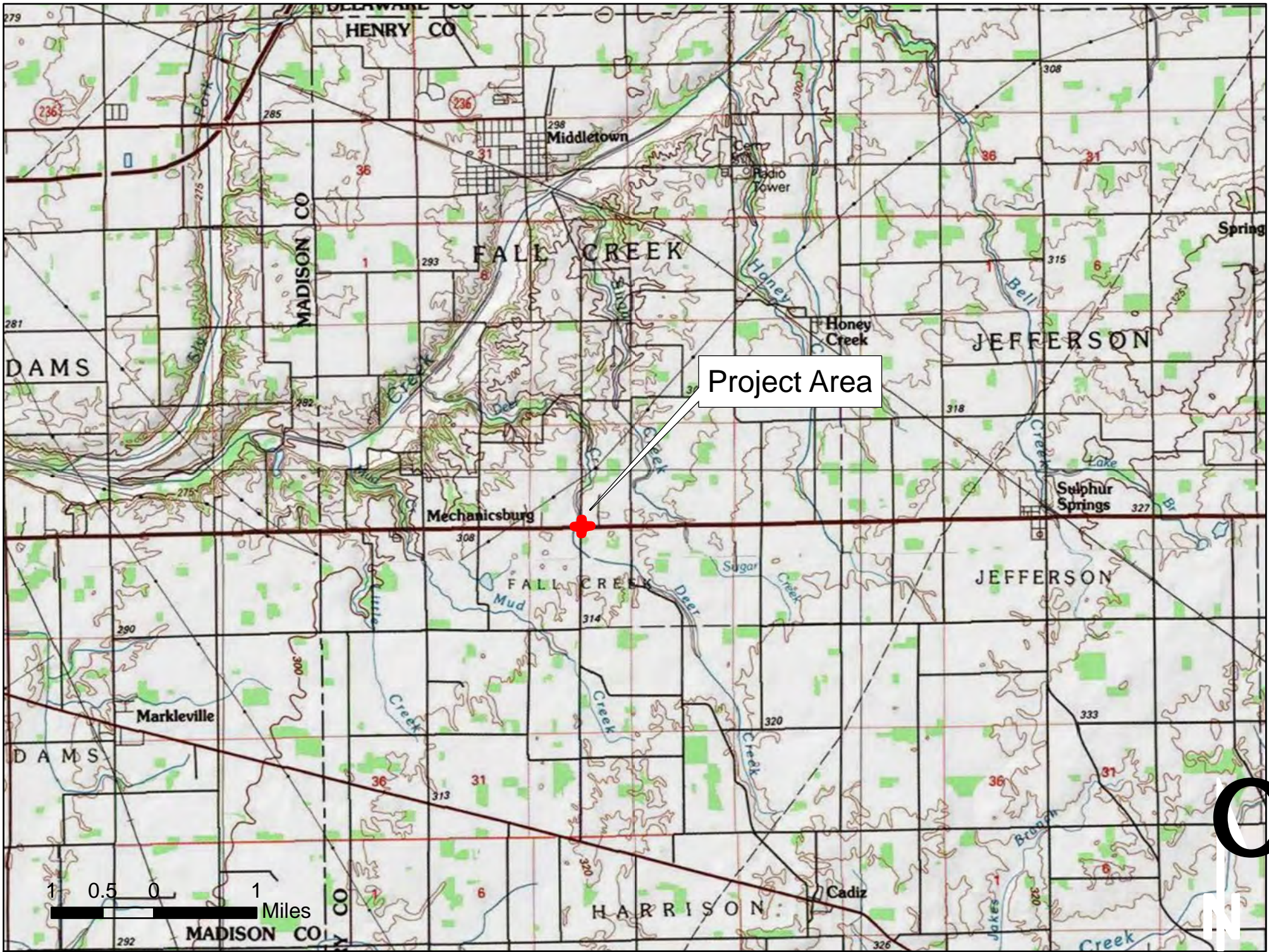
* Includes the threatened/endangered species critical habitat

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

APPENDIX B

Graphics

General Site Map
US 36 & Raider Road Intersection
Des. No. 2000152, Intersection Improvement Project
Henry 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
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

MIDDELTOWN QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

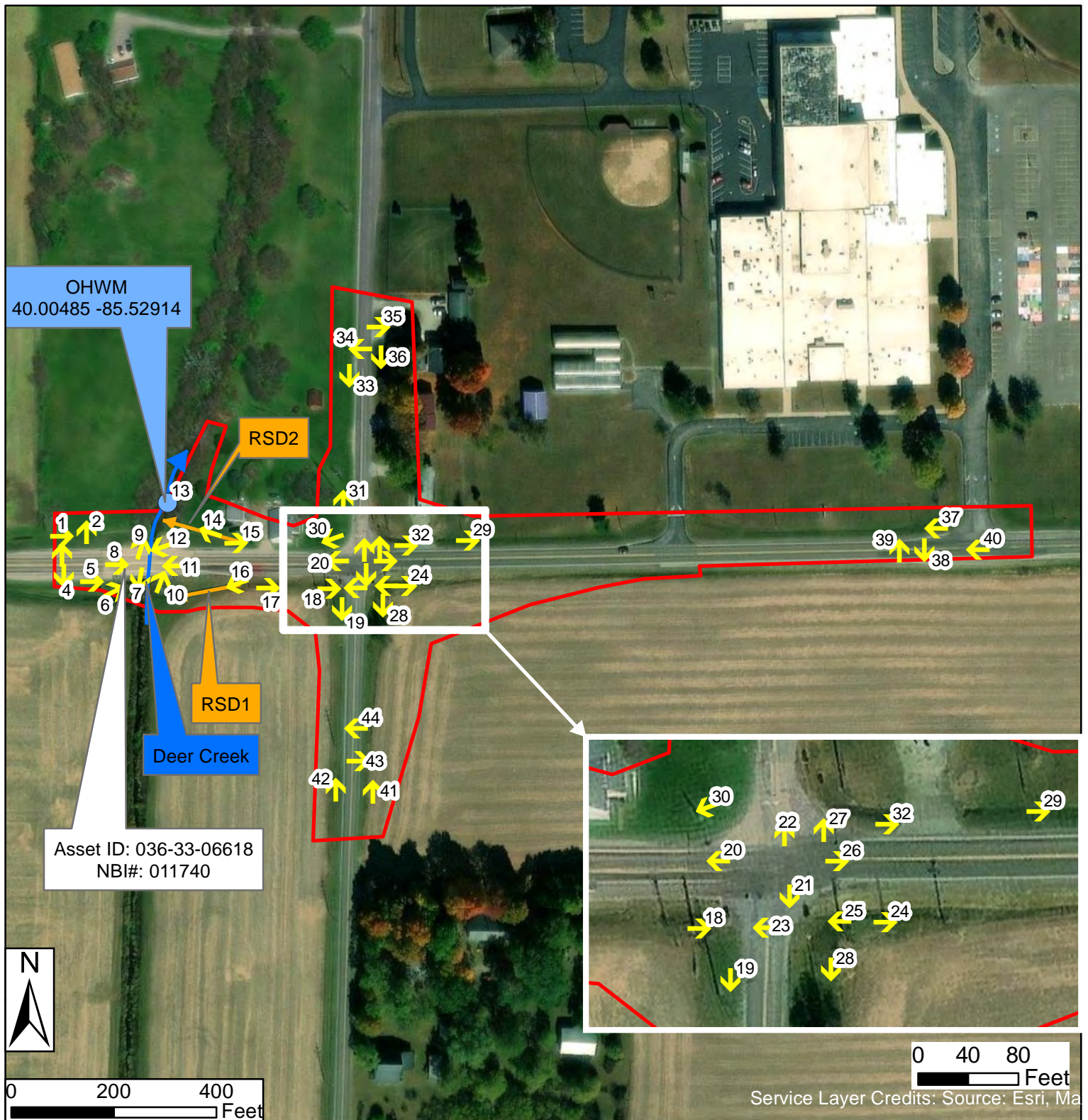


Figure 9 Photo Direction Map
Roundabout, State Project
US 36 and Raider Rd,
Fall Creek Township
Henry County, Indiana
Des No 2000152

- Stream Data Point
- ↑ Photo
- RSD
- ← Stream
- Investigated Area



Date: 12/7/2023



Photo 1: Looking east, toward Deer Creek, along the grassy swale on the north side of US 36.



Photo 2 : Looking north at grassland/pastureland, north of US 36, from the west end of the investigated area.



Photo 3: Looking north at the row crop agricultural field north of US 36, from the west end of the investigated area.



Photo 4: Looking south at the row crop agricultural field south of US 36, from the west end of the investigated area.



Photo 5: Looking east along the slope and grassy swale on the south side of US 36 toward Deer Creek.



Photo 6: Looking northeast (downstream) toward the opening of the bridge (036-33-06618/NBI# 011740) over Deer Creek from the south side of US 36.



Photo 7: Looking southwest (upstream) toward the opening of the bridge (from the center) from under the bridge. There is no riparian cover over Deer Creek downstream.

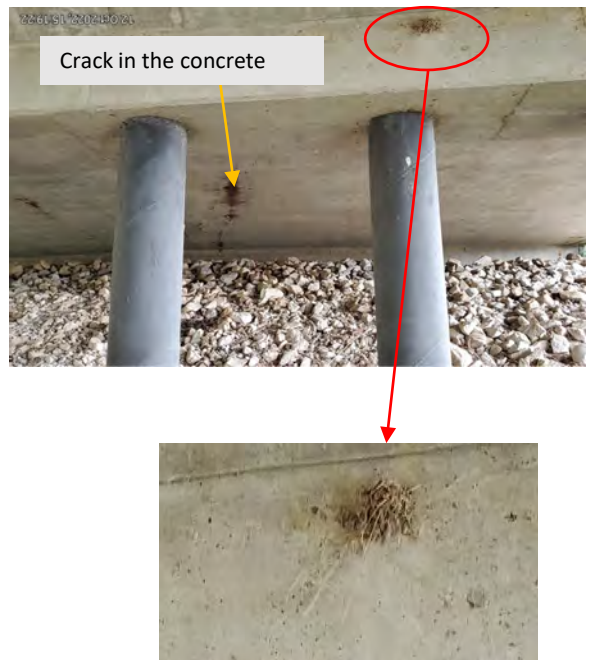


Photo 8: Looking east at the east slab from the west side of the bridge. There was what appears to be an Eastern phoebe nest on the face of the slab.



Photo 9: Looking northeast (downstream) of Deer Creek from the opening of the bridge.



Photo 10: Looking northeast at the Eastern phoebe bird nests on the east slab of the bridge.



Photo 11: Looking west at the Eastern phoebe nest on the slab from the east side of the bridge.



Photo 12: Looking southwest at the Eastern phoebe nests on the slab from the northeast side of the bridge



Photo 13: OHWM of Deer Creek Looking northeast (downstream) approximately 147 downstream from the opening of the bridge. The OHWM was found to be 17.5 ft wide and 1.33 ft deep



Photo 14: Looking northwest along RSD2 on the north side of US 36 toward Deer Creek.



Photo 15: Looking northeast at the utility pole, the residential drive, and the corner of the residence on the northwest side of US 36.



Photo 16: Looking southwest along RSD1 toward Deer Creek.



Photo 17: Looking east along the mown grassy swale on the south side of US 36 toward the intersection of US 36 and Raider Rd.



Photo 18: Looking east at the west opening of the pipe that goes under Raider Rd from the southwest corner of the intersection of US 36 and Raider Rd.



Photo 19: Looking south at the north opening of the pipe under the field entrance in the southwest corner of the intersection of US 36 and Raider Rd and along the mown grassy verge on the west side of Raider Rd.

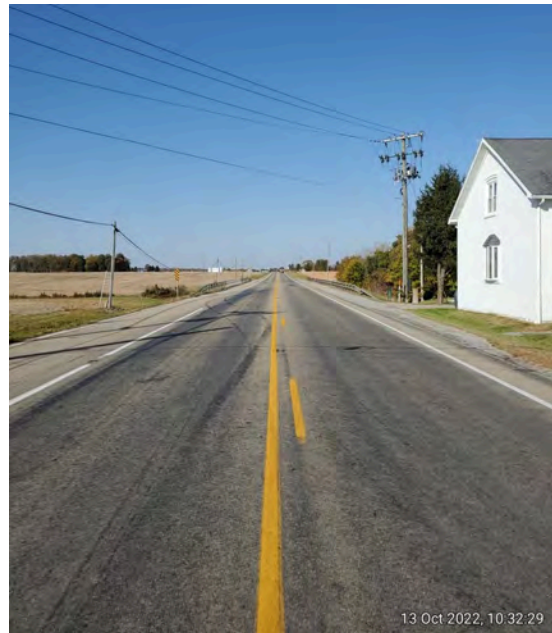


Photo 20: Looking southwest along US 36 from the intersection of US 36 and Raider Rd.



Photo 21: Looking south along Raider Rd from the intersection of US 36 and Raider Rd.

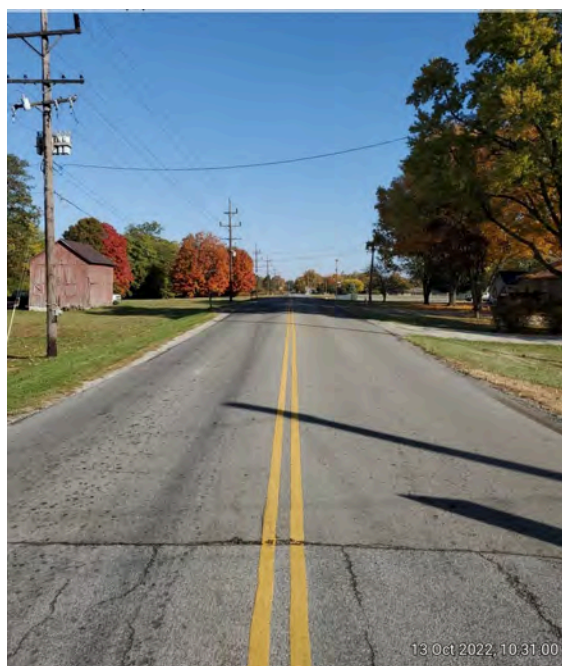


Photo 22: Looking north along Raider Rd from the intersection of US 36 and Raider Rd.



Photo 23: Looking west along the mown grassy swale in the southwest corner of the intersection of US 36 and Raider Rd and the pipe under the field entrance.



Photo 24: Looking east along the mown grassy swale along the south side of US 36.



Photo 25: Looking west at the east pipe opening of the pipe that crosses under Raider Rd from the southeast corner of the US 36 and Raider Rd intersection.



Photo 26: Looking east along US 36 from the intersection of US 36 and Raider Rd.



Photo 27: Looking north at the south opening of the pipe under the residential lawn in the northeast corner of the intersection of US 36 and Raider Rd.



Photo 28: Looking south along the vegetated swale on the east side of Raider Rd from the southeast corner of the intersection of US 36 and Raider Rd.



Photo 29: Looking east along the mown grassy swale and at the west paved drive for Shenandoah High School on the north side of US 36 from the northeast corner of US 36 and Raider Rd.



Photo 30: Looking southwest along the mown grassy swale on the northeast side of US 36 from the northeast corner of US 36 and Raider Rd.



Photo 31: Looking north at the south opening of a pipe in the residential property on the west side of Raider Rd from north of the northwest intersection of Us 36 and Raider Rd.



Photo 32: Looking east at the west opening of the pipe under the drive of the indeterminate type property in the northeast corner of the intersection of US 36 and Raider Rd.



Photo 33: Looking south along the mown grassy swale on the west side of Raider Rd from the north end of the investigated area.



Photo 34: Looking west at the mown residential yard on the west side of Raider Rd from the north end of the investigated area.



Photo 35: Looking east at the residential area on the east side of Raider Rd from the north end of the investigated area.



Photo 36: Looking south along the mown grassy swale on the west side of Raider Rd from the north end of the investigated area.



Photo 37: Looking east along the grassy swale on the north side of US 36 from the west end of the investigated area.



Photo 38: Looking south at the row crop agricultural land on the south side of US 36 from the north end of the investigated area.



Photo 39: Looking north at Shenandoah High School on the north side of US 36 from the west end of the investigated area.



Photo 40: Looking east along the grassy swale on the south side of US 36 from the west end of the investigated area.



Photo 41: Looking north along the grassy swale on the north side of Raider Rd from the south end of the investigated area.



Photo 42: Looking north along the grassy swale on the south side of Raider Rd from the south end of the investigated area.

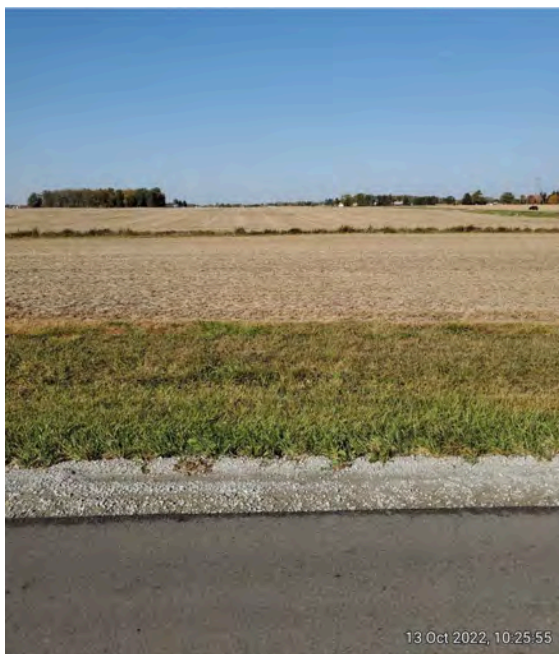


Photo 43: Looking east at the row crop agricultural land on the north side of Raider Rd from the west end of the investigated area.

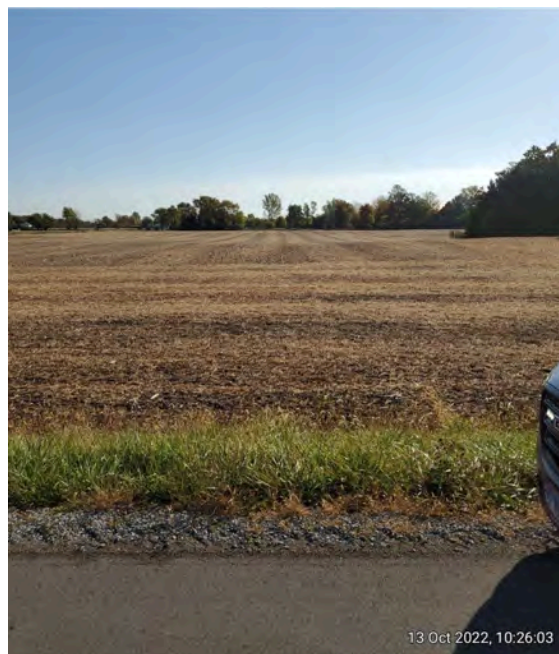
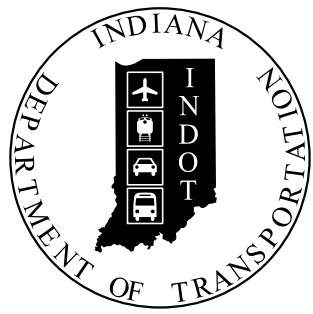


Photo 44: Looking west at the row crop agricultural land on the south side of Raider Rd from the west end of the investigated area.

PROJECT	DESIGNATION
2000152	2000152
CONTRACT	
R-43507	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

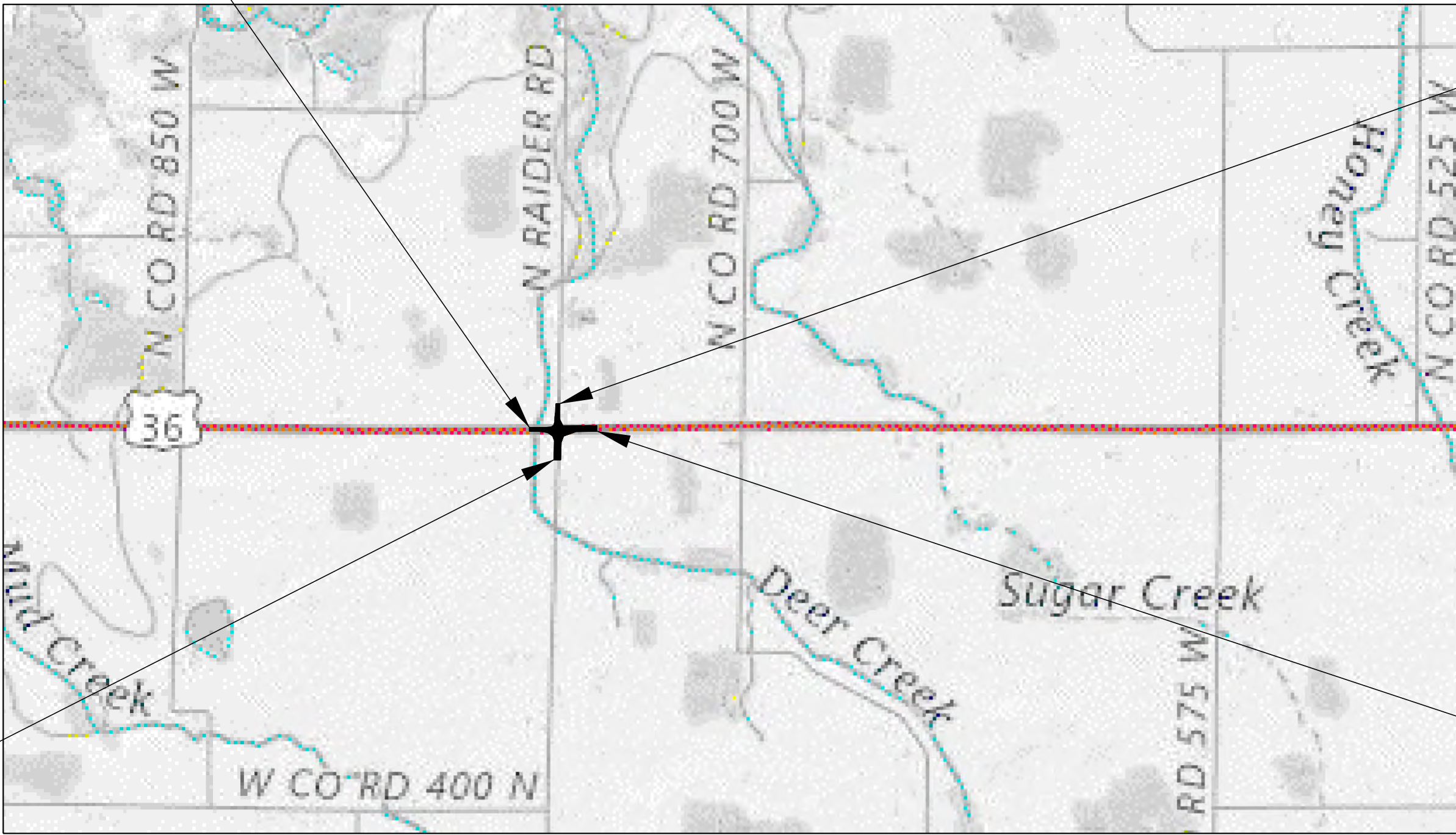
LOCATION: RAIDER RD ROUNDABOUT AT US 36 - INTERSECTION IMPROVEMENT

PROJECT NO. 2000152 PE
2000152 R/W
2000152 CONST.

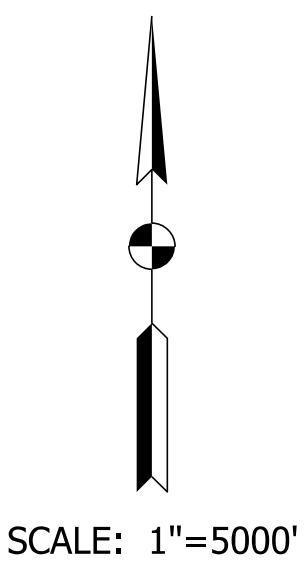
Intersection conversion to Roundabout at US 36 and Raider Road

LOCATED IN SECTIONS
SEC 17, T-18-N, R-9-E
SEC 20, T-18-N, R-9-E
FALL CREEK TOWNSHIP
HENRY COUNTY, INDIANA

BEGIN PROJECT 2000152
STA. 352+00.00 "PR-A"



END CONSTRUCTION
STA. 39+50.00 "S-A"



BEGIN CONSTRUCTION
STA. 32+50.00 "S-A"

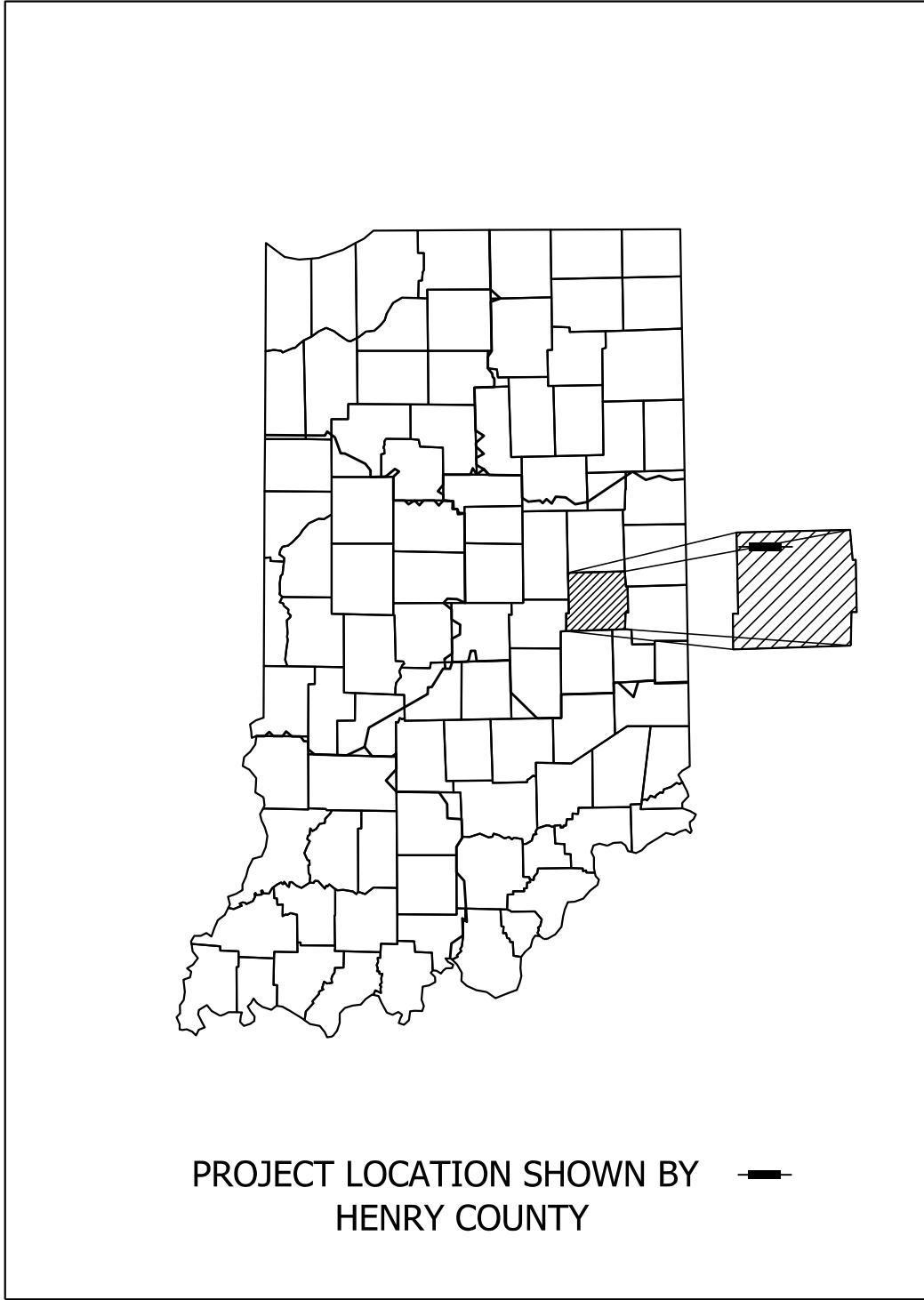
END PROJECT 2000152
STA. 359+50.00 "A"

TRAFFIC DATA - US 36		
A.A.D.T.	(2025)	4,360 V.P.D.
A.A.D.T.	(2045)	4,811 V.P.D.
D.H.V.	(2045)	490 V.P.H.
DIRECTIONAL DISTRIBUTION		51%
TRUCKS		16% A.A.D.T.

DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

TRAFFIC DATA - RAIDER ROAD		
A.A.D.T.	(2025)	1,909 V.P.D.
A.A.D.T.	(2045)	1,947 V.P.D.
D.H.V.	(2045)	214 V.P.H.
DIRECTIONAL DISTRIBUTION		44%
TRUCKS		20% A.A.D.T.

DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE




LATITUDE: 40°00'16" N LONGITUDE: 85°31'41" W

GROSS LENGTH:	0.13	MI.
TOTAL LENGTH:	0.13	MI.
MAX. GRADE:	1.50	%

HUC: 05120201100020

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

Plot: 9/6/2023	Plans Prepared By:		STAGE 2 09/06/23	PLANS PREPARED BY: FISHBECK (317) 577-9050 PHONE NUMBER		CONTRACT R-43507	DESIGNATION 2000152		
	 Engineers Architects Scientists Constructors			CERTIFIED BY: THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT. 09/06/23 DATE			SHEETS 1 of 38		
				APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE			PROJECT 2000152		



Sta. 32+00.00 to 40+00.00 Line "S-A"



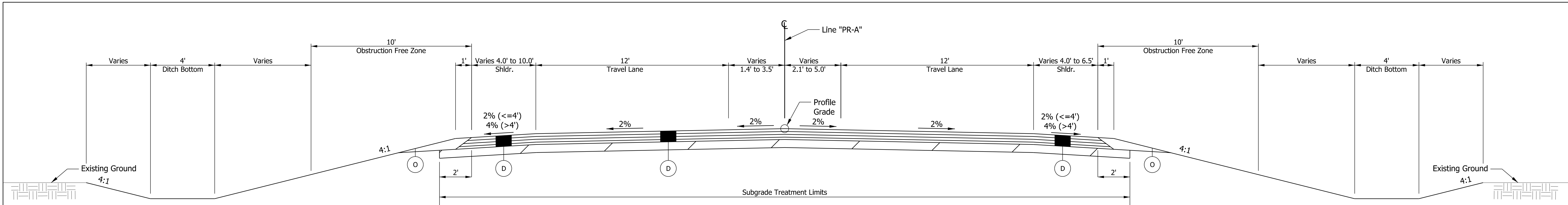
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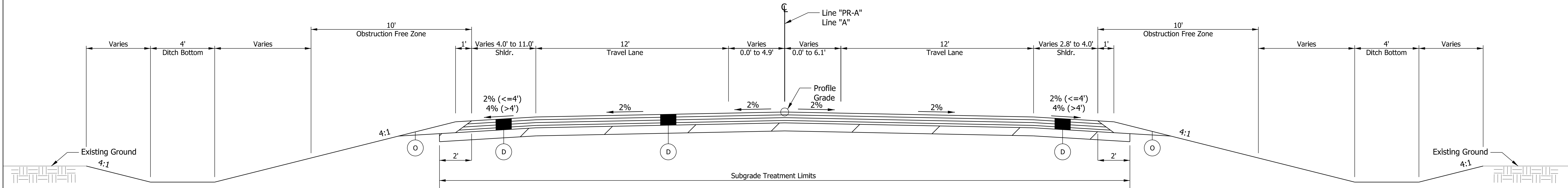
Sta. 355+50.00 to 361+00.00 Line "A"

Note: Existing typical sections shown for reference information.

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Model: Typical 1



US 36
Sta. 353+15.31 to 353+21.58 Line "PR-A"

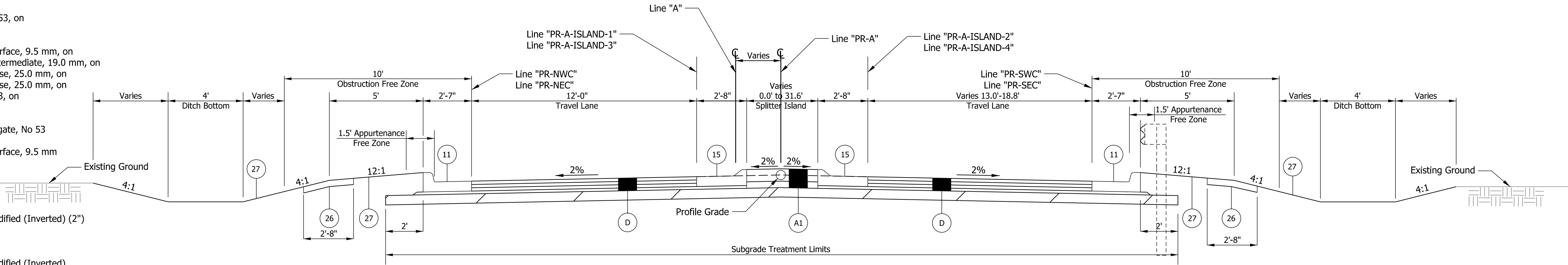


US 36
Sta. 359+10.79 to 360+00.00 Line "PR-A"

LEGEND

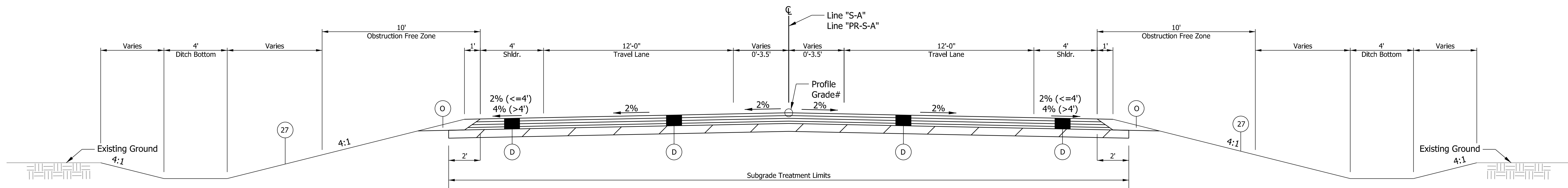
- (A) 8 in. PCCP (Colored), on
13 in. Compacted Aggregate No. 53
Subgrade Treatment, Type IBC
- (A1) 8 in. PCCP (Colored), on
14 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- (D) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on
275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on
385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on
440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on
6 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- (O) Variable Depth Compacted Aggregate, No 53
- (R) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm
- (11) Curb and Gutter, Concrete
- (12) Curb and Gutter, B, Concrete
- (13) Curb and Gutter, B, Concrete, Modified (Inverted) (2")
- (14) Curb, Integral, Concrete
- (15) Curb and Gutter, B, Concrete, Modified (Inverted)
- (26) Sodding on 4" of Topsoil
- (27) Mulched Seeding R

Subgrade Treatment Type IBC



US 36
Sta. 353+21.61 to 355+12.38 Line "PR-A"
Sta. 356+51.99 to 359+10.72 Line "PR-A"

Plot: 9/6/2023 File: RD_Proposed Typ Sections US 36.dgn Model: Typical 1	STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1"=3'		BRIDGE FILE	
		DESIGNED: BV 09/06/23		DESIGN ENGINEER 09/06/23		DESIGNATION 2000152		SHEETS 4 of 38	
		CHECKED: RI 09/06/23		CHECKED: RI 09/06/23		CONTRACT R-43507		PROJECT 2000152	
				US 36 TYPICAL PROPOSED CROSS SECTIONS					



Raider Rd

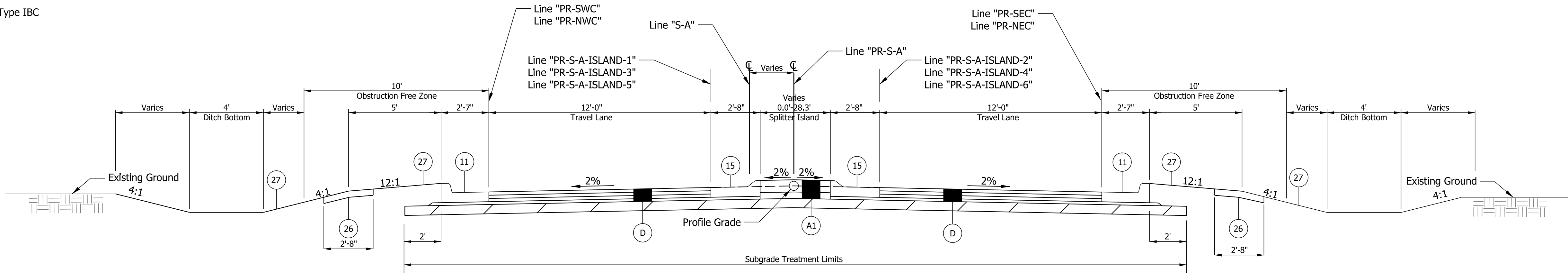
Sta. 32+30.00 to 32+63.11 Line "S-A"
Sta. 32+63.11 to 32+96.62 Line "PR-S-A"
Sta. 38+20.34 to 39+40.35 Line "PR-S-A"
Sta. 39+21.02 to 39+50.00 Line "S-A"

- Proposed Crown Transitions from 1.82' Lt. Sta. 32+30.00 "S-A" to 0.0' Sta. 33+35.44 "PR-S-A"
Proposed Crown Transitions from 0.0' Sta. 38+50.61 "PR-S-A" to 1.75' Lt. Sta. 39+50.00 "S-A"

LEGEND

- (A) 8 in. PCCP (Colored), on
13 in. Compacted Aggregate No. 53
Subgrade Treatment, Type IBC
- (A1) 8 in. PCCP (Colored), on
14 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- (D) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on
275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on
385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on
440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on
6 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- (O) Variable Depth Compacted Aggregate, No 53
- (R) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm
- (11) Curb and Gutter, Concrete
- (12) Curb and Gutter, B, Concrete
- (13) Curb and Gutter, B, Concrete, Modified (Inverted) (2")
- (14) Curb, Integral, Concrete
- (15) Curb and Gutter, B, Concrete, Modified (Inverted)
- (26) Sodding on 4" of Topsoil
- (27) Mulched Seeding R

Subgrade Treatment Type IBC



Raider Rd

Sta. 32+96.55 to 35+26.04 Line "PR-S-A"
Sta. 36+65.11 to 38+20.34 Line "PR-S-A"
Sta. 38+40.35 to 39+21.02 Line S-A"

Plot: 9/6/2023

File: RD_Proposed Typ Sections Raider.dgn
Model: Typical 1

STAGE 2

09/06/23

RECOMMENDED
FOR APPROVAL _____ 09/06/23
DESIGN ENGINEER DATE

DESIGNED: BV 09/06/23 DRAWN: BV 09/06/23

CHECKED: RI 09/06/23 CHECKED: RI 09/06/23

INDIANA
DEPARTMENT OF TRANSPORTATION

RAIDER ROAD
TYPICAL PROPOSED CROSS SECTIONS

SCALE
1"=3'

BRIDGE FILE

DESIGNATION
2000152

SHEETS
5 of 38

CONTRACT
R-43507

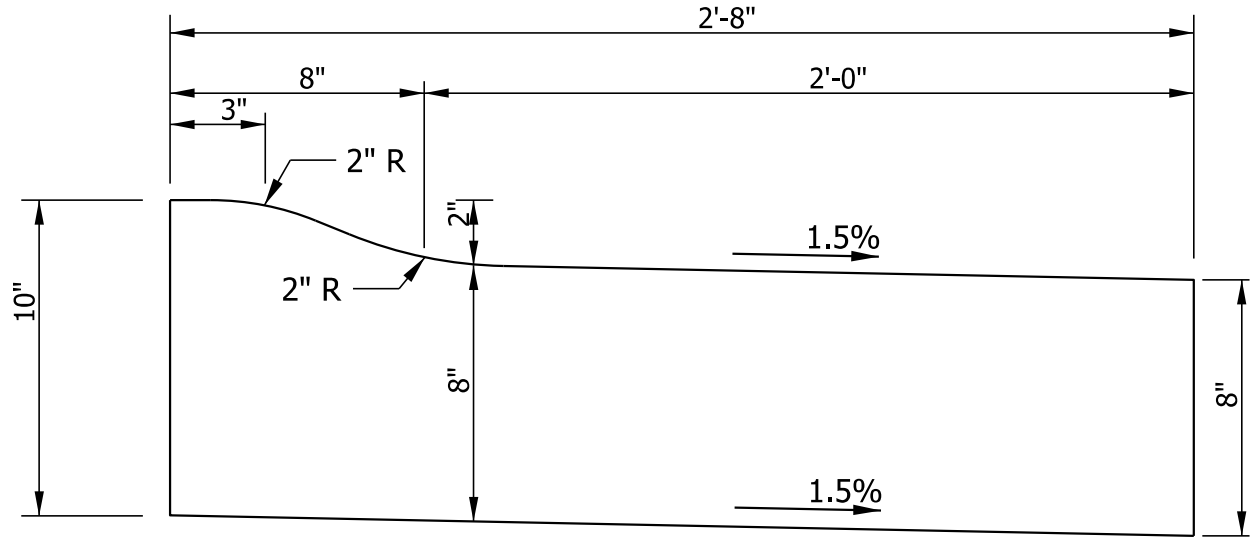
PROJECT
2000152

LEGEND

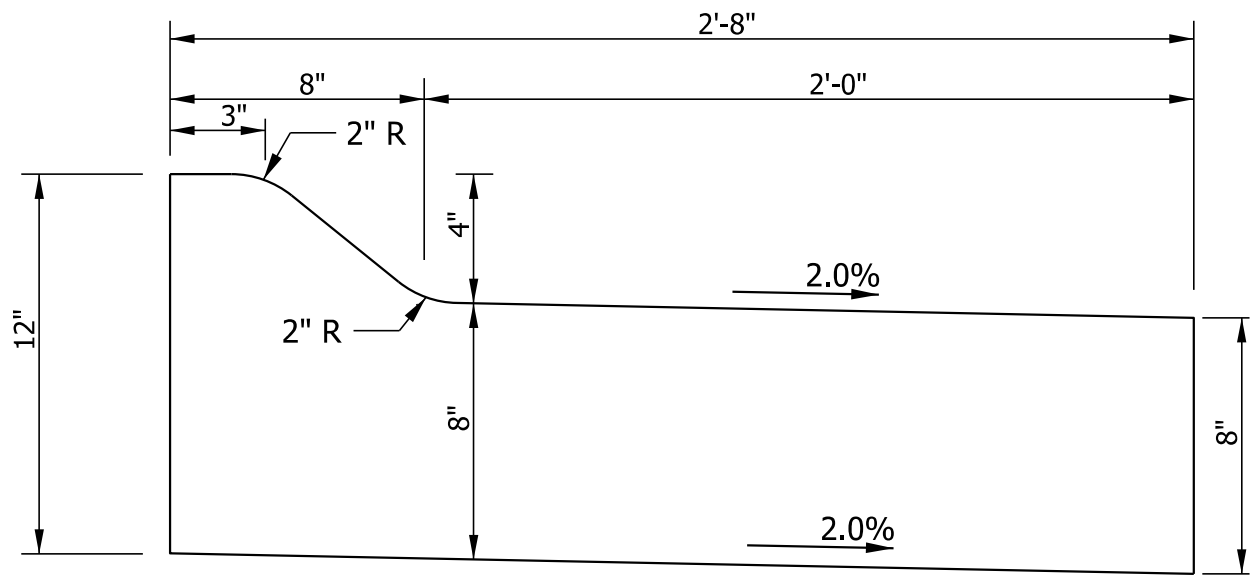
- (A) 8 in. PCCP (Colored), on
13 in. Compacted Aggregate No. 53
Subgrade Treatment, Type IBC
- (A1) 8 in. PCCP (Colored), on
14 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- (D) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on
275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on
385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on
440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on
6 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- (O) Variable Depth Compacted Aggregate, No 53
- (R) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm
- (11) Curb and Gutter, Concrete
- (12) Curb and Gutter, B, Concrete
- (13) Curb and Gutter, B, Concrete, Modified (Inverted) (2")
- (14) Curb, Integral, Concrete
- (15) Curb and Gutter, B, Concrete, Modified (Inverted)
- (26) Sodding on 4" of Topsoil
- (27) Mulched Seeding R
- Subgrade Treatment Type IBC

GENERAL NOTES

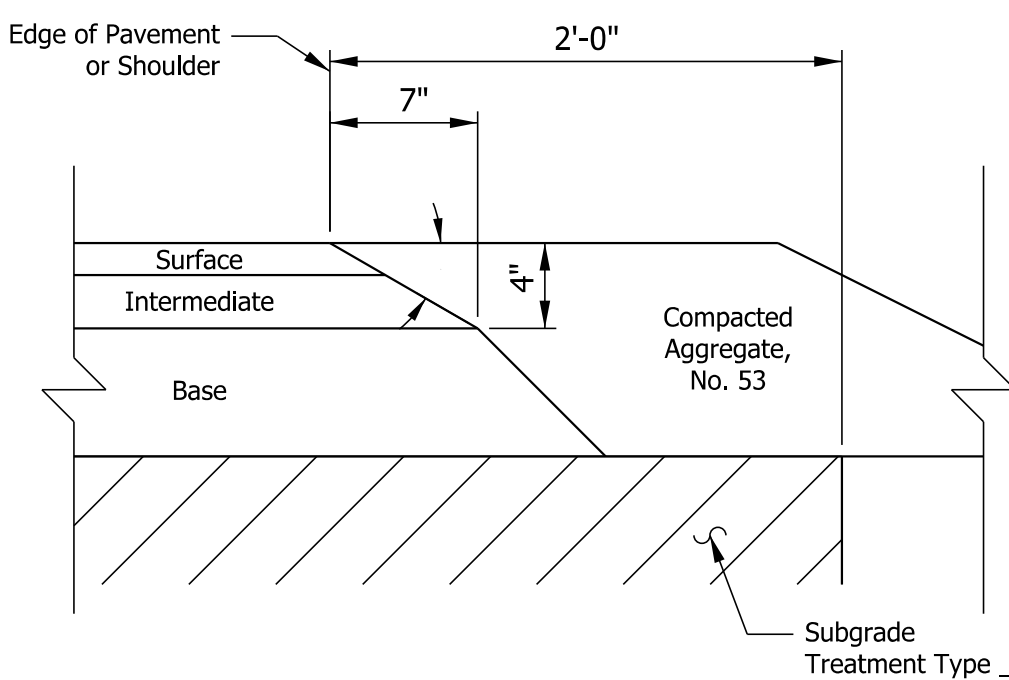
1. 13.5' Transverse Joint Spacing with 1 in. diameter
dowels per ISS for the truck apron only.



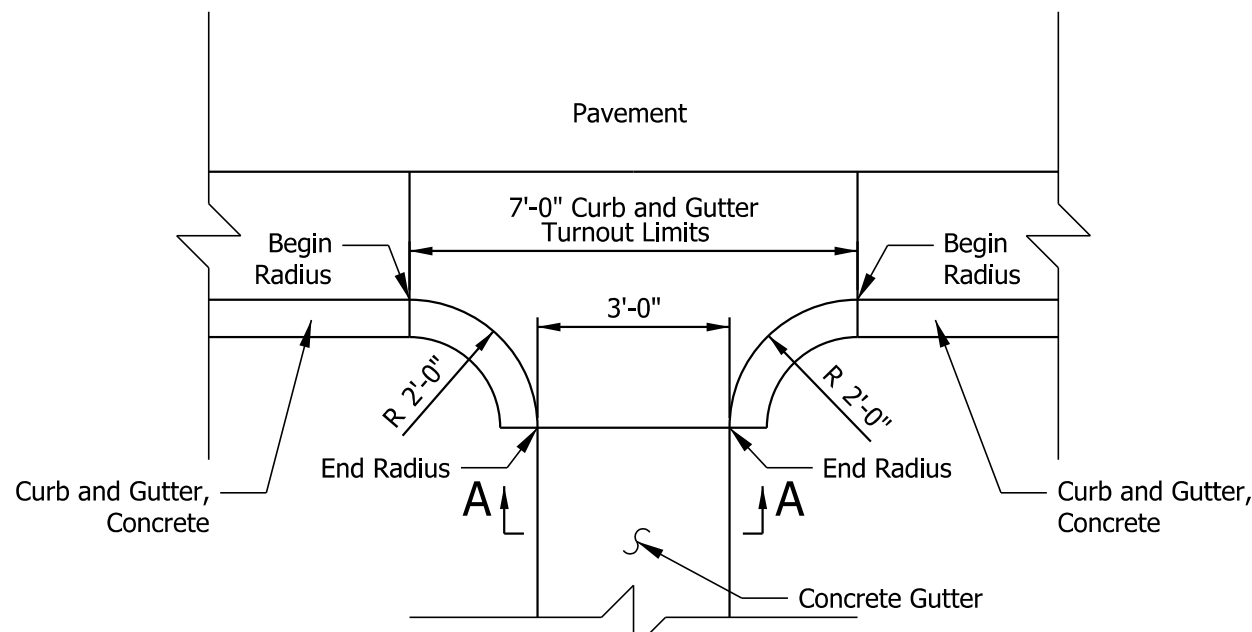
13 Curb & Gutter, B, Concrete, Modified (Inverted) (2" Reveal)
Scale: 1"=6"



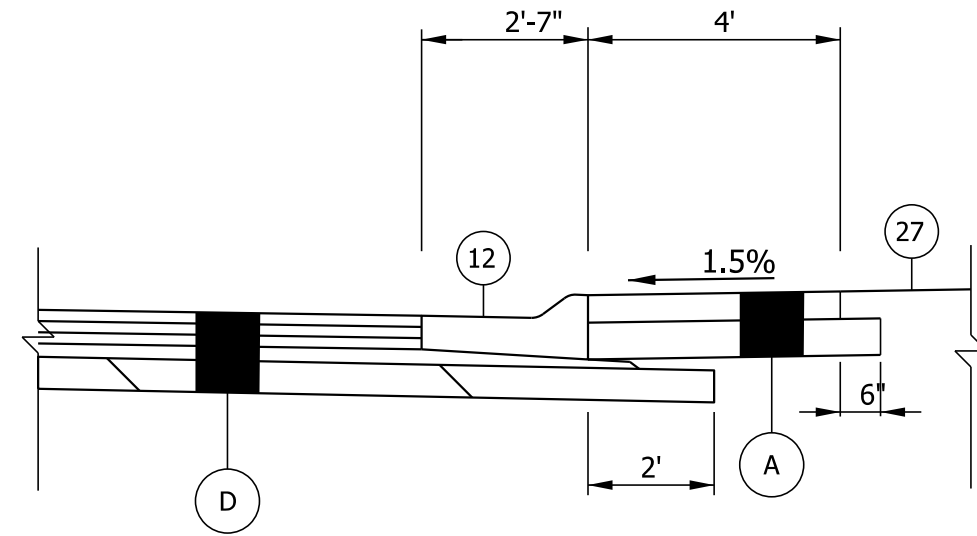
15 Curb & Gutter, B, Concrete, Modified (Inverted)
Scale: 1"=6"



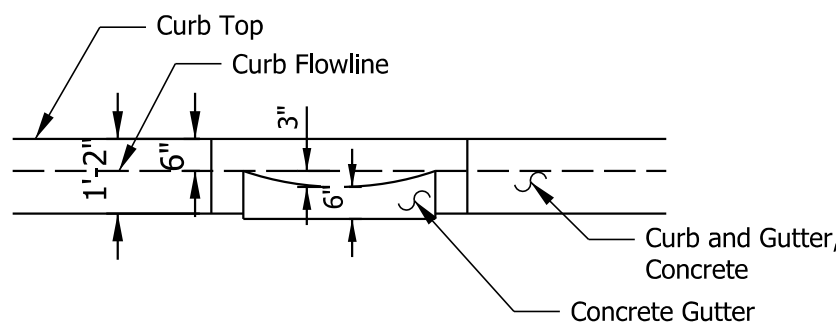
Safety Edge Detail
Not to Scale



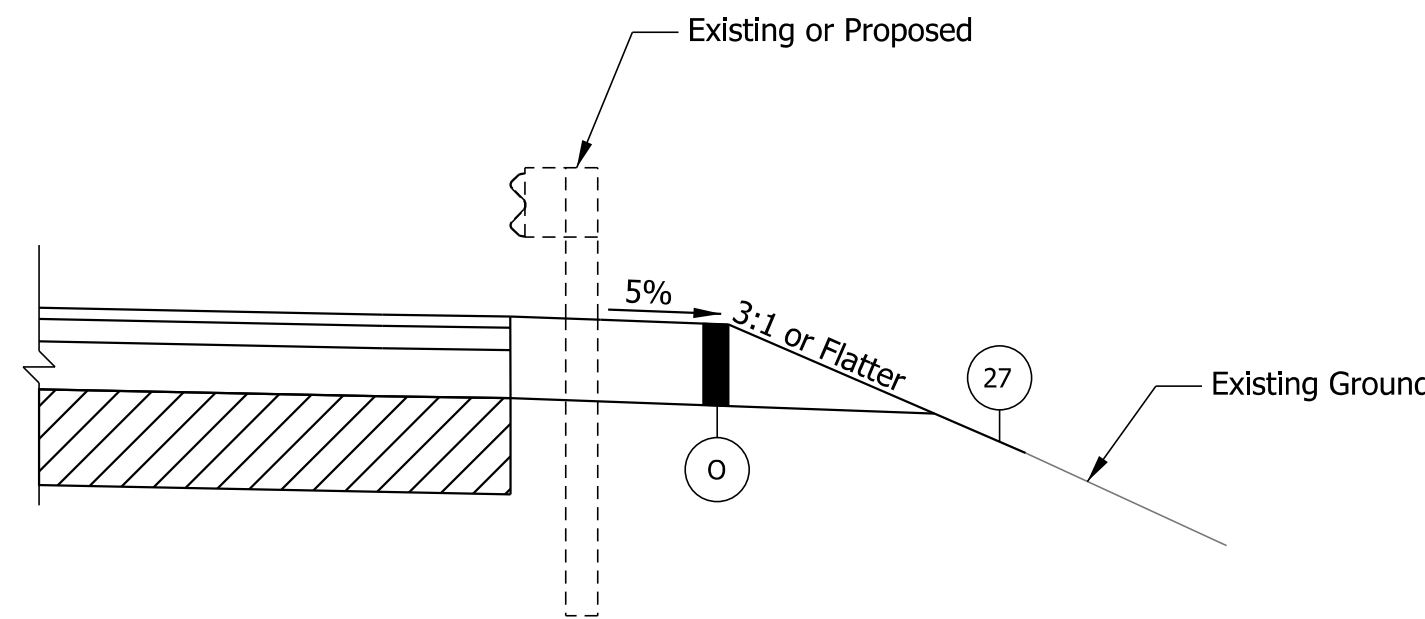
Curb & Gutter, Turnout Detail
Not to Scale
See 605-CTCG-01 for Additional Details



Corner Truck Apron Detail
Not to Scale
Sta. 31+21.93 to 32+65.74 Line "PR-SWC"
Sta. 23+54.52 to 24+82.26 Line "PR-SEC"
Sta. 41+43.01 to 42+91.00 Line "PR-NWC"
Sta. 12+94.33 to 14+17.09 Line "PR-NEC"



Section A-A
Not to Scale

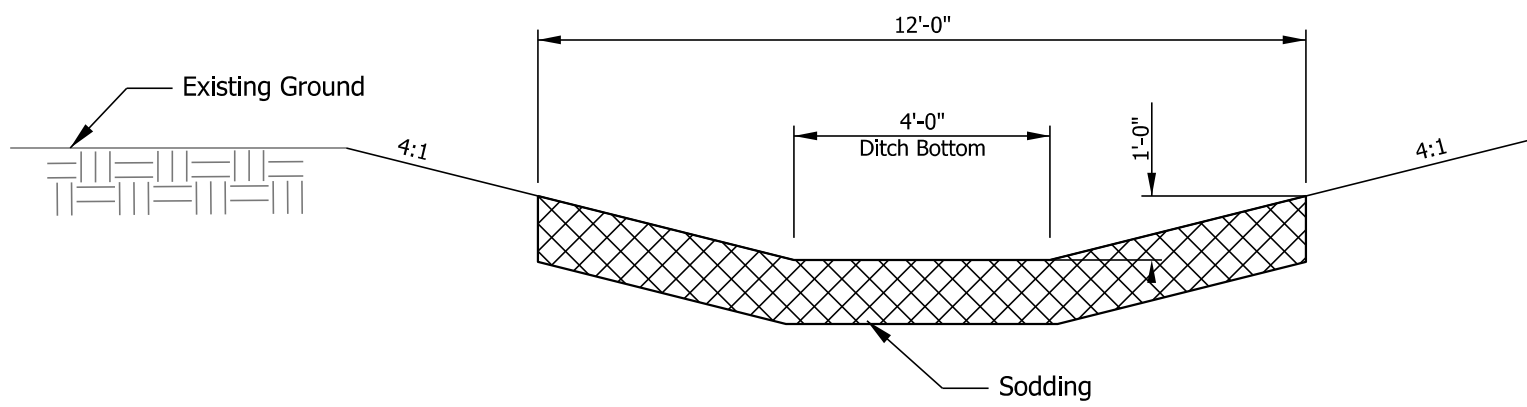


Guardrail Detail
Not to Scale

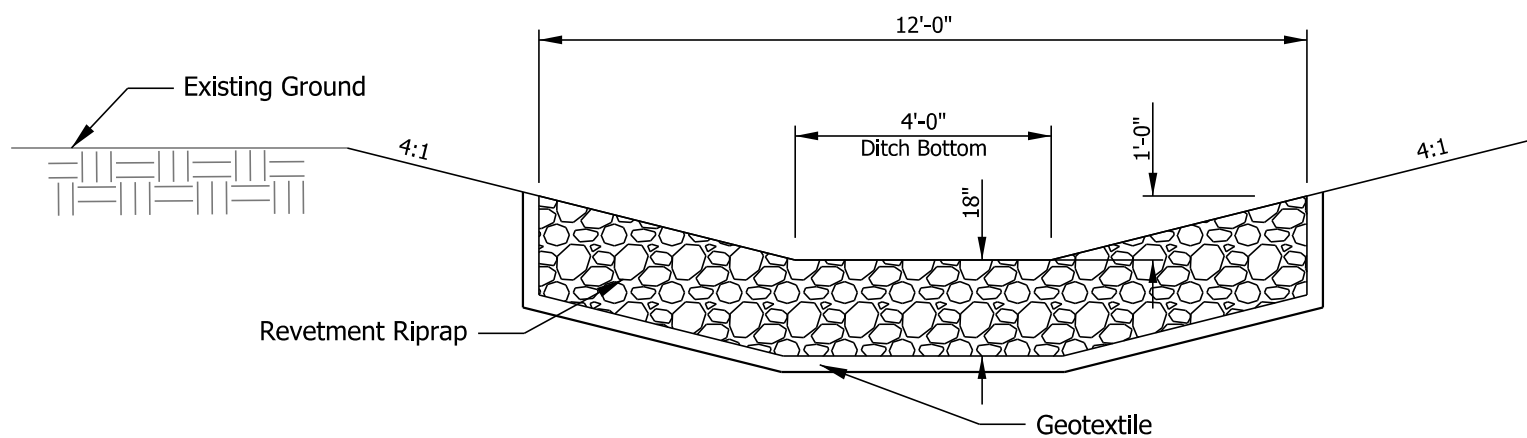
Existing
Sta. 353+15.31 to 354+03.60 Line "PR-A", Lt.
Sta. 353+15.31 to 353+50.47 Line "PR-A", Rt.

Proposed
"Tie to existing aluminum guardrail with A S Splice Connector"

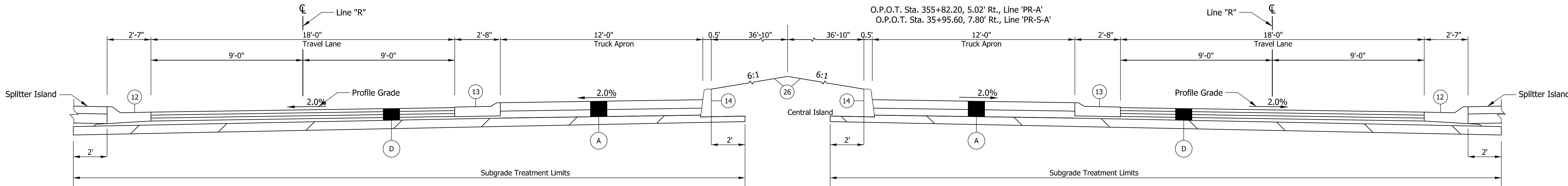
Sta. 353+42.23 to 353+71.41 Line "PR-A", Rt.



Typical Riprap 4' Flat Bottom Ditch Detail (4:1 Slopes)
Not to Scale



Typical Sodding 4' Flat Bottom Ditch Detail (4:1 Slopes)
Not to Scale



Roundabout Circulatory Roadway at Splitter Island

Plot: 9/6/2023

File: RD_Proposed Typ Sections Round.dgn
Model: Typical 1

STAGE 2

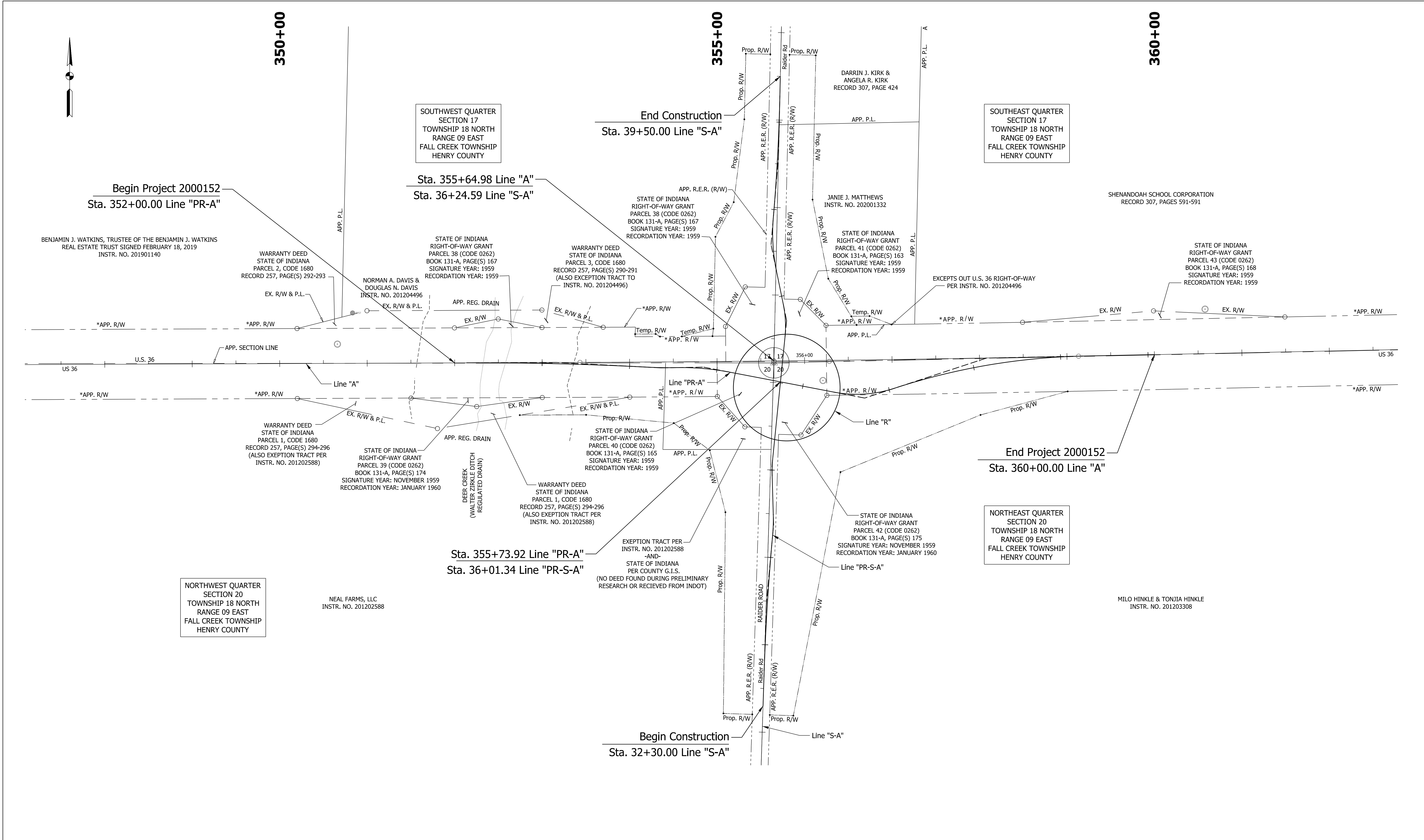
09/06/23

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	09/06/23	DATE
DESIGNED: BV	09/06/23	DRAWN: BV	09/06/23
CHECKED: RI	09/06/23	CHECKED: RI	09/06/23

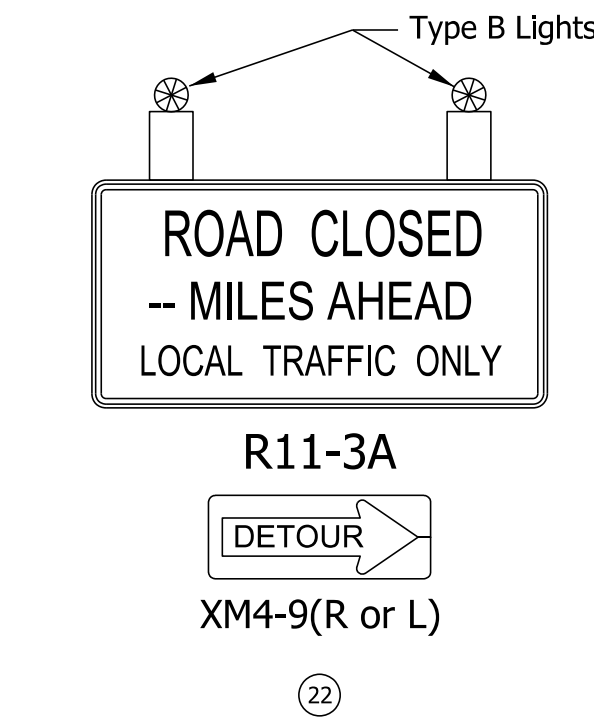
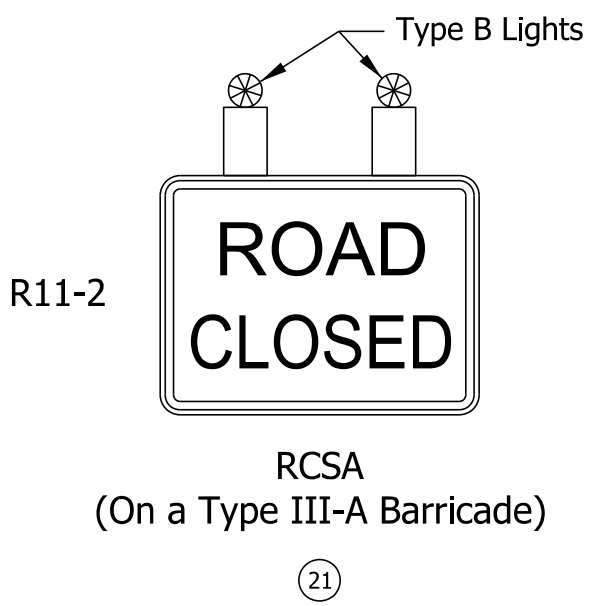
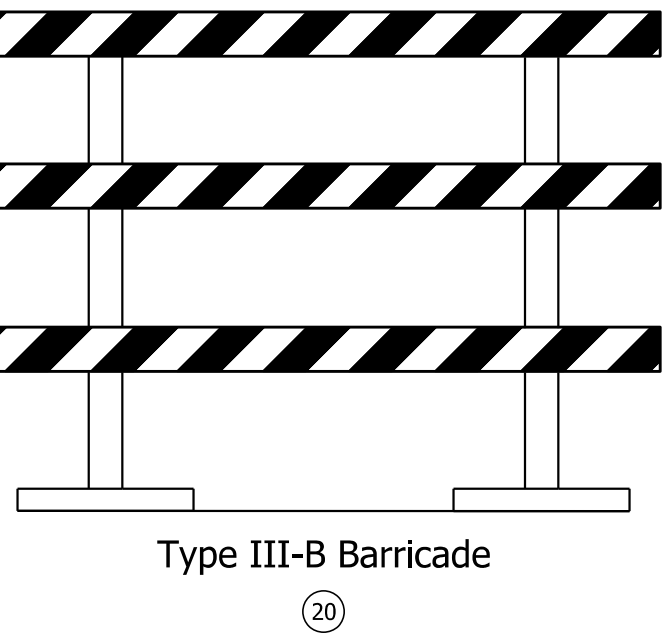
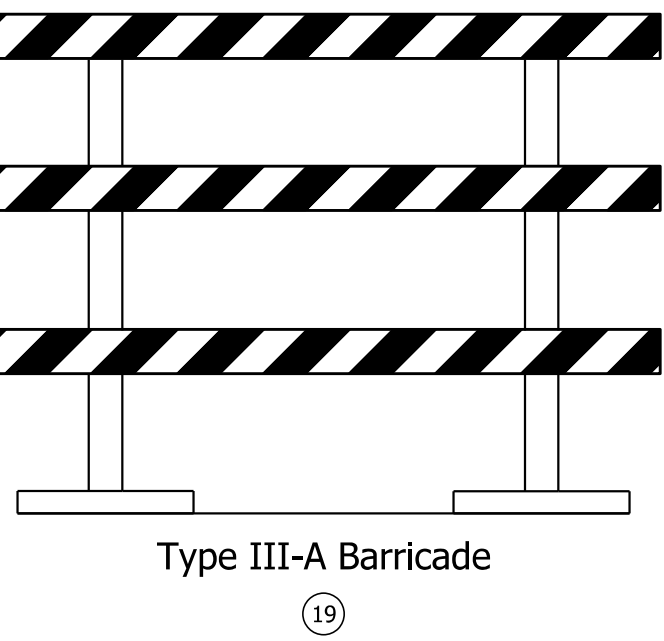
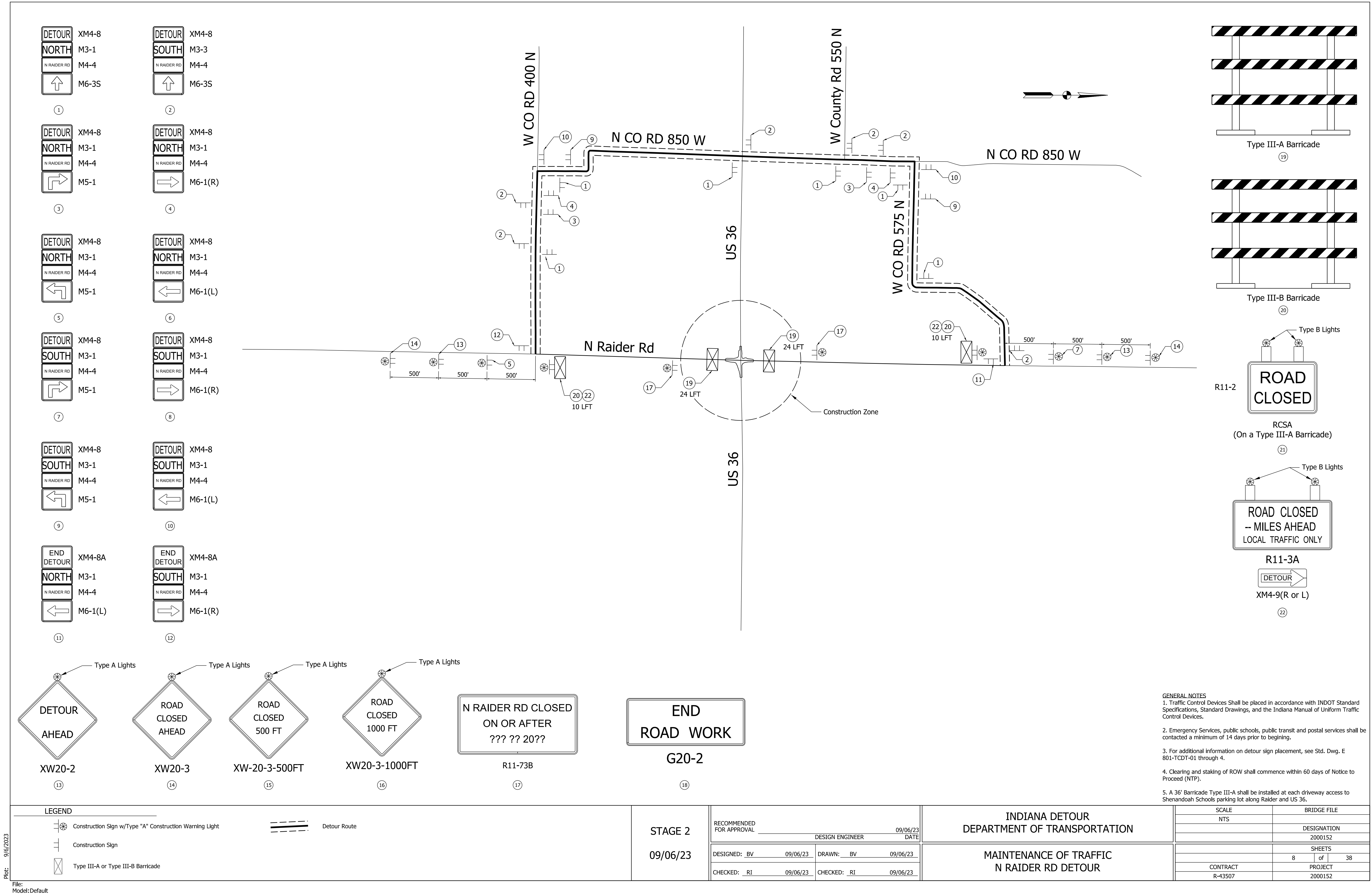
INDIANA
DEPARTMENT OF TRANSPORTATION

ROUNDABOUT
PROPOSED TYPICAL SECTIONS

SCALE 1"=3'	BRIDGE FILE
	DESIGNATION 2000152
	SHEETS 6 of 38
CONTRACT R-43507	PROJECT 2000152



	STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL _____ 09/06/23 DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1"=50'	BRIDGE FILE	
						DESIGNATION 2000152		
						SHEETS 7 of 38		
		DESIGNED: BV 09/06/23 DRAWN: BV 09/06/23		US 36 AND RAIDER RD PLAT NO. 1		PROJECT 2000152		
		CHECKED: RI 09/06/23 CHECKED: RI 09/06/23						



- GENERAL NOTES
1. Traffic Control Devices Shall be placed in accordance with INDOT Standard Specifications, Standard Drawings, and the Indiana Manual of Uniform Traffic Control Devices.
 2. Emergency Services, public schools, public transit and postal services shall be contacted a minimum of 14 days prior to beginning.
 3. For additional information on detour sign placement, see Std. Dwg. E 801-TCDT-01 through 4.
 4. Clearing and staking of ROW shall commence within 60 days of Notice to Proceed (NTP).
 5. A 36" Barricade Type III-A shall be installed at each driveway access to Shenandoah Schools parking lot along Raider and US 36.

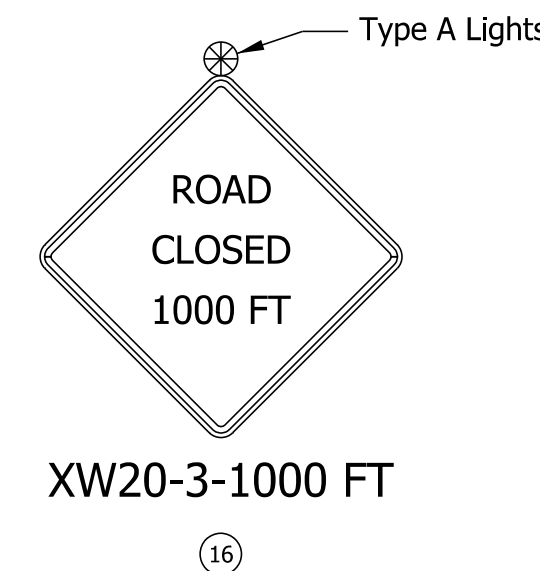
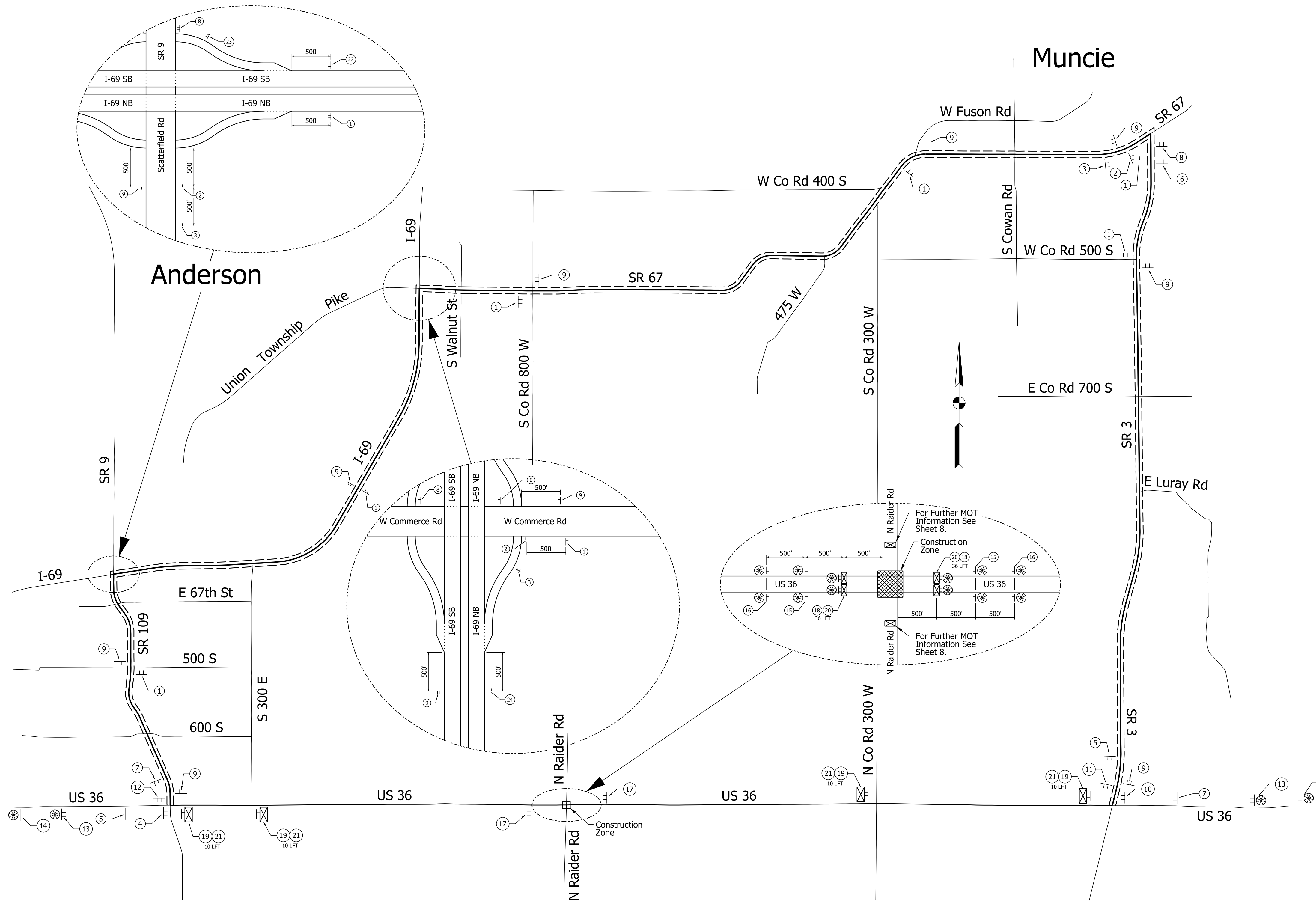
LEGEND	
	Construction Sign w/Type "A" Construction Warning Light
	Construction Sign
	Type III-A or Type III-B Barricade
	Detour Route

STAGE 2
09/06/23

RECOMMENDED FOR APPROVAL _____ 09/06/23 DESIGN ENGINEER DATE	
DESIGNED: BV 09/06/23	DRAWN: BV 09/06/23
CHECKED: RI 09/06/23	CHECKED: RI 09/06/23

INDIANA DETOUR DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC N RAIDER RD DETOUR	

SCALE NTS		BRIDGE FILE	
		DESIGNATION 2000152	
		SHEETS	
		8	of 38
CONTRACT R-43507		PROJECT 2000152	



The diagram shows a rectangular sign with rounded corners and a double border. Inside the sign, the words "ROAD" and "CLOSED" are written in large, bold, sans-serif capital letters, one above the other. Above the sign, there are two vertical posts. Each post has a circular light fixture at the top. An arrow points from the text "Type B Lights" to the right-hand light fixture. To the left of the sign, the text "E5-2A" is written.

E5-2A

Type B Lights

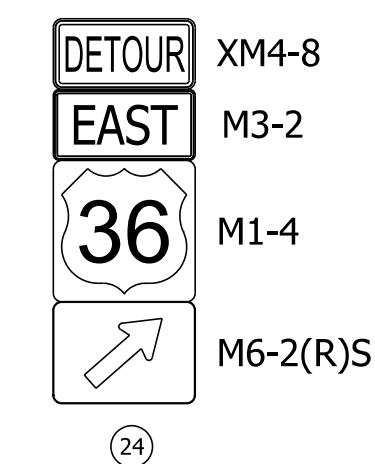
ROAD
CLOSED

RCSA
(On a Type III-A Barricade)

(20)

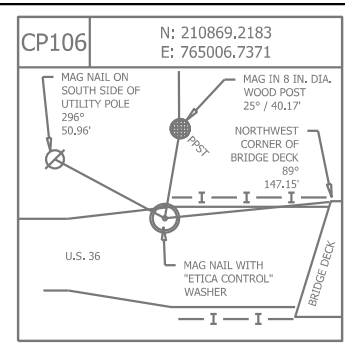
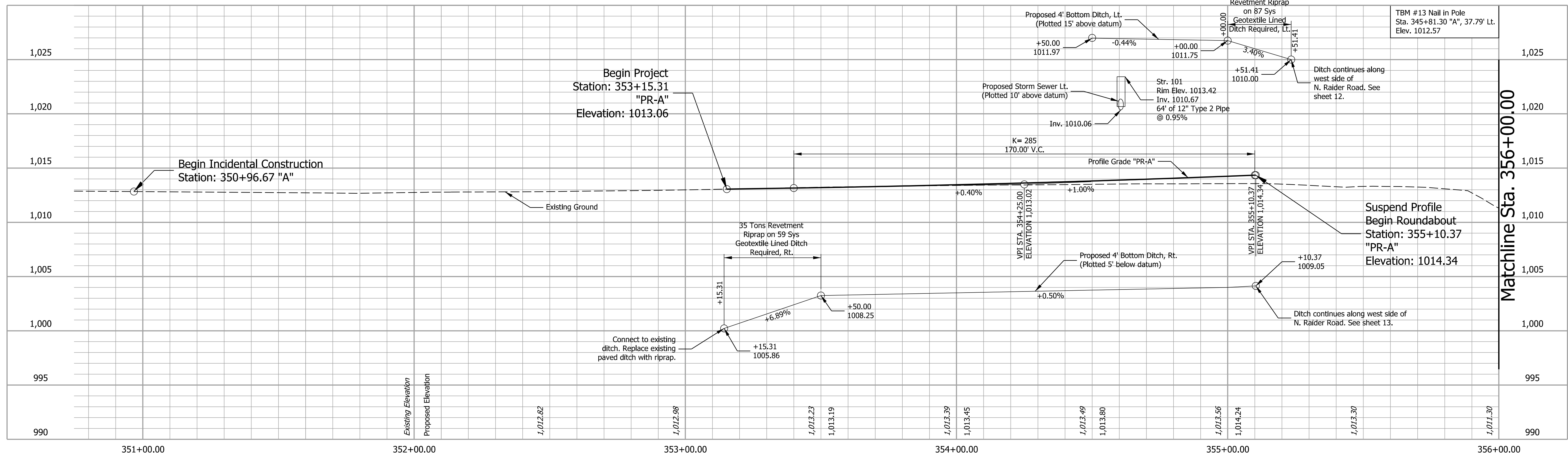
GENERAL NOTES

1. Traffic Control Devices Shall be placed in accordance with INDOT Standard Specifications, Standard Drawings, and the Indiana Manual of Uniform Traffic Control Devices.
2. Emergency Services, public schools, public transit and postal services shall be contacted a minimum of 14 days prior to beginning.
3. For additional information on detour sign placement, see Std. Dwg. E 801-TCDT-01 through 4.
4. Clearing and staking of ROW shall commence within 60 days of Notice to Proceed (NTP).
5. A 36' Barricade Type III-A shall be installed at each driveway access to Shenandoah Schools parking lot along Raider and US 36.



SCALE	BRIDGE FILE		
NTS			
	DESIGNATION		
	2000152		
	SHEETS		
	9	of	38
CONTRACT	PROJECT		
R-43507	2000152		

ALL TOPOGRAPHY ON THIS SHEET DESCRIBED FROM LINE "A" UNLESS OTHERWISE NOTED. ALL R/W ON THIS SHEET DESCRIBED FROM LINE 'A' UNLESS OTHERWISE NOTED.



STAGE 2

09/06/23

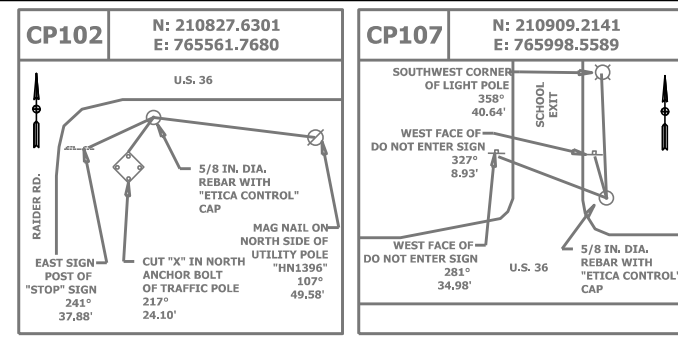
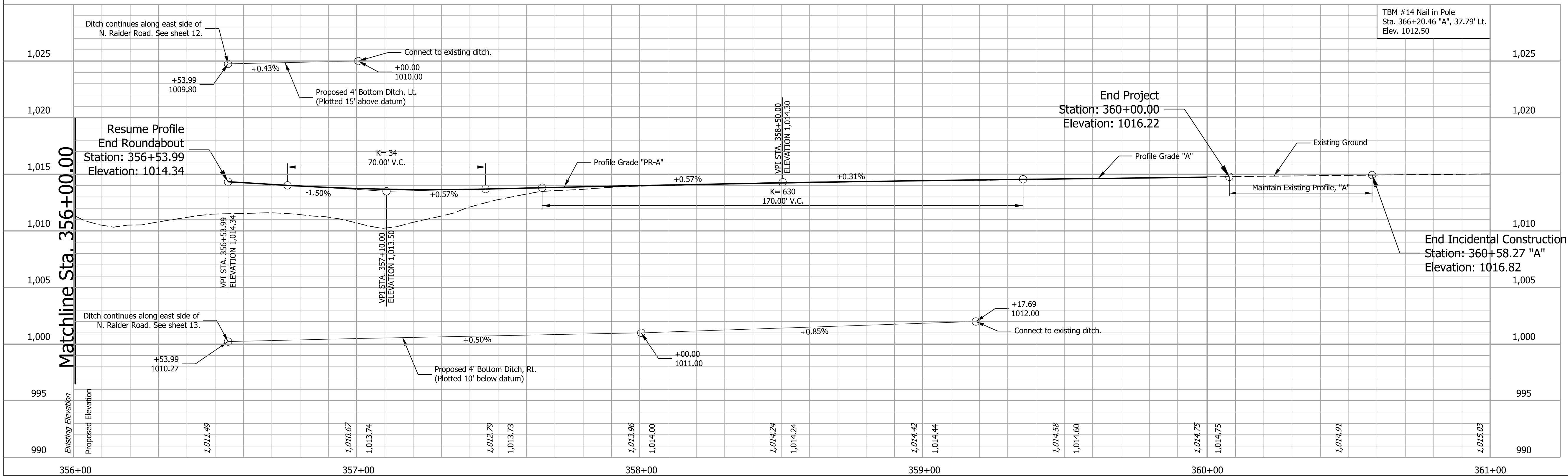
RECOMMENDED FOR APPROVAL _____		09/06/23	
DESIGN ENGINEER _____		DATE _____	
DESIGNED: <u>BV</u>	09/06/23	DRAWN: <u>BV</u>	09/06/23
CHECKED: <u>RI</u>	09/06/23	CHECKED: <u>RI</u>	09/06/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
LINE "A"

PROFILE HORIZONTAL SCALE		BRIDGE FILE	
1"=20'			
PROFILE VERTICAL SCALE		DESIGNATION	
1"=5'		2000152	
PLAN SCALE		SHEETS	
1"=20'		10	of 38
CONTRACT		PROJECT	
R-43507		2000152	

ALL TOPOGRAPHY ON THIS SHEET DESCRIBED FROM LINE "A" UNLESS OTHERWISE NOTED. ALL R/W ON THIS SHEET DESCRIBED FROM LINE 'A' UNLESS OTHERWISE NOTED.



STAGE 2

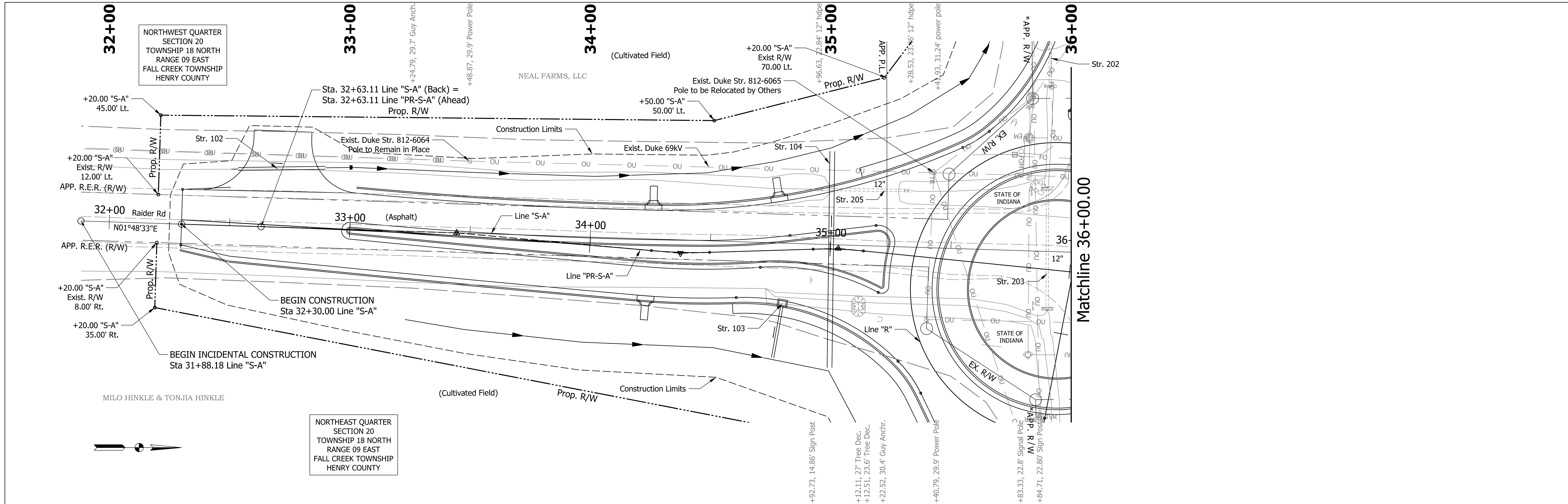
09/06/23

RECOMMENDED FOR APPROVAL		09/06/23	
		DESIGN ENGINEER	DATE
DESIGNED: BV	09/06/23	DRAWN: BV	09/06/23
CHECKED: RI	09/06/23	CHECKED: RI	09/06/23

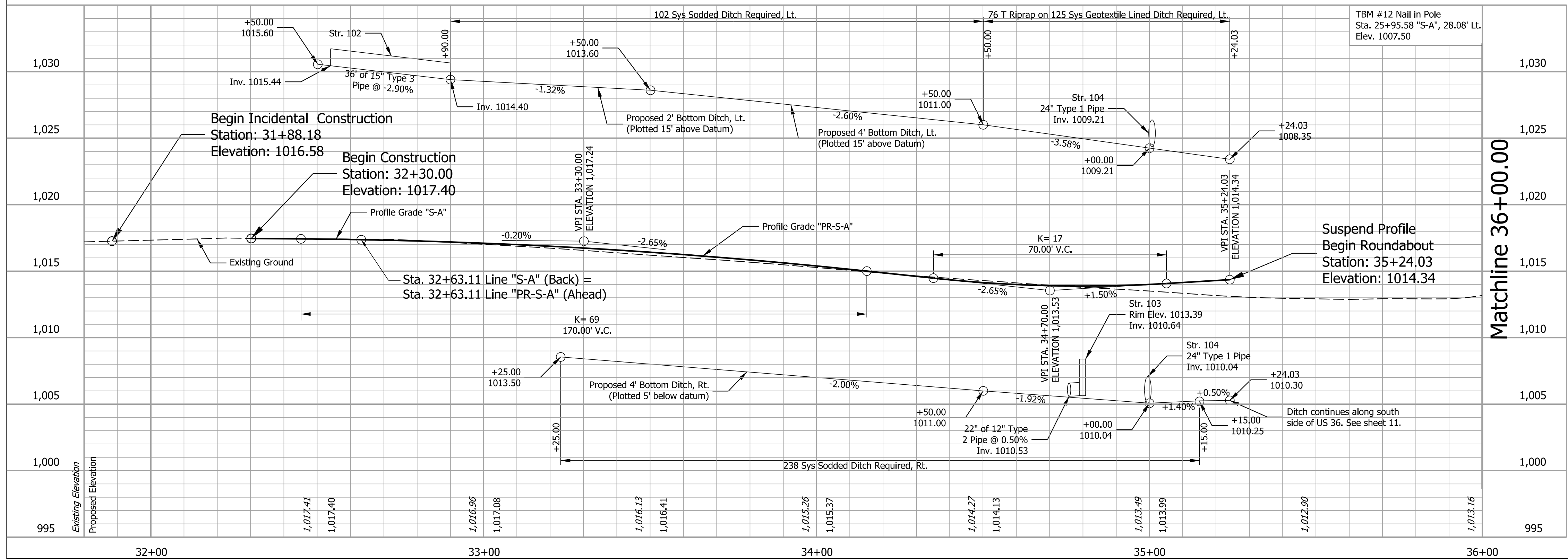
INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE LINE "A"

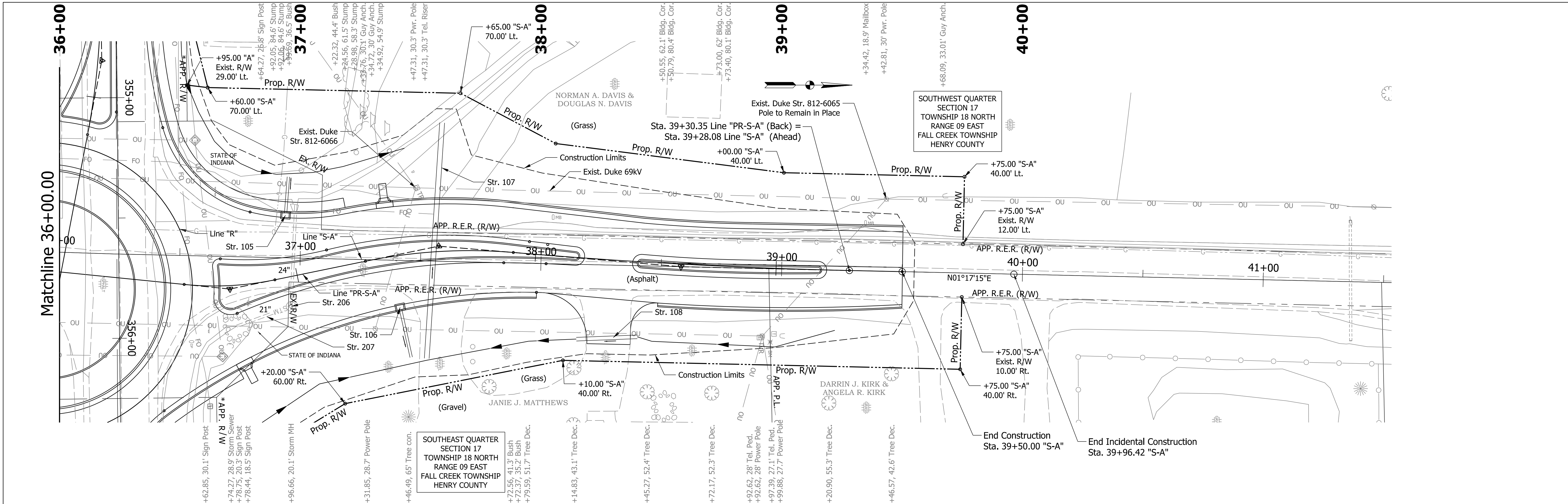
PROFILE HORIZONTAL SCALE	BRIDGE FILE		
1"=20'			
PROFILE VERTICAL SCALE	DESIGNATION		
1"=5'	2000152		
PLAN SCALE	SHEETS		
1"=20'	11	of	38
CONTRACT	PROJECT		
R-43507	2000152		



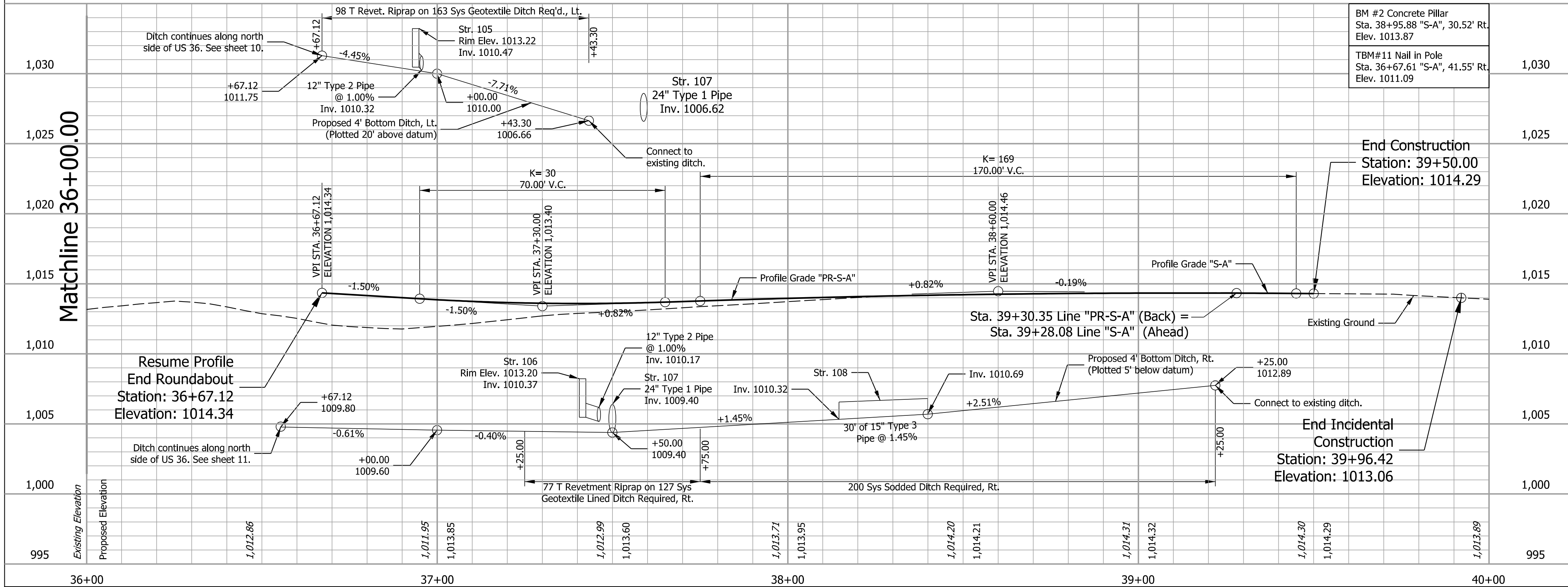
ALL TOPOGRAPHY ON THIS SHEET DESCRIBED FROM LINE "S-A" UNLESS OTHERWISE NOTED. ALL R/W ON THIS SHEET DESCRIBED FROM LINE "S-A" UNLESS OTHERWISE NOTED.



Plot: 9/6/2023 File: Model:Default	<div>CP103 N: 210209.1701 E: 755505.7836 </div>	STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL DESIGNED: BV 09/06/23 CHECKED: RI 09/06/23	09/06/23 DATE DESIGN ENGINEER 09/06/23 DRAWN: BV 09/06/23 CHECKED: RI 09/06/23	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE LINE "S-A"	PROFILE HORIZONTAL SCALE 1"=20'	BRIDGE FILE	
						PROFILE VERTICAL SCALE 1"=5'	DESIGNATION 2000152	
						PLAN SCALE 1"=20'	SHEETS 12 of 38	
						CONTRACT R-43507	PROJECT 2000152	



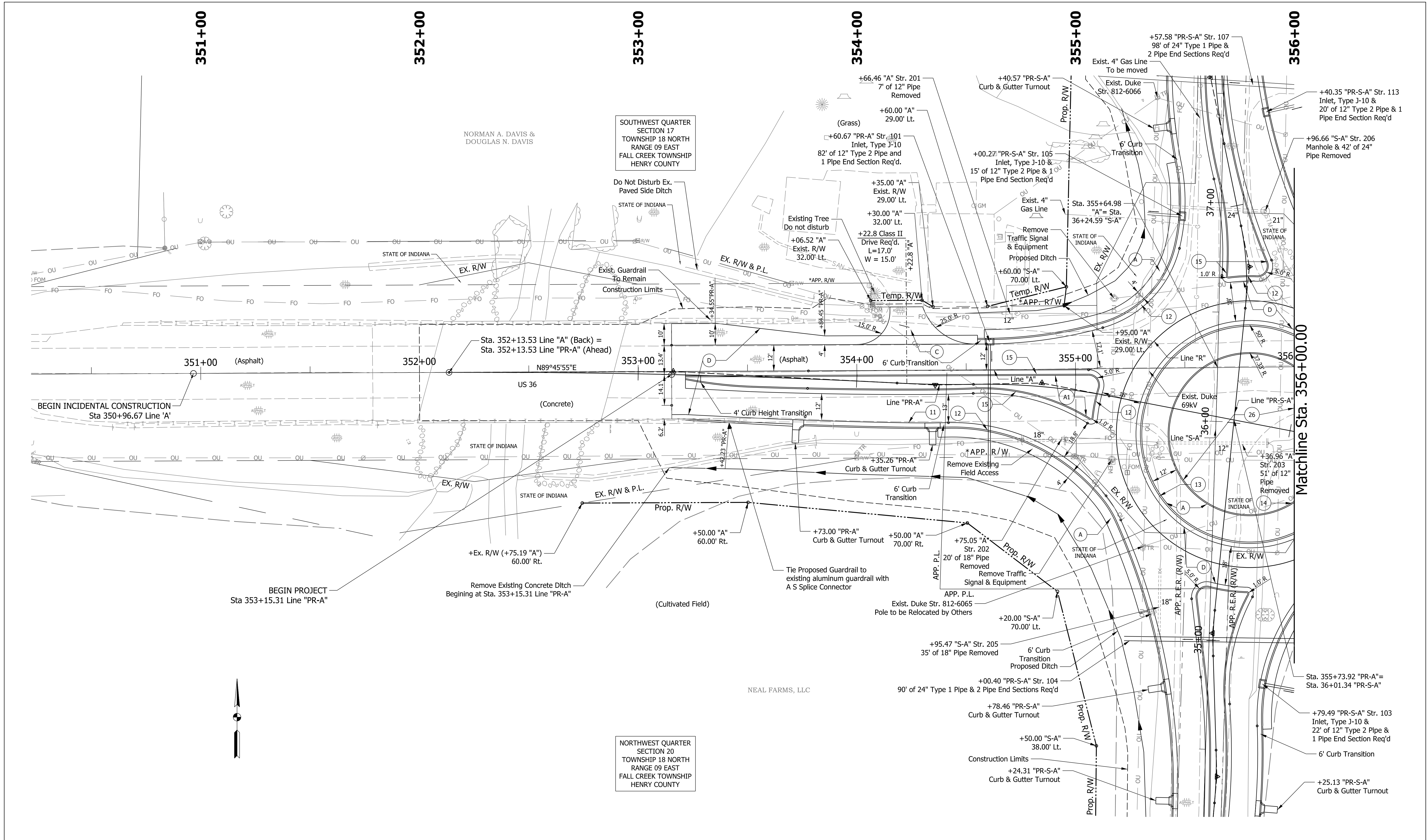
ALL TOPOGRAPHY ON THIS SHEET DESCRIBED FROM LINE "S-A" UNLESS OTHERWISE NOTED. ALL R/W ON THIS SHEET DESCRIBED FROM LINE "S-A" UNLESS OTHERWISE NOTED.



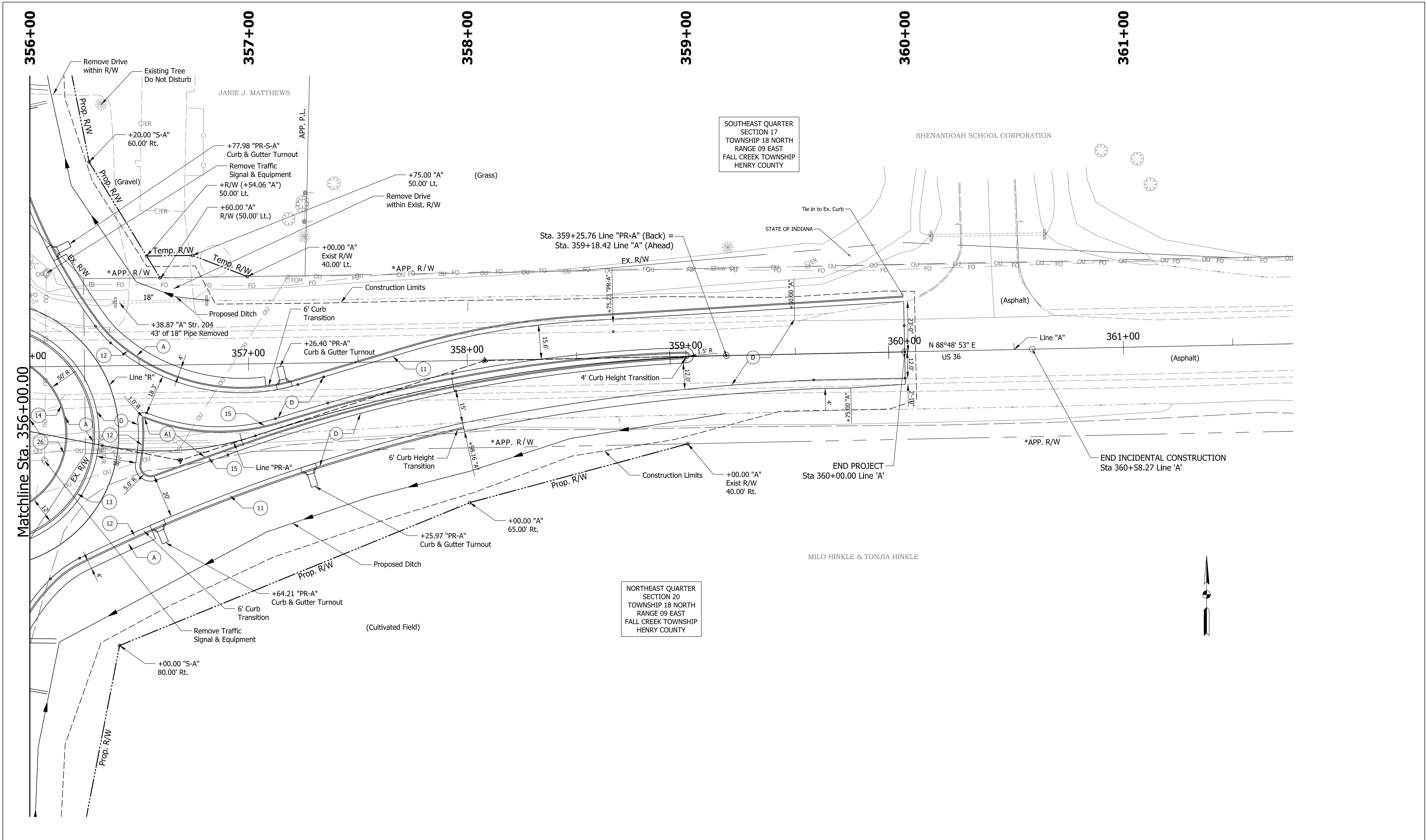
INDIANA DEPARTMENT OF TRANSPORTATION	PROFILE HORIZONTAL SCALE		BRIDGE FILE	
	1"=20'			
	PROFILE VERTICAL SCALE		DESIGNATION	
	1"=5'		2000152	
	PLAN SCALE		SHEETS	
PLAN AND PROFILE LINE "S-A"	1"=20'		13	of 38
	CONTRACT		PROJECT	
	R-43507		2000152	

STAGE 2		09/06/23	
DESIGNED: BV		09/06/23	
CHECKED: RI		09/06/23	

RECOMMENDED FOR APPROVAL		09/06/23	
DESIGN ENGINEER		DATE	
DRAWN: BV		09/06/23	
CHECKED: RI		09/06/23	



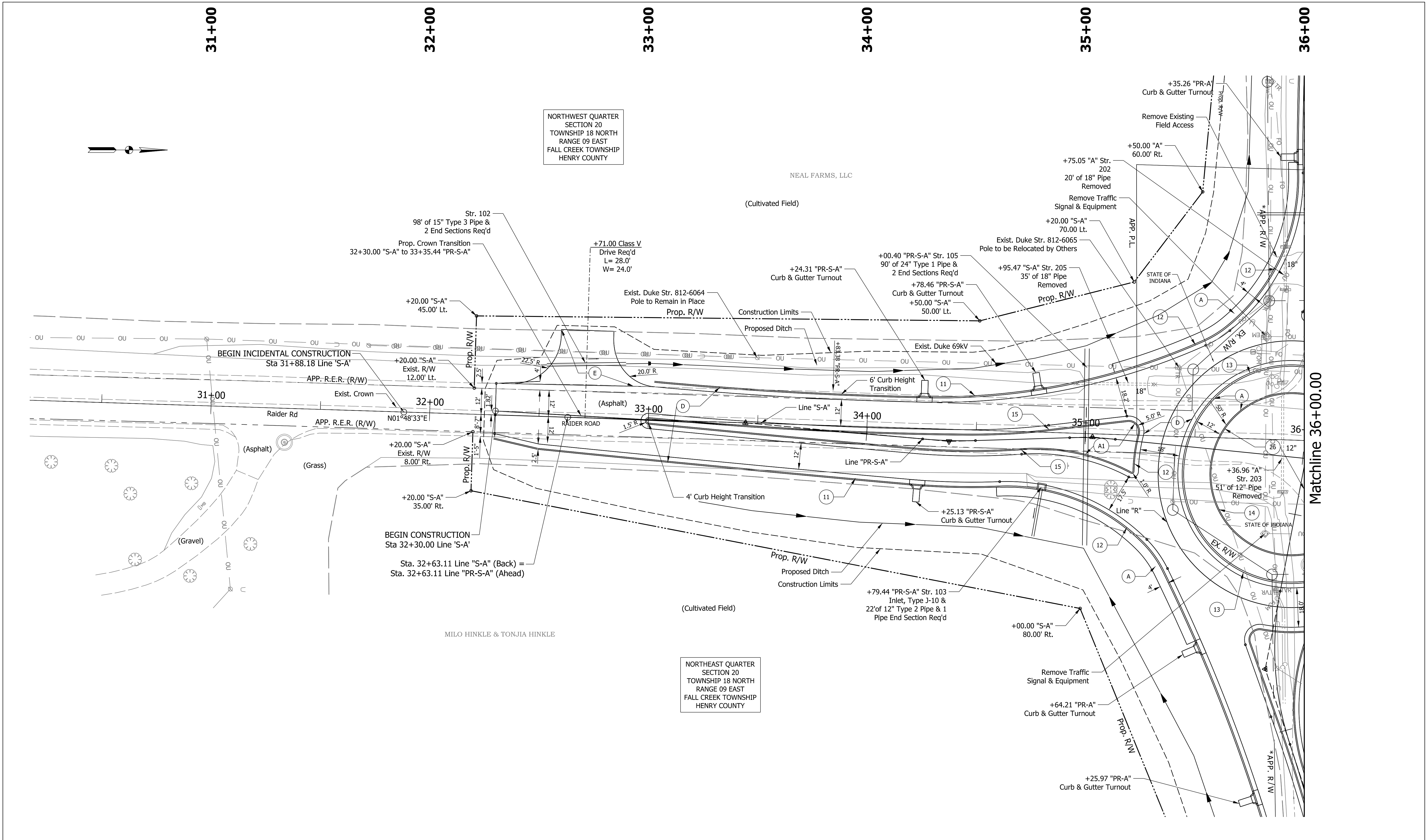
Plot: 9/6/2023 File: Model:Default	LEGEND				STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL DESIGN ENGINEER 09/06/23 DATE	INDIANA DEPARTMENT OF TRANSPORTATION CONSTRUCTION DETAIL LINE "A"		PLAN SCALE 1"=20'		BRIDGE FILE	
	(A) 8 in. PCCP (Colored), on 13 in. Compacted Aggregate No. 53 Subgrade Treatment, Type IBC	(C) PCCP for Approaches, 6 in. on Subgrade Treatment, Type II	(E) 6 in. Aggregate	(15) Curb and Gutter, B, Concrete, Modified (Inverted) Sodding on 4" of Topsoil					DESIGNATION 2000152		SHEETS	
	(A1) 8 in. PCCP (Colored), on 14 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(D) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on 275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on 385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on Subgrade Treatment, Type IBC	(11) Curb and Gutter, Concrete	(26) Sodding on 4" of Topsoil					CONTRACT R-43507		PROJECT 2000152	
		(12) Curb and Gutter, B, Concrete	(13) Curb and Gutter, B, Concrete, Modified (Inverted) (2")	(27) Mulched Seeding R					14 of 38			



LEGEND				STAGE 2 09/06/23	INDIANA DEPARTMENT OF TRANSPORTATION CONSTRUCTION DETAIL LINE "A"		PLAN SCALE 1"=20'		BRIDGE FILE	
(A) 8 in. PCCP (Colored), on 13 in. Compacted Aggregate No. 53 Subgrade Treatment, Type IBC	(C) PCCP for Approaches, 6 in. on Subgrade Treatment, Type II	(E) 6 in, Aggregate	(15) Curb and Gutter, B, Concrete, Modified (Inverted) Sodding on 4" of Topsoil				DESIGNATION 2000152		SHEETS 15 of 38	
(A1) 8 in. PCCP (Colored), on 14 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(D) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on 275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on 385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 6 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(11) Curb and Gutter, Concrete	(26) Mulched Seeding R				CONTRACT R-43507		PROJECT 2000152	
	(12) Curb and Gutter, B, Concrete	(13) Curb and Gutter, B, Concrete, Modified (Inverted) (2")								

Plot: 9/6/2023

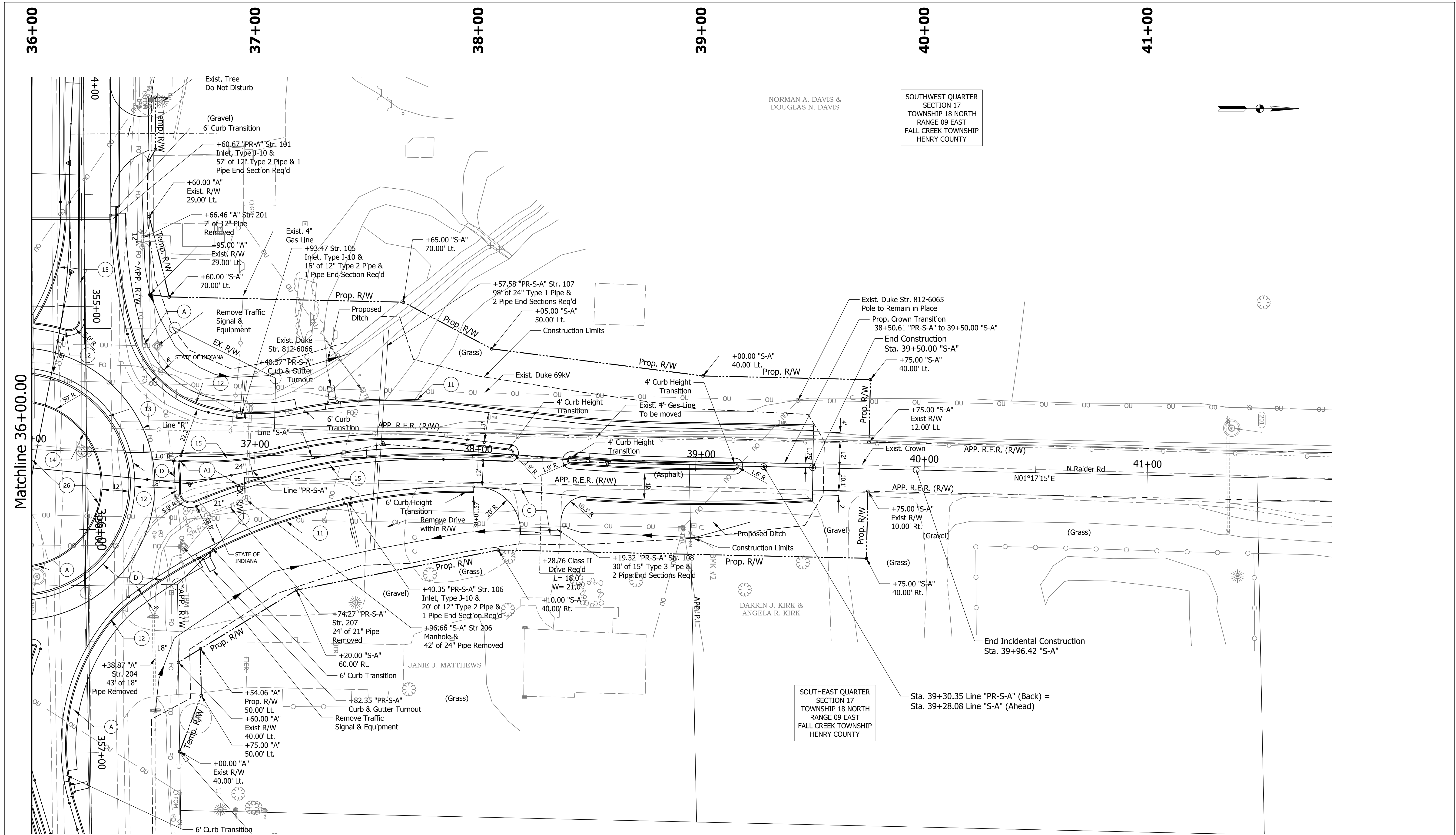
File: Model:Default



LEGEND				STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL DESIGN ENGINEER 09/06/23 DATE		INDIANA DEPARTMENT OF TRANSPORTATION CONSTRUCTION DETAIL LINE "S-A"		PLAN SCALE 1"=20'	BRIDGE FILE
(A)	8 in. PCCP (Colored), on 13 in. Compacted Aggregate No. 53 Subgrade Treatment, Type IBC	(C)	PCCP for Approaches, 6 in. on Subgrade Treatment, Type II							DESIGNATION 2000152
(A1)	8 in. PCCP (Colored), on 14 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(D)	220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on 275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on 385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 6 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(E)	6 in, Aggregate	(11)	Curb and Gutter, Concrete	(12)	Curb and Gutter, B, Concrete	SHEETS 16 of 38
				(13)	Curb and Gutter, B, Concrete, Modified (Inverted) (2")	(14)	Curb, Integral, Concrete	(15)	Curb and Gutter, B, Concrete, Modified (Inverted) Sodding on 4" of Topsoil	PROJECT 2000152

Plot: 9/6/2023

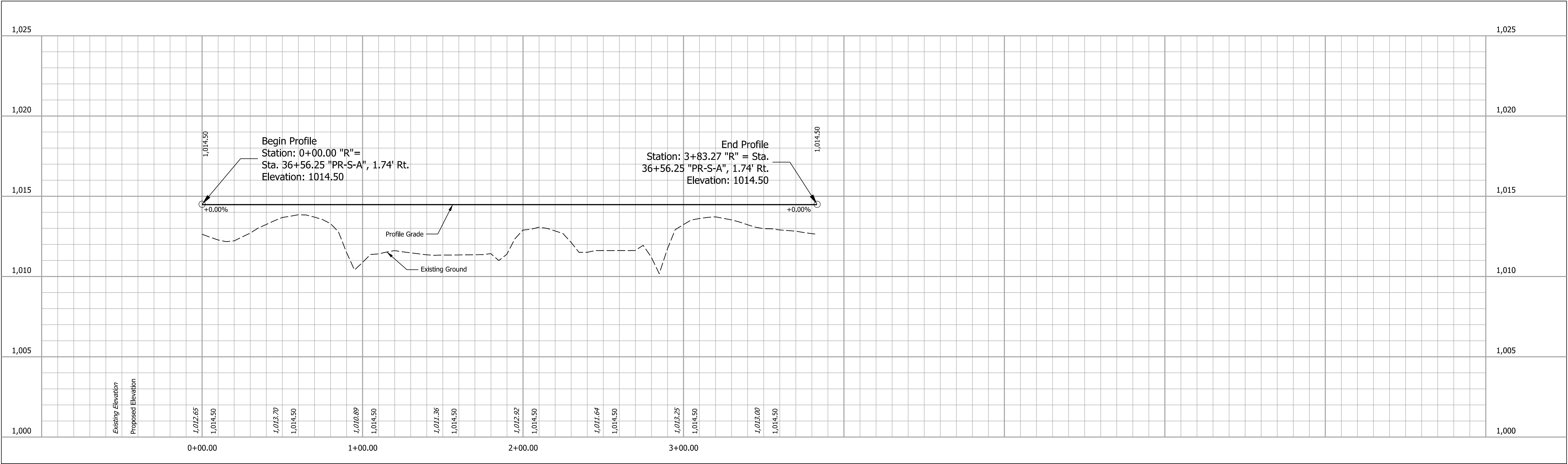
File:
Model:Default



LEGEND				INDIANA DEPARTMENT OF TRANSPORTATION		PLAN SCALE 1"=20'	BRIDGE FILE
(A) 8 in. PCCP (Colored), on 13 in. Compacted Aggregate No. 53 Subgrade Treatment, Type IBC	(C) PCCP for Approaches, 6 in. on Subgrade Treatment, Type II	(E) 6 in. Aggregate	(15) Curb and Gutter, B, Concrete, Modified (Inverted) Sodding on 4" of Topsoil	STAGE 2	RECOMMENDED FOR APPROVAL		DESIGNATION 2000152
(A1) 8 in. PCCP (Colored), on 14 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(D) 220 lb/syd QC/QA HMA, 3, 76, Surface, 9.5 mm, on 275 lb/syd QC/QA HMA, 3, 76, Intermediate, 19.0 mm, on 385 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 440 lb/syd QC/QA HMA, 3, 64, Base, 25.0 mm, on 6 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC	(11) Curb and Gutter, Concrete	(26) Mulched Seeding R	09/06/23	DESIGNED: BV 09/06/23 CHECKED: RI 09/06/23	DRAWN: BV 09/06/23 CHECKED: RI 09/06/23	SHEETS 17 of 38 PROJECT 2000152
		(12) Curb and Gutter, B, Concrete					
		(13) Curb and Gutter, B, Concrete, Modified (Inverted) (2")					
		(14) Curb, Integral, Concrete					

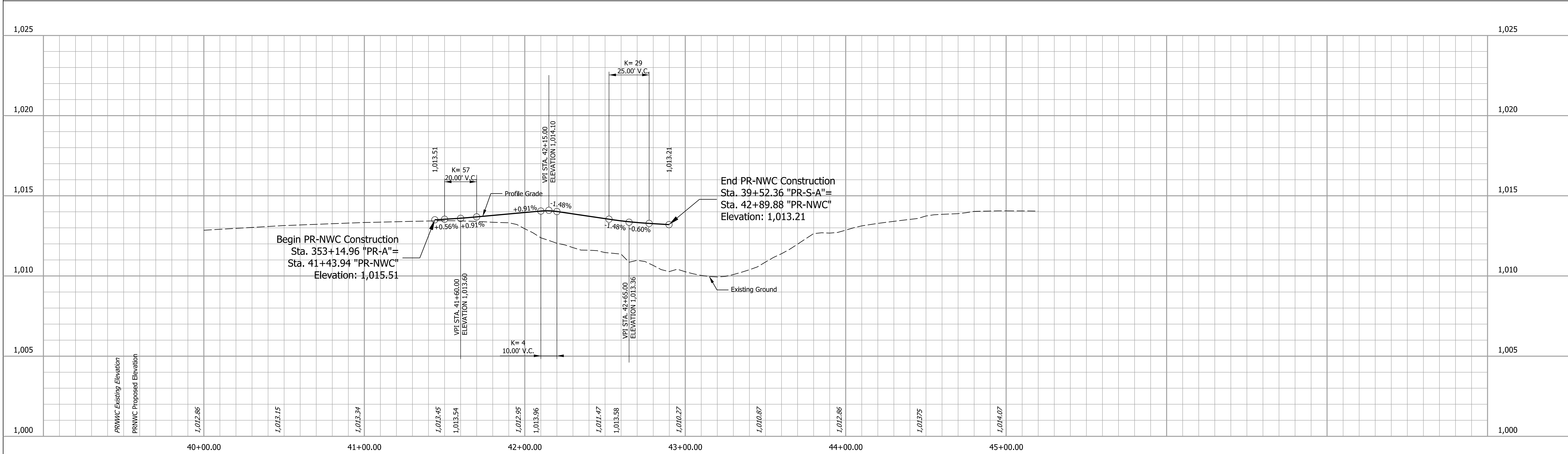
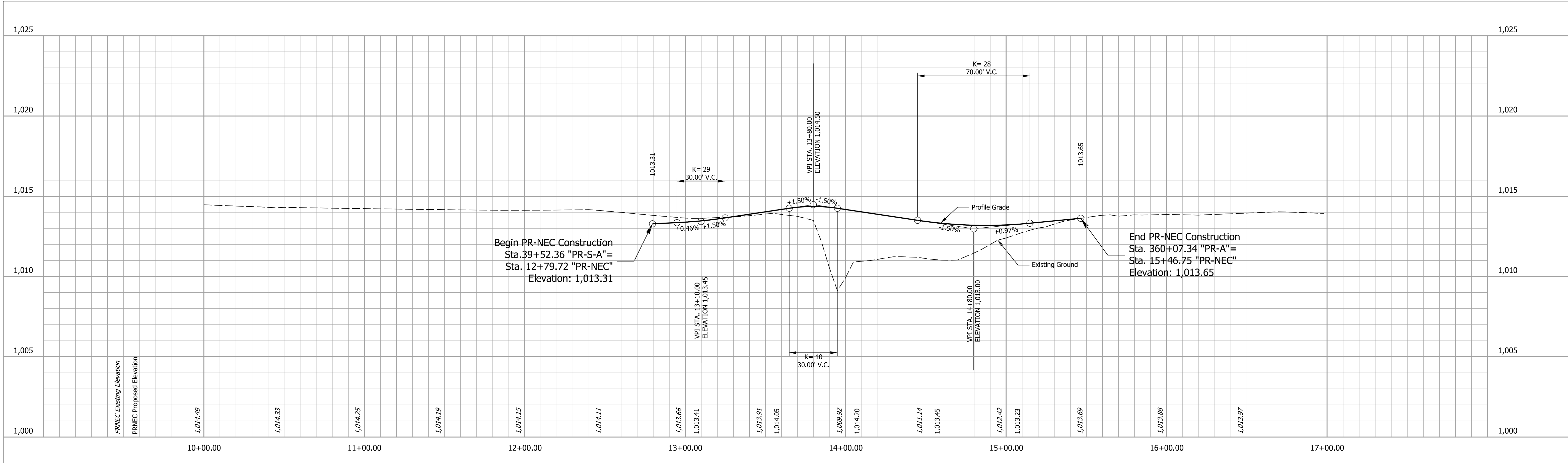
Plot: 9/6/2023

File:
Model:Default



Plot: 9/6/2023						STAGE 2	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE 09/06/23		INDIANA DEPARTMENT OF TRANSPORTATION		PROFILE HORIZONTAL SCALE 1"=50'		BRIDGE FILE	
						09/06/23	DESIGNED: BV _____ 09/06/23		US 36 AND RAIDER RD ROUNDAABOUT PROFILE LINE "R"		PROFILE VERTICAL SCALE 1"=5'		DESIGNATION 2000152	
							DRAWN: BV _____ 09/06/23				SHEETS			
							CHECKED: RI _____ 09/06/23				19 of 38			
							CHECKED: RI _____ 09/06/23				CONTRACT R-43507		PROJECT 2000152	

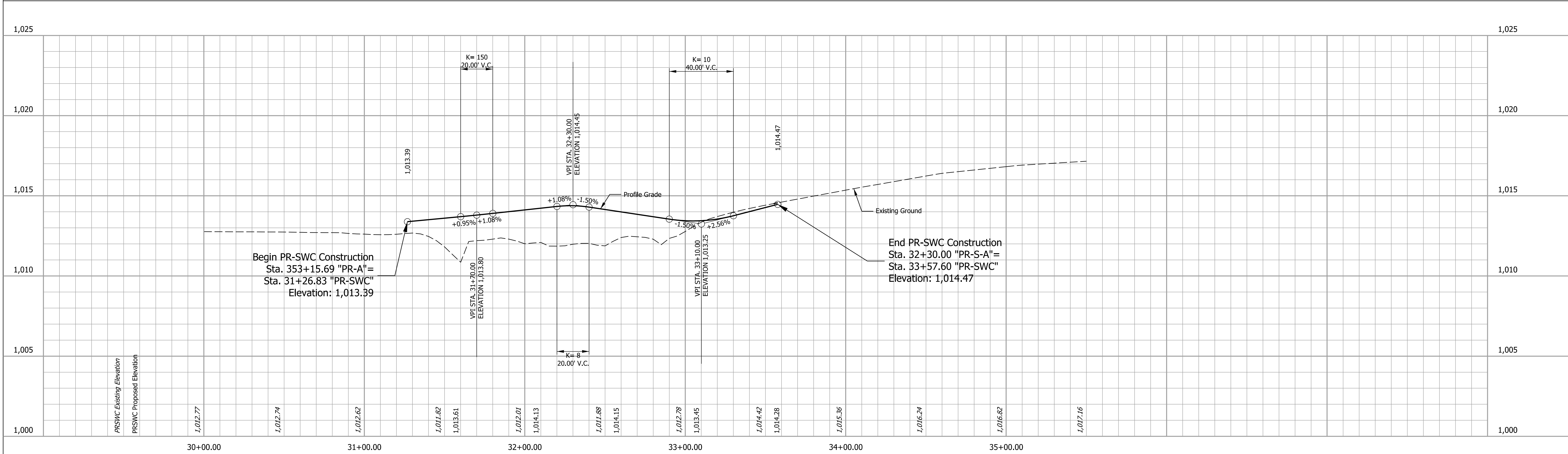
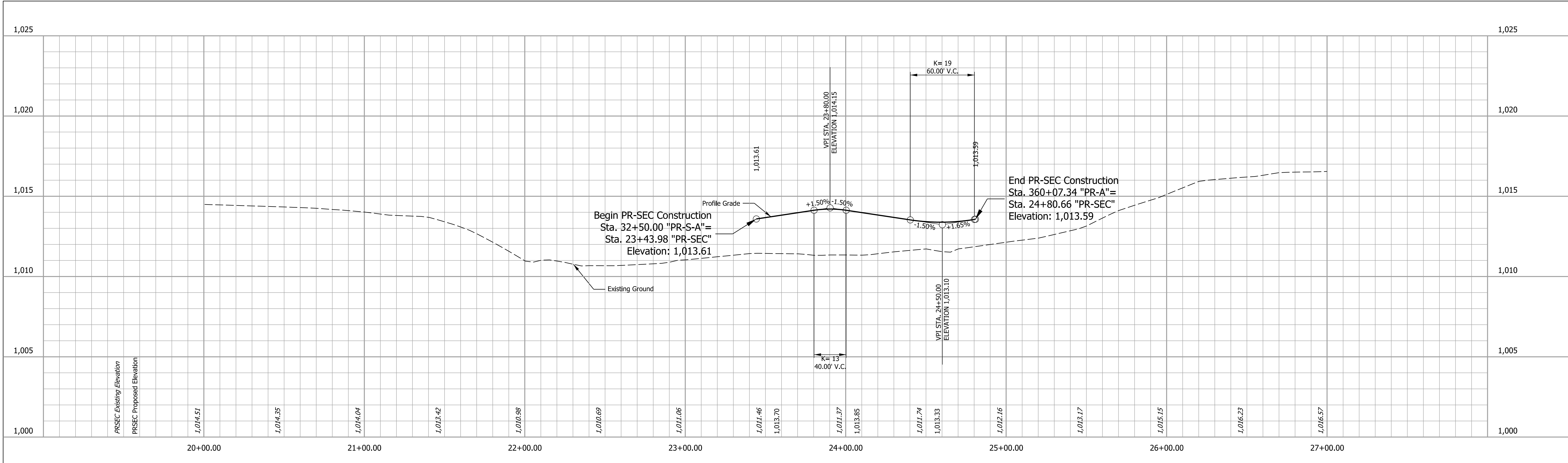
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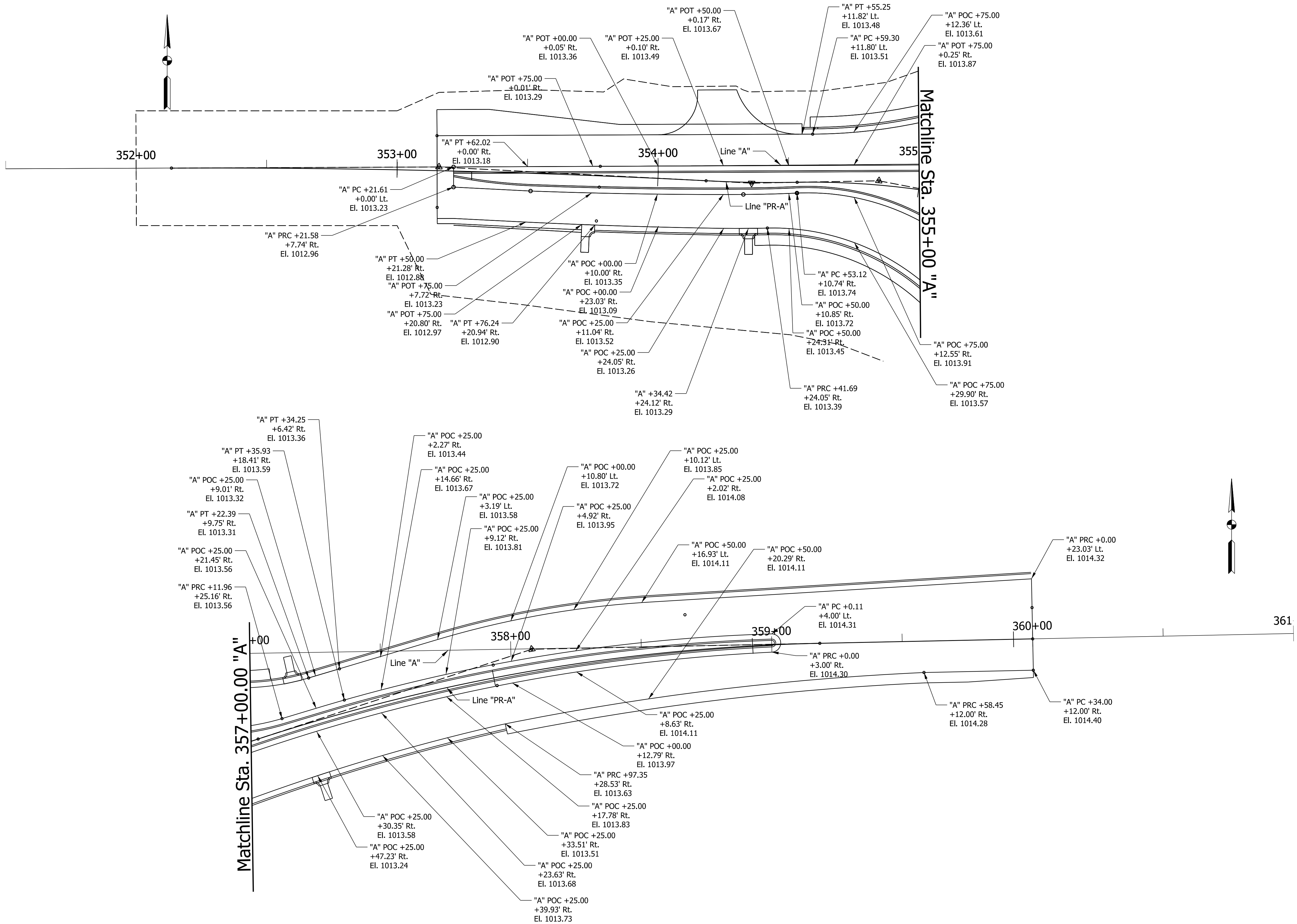
					STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL _____ 09/06/23 DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION		PROFILE HORIZONTAL SCALE 1"=50'		BRIDGE FILE		
						DESIGNED: BV 09/06/23 DRAWN: BV 09/06/23 CHECKED: RI 09/06/23 CHECKED: RI 09/06/23	LINE "PR-NWC"/LINE "PR-NEC" NORTH CURB PROFILES		CONTRACT R-43507		PROFILE VERTICAL SCALE 1"=5'		DESIGNATION 2000152	
											SHEETS		20 of 38	
											PROJECT		2000152	

Plot: 9/6/2023

File:
Model:Default



Plot: 9/6/2023 File: Model:Default					STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL _____ 09/06/23 DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION US 36 SOUTH CORNER PROFILES	PROFILE HORIZONTAL SCALE		BRIDGE FILE				
									1"=50'						
									PROFILE VERTICAL SCALE		DESIGNATION				
									1"=5'		2000152				
											SHEETS				
									21		of		38		
									CONTRACT		PROJECT				
									R-43507		2000152				



Plot: 9/6/2023

File:
Model:Default

STAGE 2

09/06/23

RECOMMENDED
FOR APPROVAL _____ 09/06/23
DESIGN ENGINEER DATE

DESIGNED: BV 09/06/23 DRAWN: BV 09/06/23

CHECKED: RI 09/06/23 CHECKED: RI 09/06/23

INDIANA
DEPARTMENT OF TRANSPORTATION

SPOT ELEVATION PLAN
LINE "A"

SCALE

1"=20'

BRIDGE FILE

DESIGNATION

2000152

SHEETS

22

of

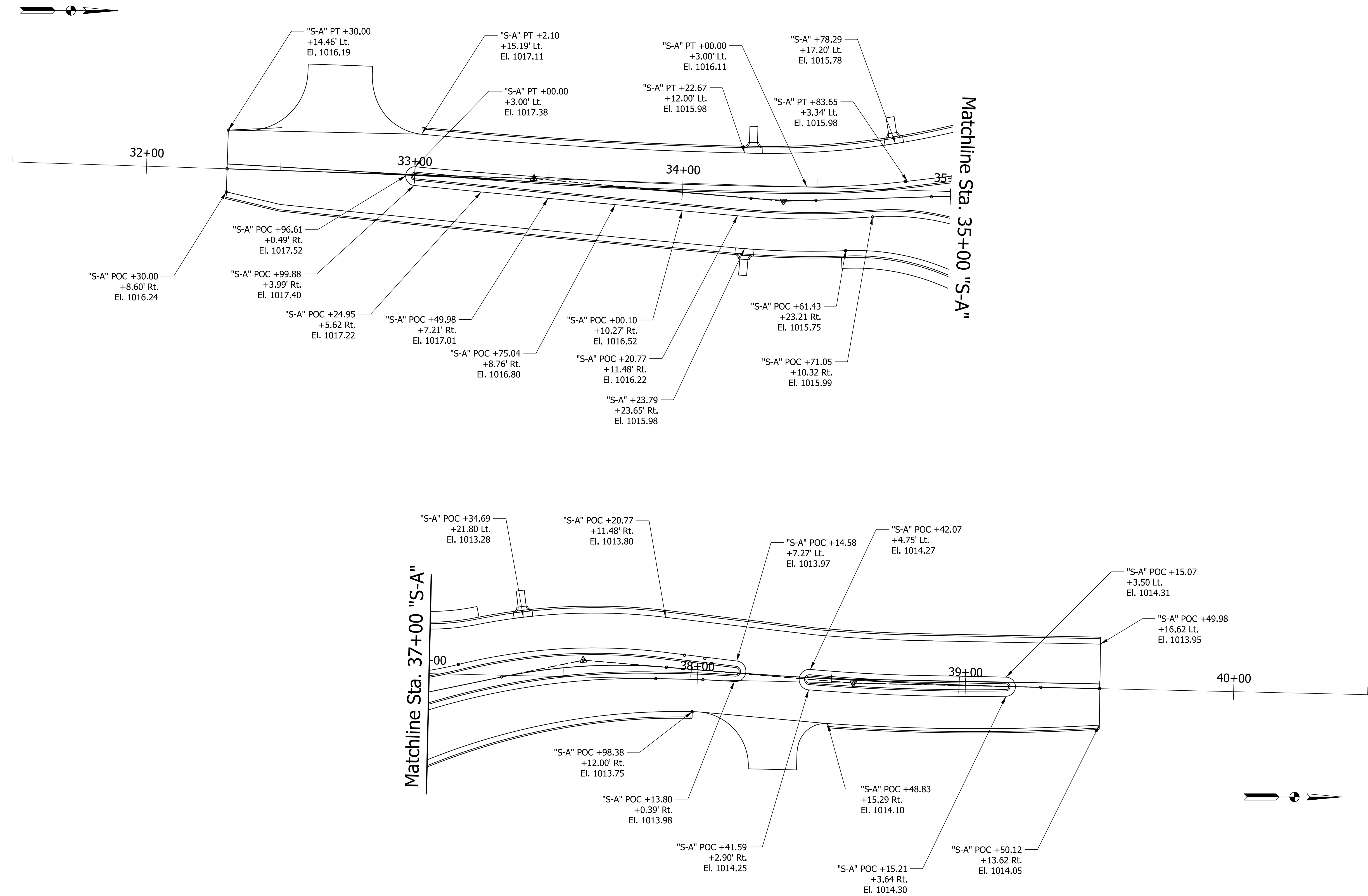
38

CONTRACT

R-43507

PROJECT

2000152



Plot: 9/6/2023

File:
Model:Default

STAGE 2
09/06/23

RECOMMENDED FOR APPROVAL _____		09/06/23	
DESIGNED: BV		09/06/23	
CHECKED: RI		09/06/23	

INDIANA
DEPARTMENT OF TRANSPORTATION

SPOT ELEVATION PLAN
LINE "S-A"

SCALE
1"=20'

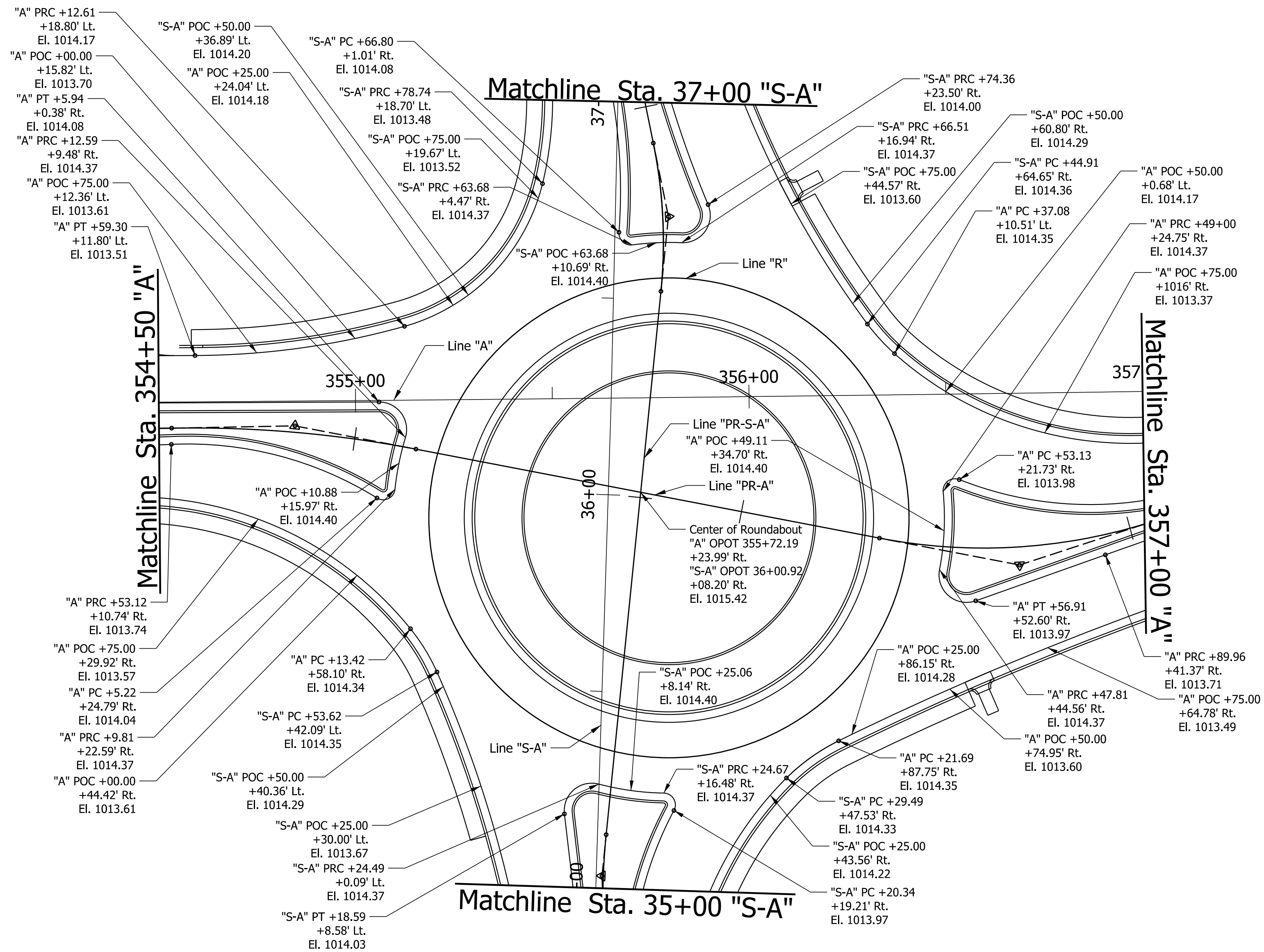
BRIDGE FILE

DESIGNATION
2000152

SHEETS
23 of 38

CONTRACT
R-43507

PROJECT
2000152



Plot: 9/6/2023

File:
Model:Default

STAGE 2

09/06/23

RECOMMENDED
FOR APPROVAL _____ 09/06/23
DESIGN ENGINEER DATE

DESIGNED: BV 09/06/23 DRAWN: BV 09/06/23

CHECKED: RI 09/06/23 CHECKED: RI 09/06/23

INDIANA
DEPARTMENT OF TRANSPORTATION

US 36 AND RAIDER RD
SPOT ELEVATION PLAN

SCALE

1"=20'

BRIDGE FILE

DESIGNATION

2000152

SHEETS

24 of 38

CONTRACT

R-43507

PROJECT

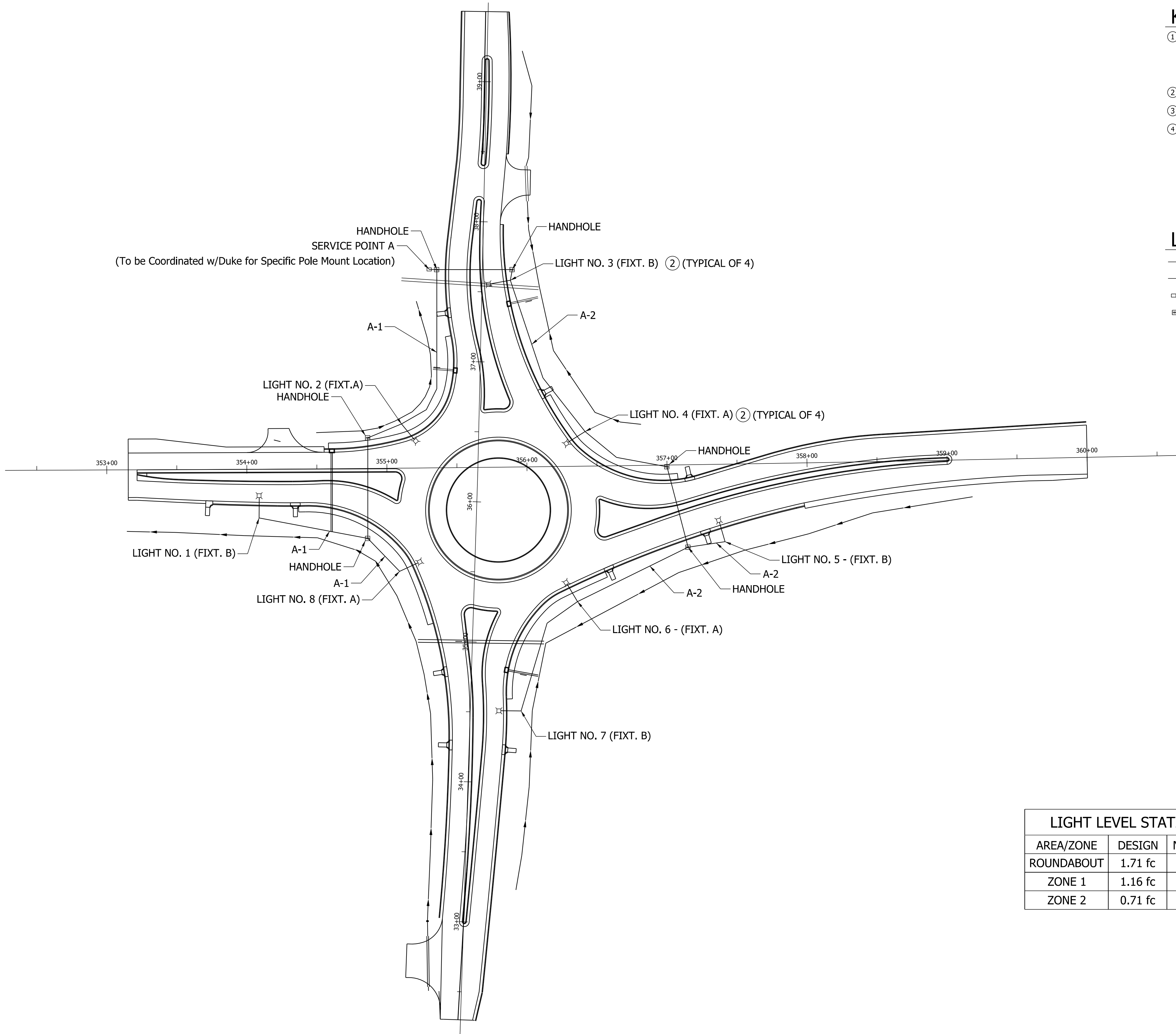
2000152

KEYNOTES

- ① Electric Service Point Type I, 120/240V. Mount to Existing Pole Per Utilities Request. Refer to INDOT Light Service Point Standard Drawings E807-LTSP.
- ② Roadway Light Fixture.
- ③ Cable Duct Wire #4 Cu in Plastic Duct 4-1/C
- ④ Provide 3" Galvanized Rigid Conduit Sleeve Under Road for Cable Duct.

LEGEND

- x LED Luminaire and Pole
- Conduit and Cabling
- Service Point Type I
- Handhole



LIGHT LEVEL STATISTICS		
AREA/ZONE	DESIGN	NCHRP 1043
ROUNDABOUT	1.71 fc	1.70 fc
ZONE 1	1.16 fc	1.20 fc
ZONE 2	0.71 fc	0.70 fc

Plot: 9/6/2023

File: Model:Default

STAGE 2
09/06/23

RECOMMENDED FOR APPROVAL _____		09/06/23	
DESIGN ENGINEER		DATE	
DESIGNED: BV	09/06/23	DRAWN: BV	09/06/23
CHECKED: RI	09/06/23	CHECKED: RI	09/06/23

INDIANA
DEPARTMENT OF TRANSPORTATION

US 36 AND RAIDER RD
LIGHTING PLAN

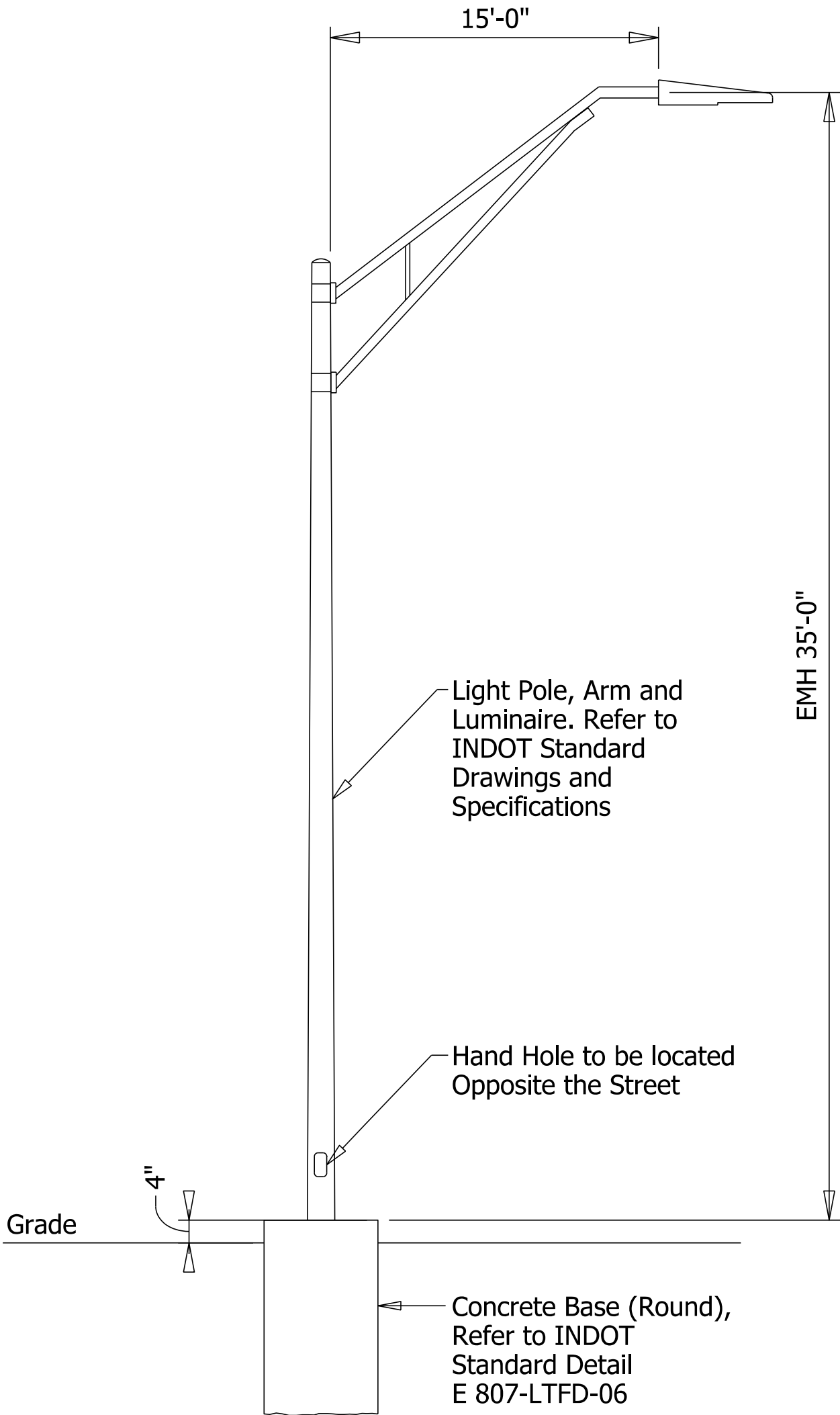
SCALE 1"=40'		BRIDGE FILE	
		DESIGNATION 2000152	
		SHEETS 25 of 38	
CONTRACT R-43507		PROJECT 2000152	

LUMINAIRE AND POLE INFORMATION SCHEDULE								
LUMINAIRE NO.	1	2	3	4	5	6	7	8
CIRCUIT NO.	A-1	A-1	A-2	A-2	A-2	A-2	A-2	A-1
CIRCUIT CONNECTION (R-RED, B-BLACK)	B	R	B	R	B	R	B	R
STATION	354+09 14' RT	355+11 32' LT	37+58 20' RT	356+42 25' LT	357+37 16' RT	35+29 74' RT	34+51 16' RT	35+51 54' LT

LIGHTING FIXTURE SCHEDULE						
SERVICE POINT	SERVICE TYPE	VOLTAGE	MAIN BREAKER	BRANCH CIRCUIT COLOR	BRANCH CIRCUIT DESIGN LOAD	BRANCH CIRCUIT BREAKER
A	--	120/240V	--	BLACK RED	-- --	-- --

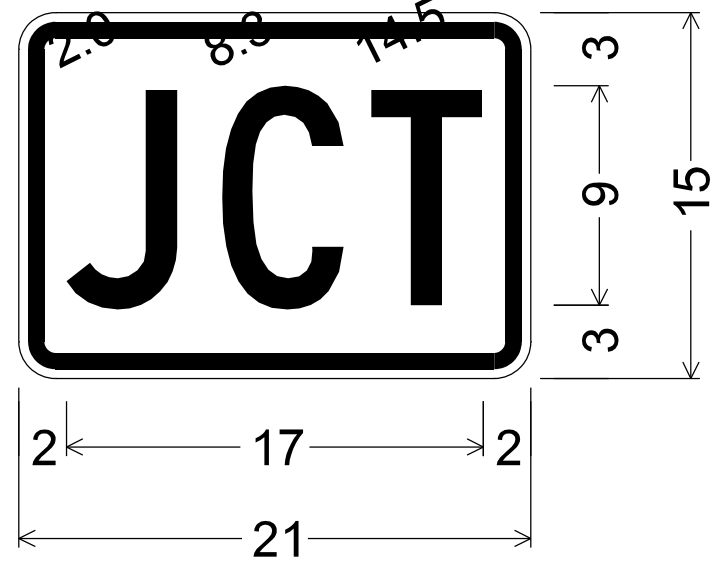
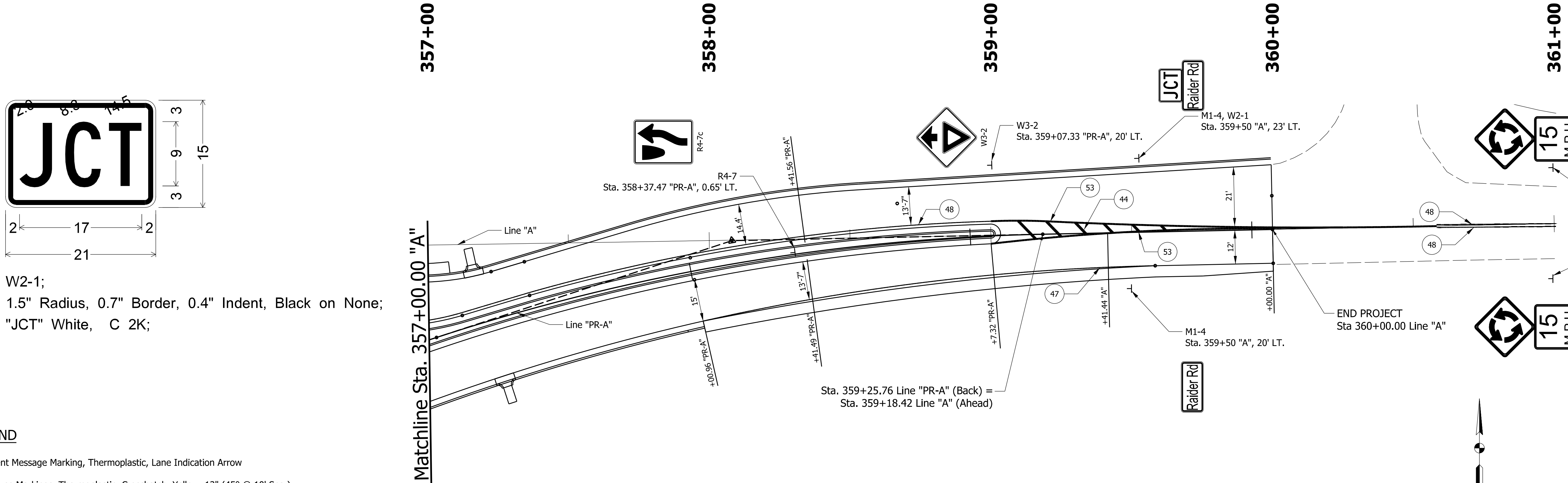
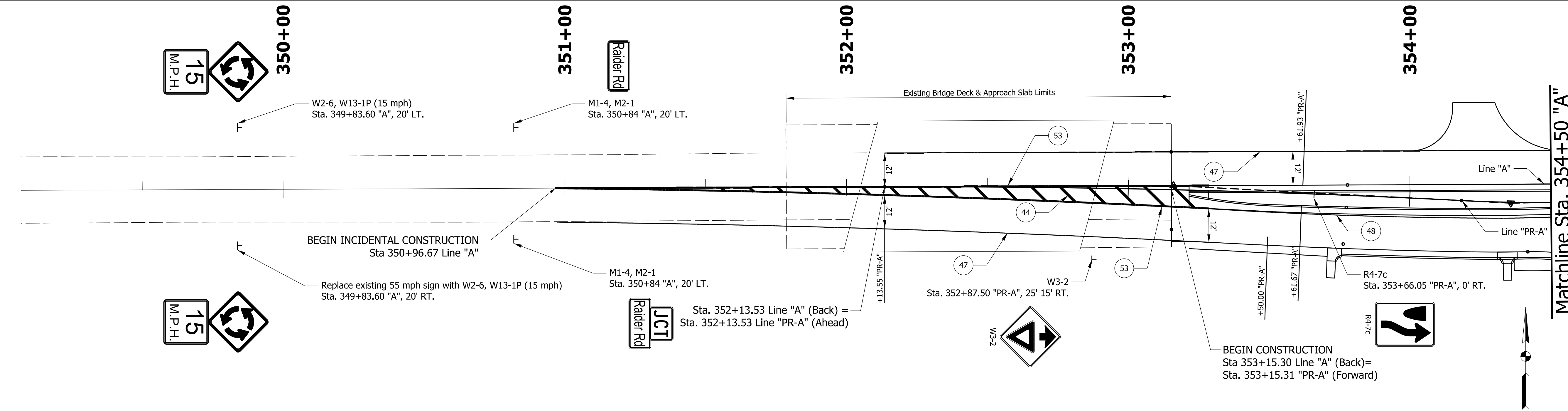
LIGHTING FIXTURE SCHEDULE								
TYPE	SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	LAMP	VOLTAGE	MOUNTING	REMARKS
A	⚡	INDOT STANDARD LED	AMERICAN ELECTRIC LIGHTING	ATB0-P302-MVOLT-R3-4K	LED	120	ARM	--
A		INDOT STANDARD 15' ARM E-807-LTST	--	--	--	--	--	--
A		INDOT STANDARD 30' POLE E-807-LTST	--	--	--	--	--	--
A		FRANGIBLE BASE	AKRON	--	--	--	--	COORDINATE WITH BOLT CIRCLE OF POLE
B	⚡	INDOT STANDARD LED	AMERICAN ELECTRIC LIGHTING	ATB0-P203-MVOLT-R3-4K	LED	120	ARM	--
B		INDOT STANDARD 15' ARM E-807-LTST	--	--	--	--	--	--
B		INDOT STANDARD 30' POLE E-807-LTST	--	--	--	--	--	--
B		FRANGIBLE BASE	AKRON	--	--	--	--	COORDINATE WITH BOLT CIRCLE OF POLE

LUMINAIRE DESIGN DATA TABLE	
LUMINAIRE STYLE	INDOT STANDARD
LAMP TYPE	70W-83W. LED, 1300 mA
DESIGN SAMPLE PHOTOMETRIC CURVE	ATBO SERIES 70W-83W LED 1300mA TYPE 3 4000K CCT
EFFECTIVE MOUNTING HEIGHT (EMH)	35
LUMINAIRE CLASSIFICATION (IES)	ATBO SERIES 70W-83W LED 1300mA TYPE 3 4000K CCT
VOLTAGE	120/240V
LUMINAIRE LOAD OPERATING AMPS (VARIES DEPENDING ON MANUFACTURER)	1.1A
INITIAL LAMP LUMENS (LL)	4000K
DESIGN SOFTWARE	AGI32
AVERAGE MAINTAINED ILLUMINATION (Eh)	1.10 fc



LIGHT POLE DETAIL
SCALE: Not to Scale

Plot: 9/6/2023 File: Model:Default	STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL _____ 09/06/23 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE NTS	
		DESIGNED: _NSK_ 09/06/23 DRAWN: _NSK_ 09/06/23	LIGHTING DETAILS AND SCHEDULES	DESIGNATION 2000152	
		CHECKED: _JH_ 09/06/23 CHECKED: _JH_ 09/06/23		SHEETS 26 of 38	
				CONTRACT R-43507	PROJECT 2000152



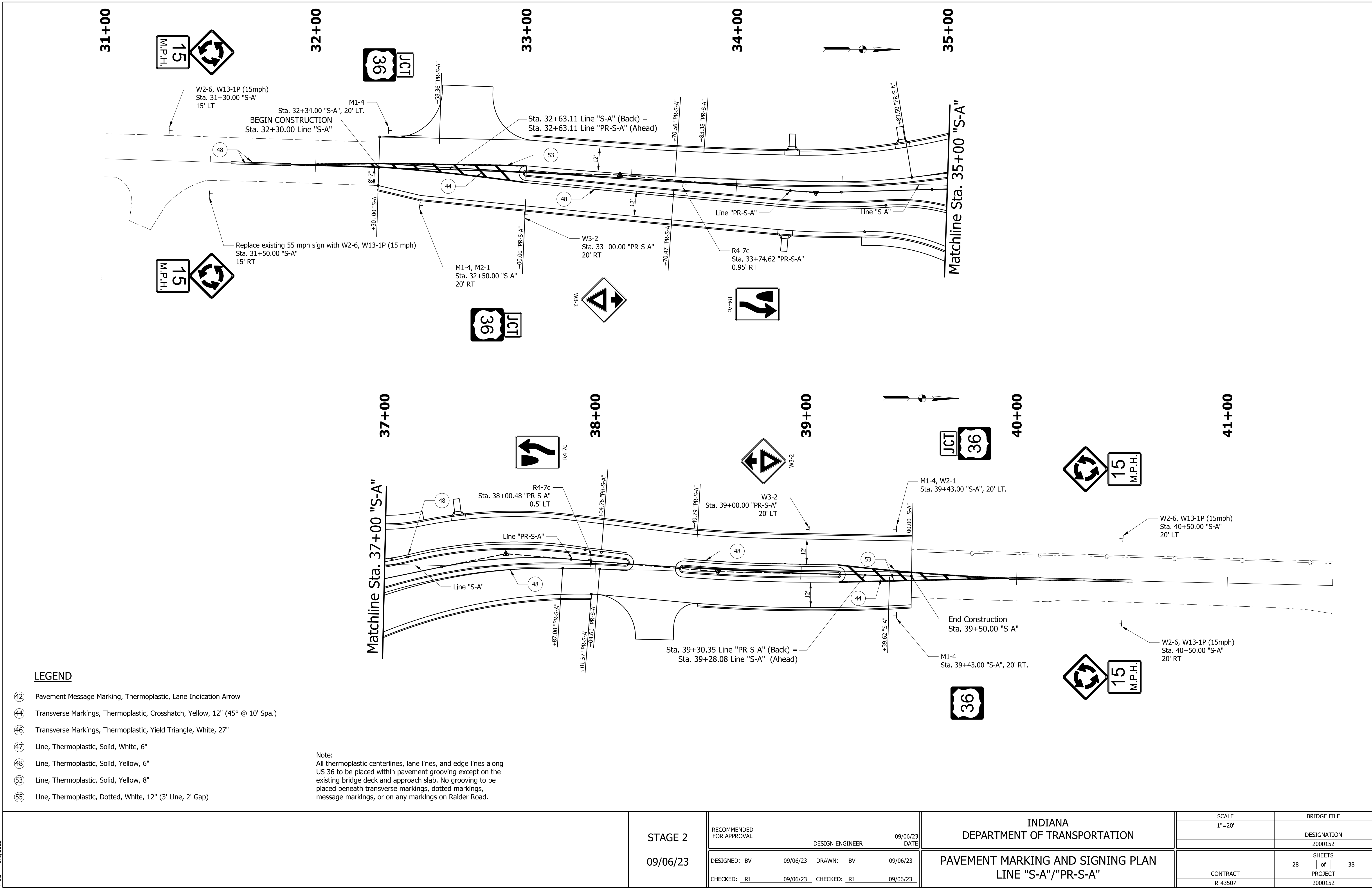
W2-1;
1.5" Radius, 0.7" Border, 0.4" Indent, Black on None;
"JCT" White, C 2K;

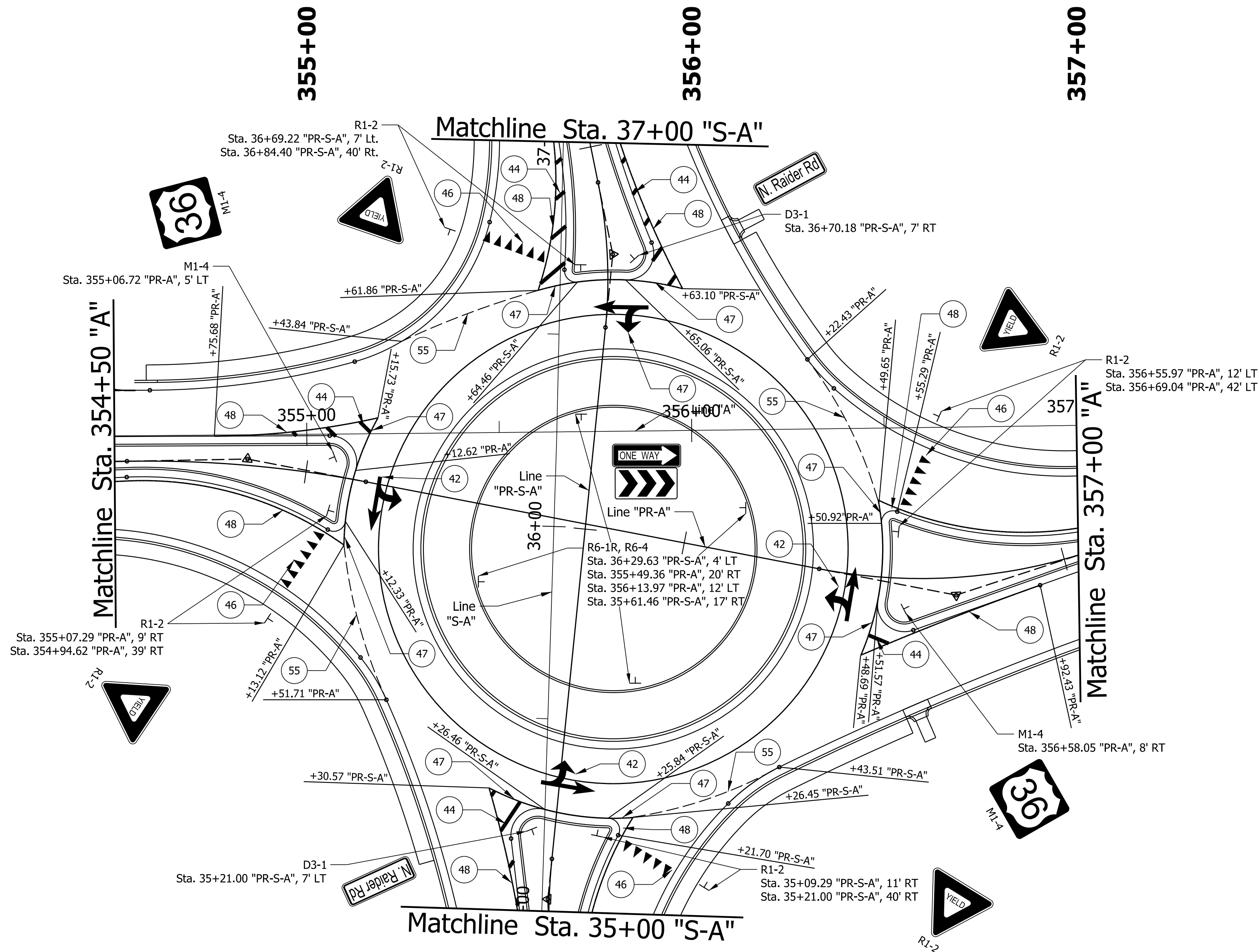
LEGEND

- 42 Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- 44 Transverse Markings, Thermoplastic, Crosshatch, Yellow, 12" (45° @ 10' Spa.)
- 46 Transverse Markings, Thermoplastic, Yield Triangle, White, 27"
- 47 Line, Thermoplastic, Solid, White, 6"
- 48 Line, Thermoplastic, Solid, Yellow, 6"
- 53 Line, Thermoplastic, Solid, Yellow, 8"
- 55 Line, Thermoplastic, Dotted, White, 12" (3' Line, 2' Gap)

Note:
All thermoplastic centerlines, lane lines, and edge lines along US 36 to be placed within pavement grooving except on the existing bridge deck and approach slab. No grooving to be placed beneath transverse markings, dotted markings, message markings, or on any markings on Raider Road.

Plot: 9/6/2023	STAGE 2 09/06/23	RECOMMENDED FOR APPROVAL _____ 09/06/23 DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE 1"=20'		BRIDGE FILE	
		DESIGNED: BV 09/06/23 DRAWN: BV 09/06/23		PAVEMENT MARKING AND SIGNING PLAN LINE "A"/"PR-A"		DESIGNATION 2000152			
		CHECKED: RI 09/06/23 CHECKED: RI 09/06/23				SHEETS 27 of 38			
						CONTRACT R-43507		PROJECT 2000152	





LEGEND

- (42) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- (44) Transverse Markings, Thermoplastic, Crosshatch, Yellow, 12" (45° @ 10' Spa.)
- (46) Transverse Markings, Thermoplastic, Yield Triangle, White, 27"
- (47) Line, Thermoplastic, Solid, White, 6"
- (48) Line, Thermoplastic, Solid, Yellow, 6"
- (53) Line, Thermoplastic, Solid, Yellow, 8"
- (55) Line, Thermoplastic, Dotted, White, 12" (3' Line, 2' Gap)

Note:
All thermoplastic centerlines, lane lines, and edge lines along US 36 to be placed within pavement grooving except on the existing bridge deck and approach slab. No grooving to be placed beneath transverse markings, dotted markings, message markings, or on any markings on Raider Road.

Plot: 9/6/2023	STAGE 2	RECOMMENDED FOR APPROVAL _____ 09/06/23		INDIANA		SCALE	BRIDGE FILE
		DESIGN ENGINEER _____ DATE		DEPARTMENT OF TRANSPORTATION		1"=20'	
						DESIGNATION	
						2000152	
09/06/23	DESIGNED: BV _____ 09/06/23	DRAWN: BV _____ 09/06/23	US 36 AND RAIDER RD PAVEMENT MARKING AND SIGNING PLAN		SHEETS		
					29	of	38
	CHECKED: RI _____ 09/06/23	CHECKED: RI _____ 09/06/23			PROJECT		
					2000152		

APPENDIX C

Early Coordination



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (317) 694-8283

Eric Holcomb, Governor
Michael Smith, Commissioner

March 15, 2023

Sample Early
Coordination Letter

Re: Early Coordination Letter, Des. No.: 2000152, Intersection Improvement of US 36 & Raider Road, Henry County, Indiana.
KEG No. 21-1065.00

Dear Interested Party,

The Indiana Department of Transportation (INDOT), with federal funding, intends to proceed with a project involving the aforementioned roadway in Henry County. 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.

This project is located at the intersection of US 36 and Raider Road, in Henry County. This section of US 36 and Raider Road are two-lane *Rural Major Collectors*. The existing US 36 and Raider Road cross sections consist of one 12-foot lane in each direction with 3-foot aggregate shoulders. The draft need for this project is the above average crash severity at the existing intersection. Per RoadHAT 3.0 analysis (INDOT traffic engineering safety modeling software) of 2016-2018 crash data, the most recent data available at the time of this analysis, the index of crash frequency (ICF) is 1.61 (well above average) and the index of crash cost (ICC) is 2.40 (well above average). These indices compare the crash cost and crash frequency for this intersection to intersections with similar volumes, roadway classifications, and control type throughout Indiana. The ICC and ICF exceeds the threshold of 1.00 set by INDOT's Office of Traffic Safety, flagging the intersection as a safety concern. The draft purpose of the project is to reduce crash potential, improve the ICC and ICF to below 1.00, and provide a long-term solution to ensure safe and efficient operation of the intersection. The approximate existing right-of-way (ROW) is 40 feet each side of centerline on US 36 and 10 feet each side of centerline on Raider Road.

The proposed project is anticipated to convert the existing intersection into a single lane roundabout. Drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Intersection improvements will also include new street lighting and landscaping. The project requires the acquisition of 1.35 acres of permanent ROW and 0.40 acre of temporary ROW. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline. The project will be approximately 0.29 mile in length. The proposed method of traffic maintenance is anticipated to be a full closure when school is not in session, utilizing a detour via SR 109, I-69, SR 67 and SR 3. Approximately 0.27 acre of trees will be cleared as part of this project. The project is anticipated to begin construction in late Spring or early Summer of 2025.

Land use in the vicinity of the project is predominantly agricultural, with a school in the northeast quadrant. Kaskaskia Engineering Group, LLC will perform waters and wetlands determinations to identify water resources that may be present, if applicable. 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 me, at 618-233-5877 or bmoneymaker@kaskaskiaeng.com, or Don McGhghy, INDOT Project Manager at 317-467-3920 or dmcghghy@indot.in.gov. Thank you in advance for your input.

Sincerely,



Brigitte MoneyMaker
Environmental Scientist
Kaskaskia Engineering Group, LLC

Attachment -

- Early Coordination Letter Recipient List
- Maps (Location, Aerial, Topographic)
- Photo Log

Attachments omitted to
avoid duplication

cc: Jerod Hiller, Fishbeck



INDIANA GEOLOGICAL & WATER SURVEY

INDIANA UNIVERSITY

Organization and Project Information

Project ID: 21-1065.00
Des. ID: 2000152
Project Title: Intersection Improvement of US 36 & Raider Road
Name of Organization: Kaskaskia Engineering Group, LLC
Requested by: Brigitte Moneymaker

Environmental Assessment Report

1. Geological Hazards:
 - Moderate liquefaction potential
 - 1% Annual Chance Flood Hazard
2. Mineral Resources:
 - Bedrock Resource: High Potential
 - Sand and Gravel Resource: Low Potential
3. Active or abandoned mineral resources extraction sites:
 - Petroleum Exploration Wells

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

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

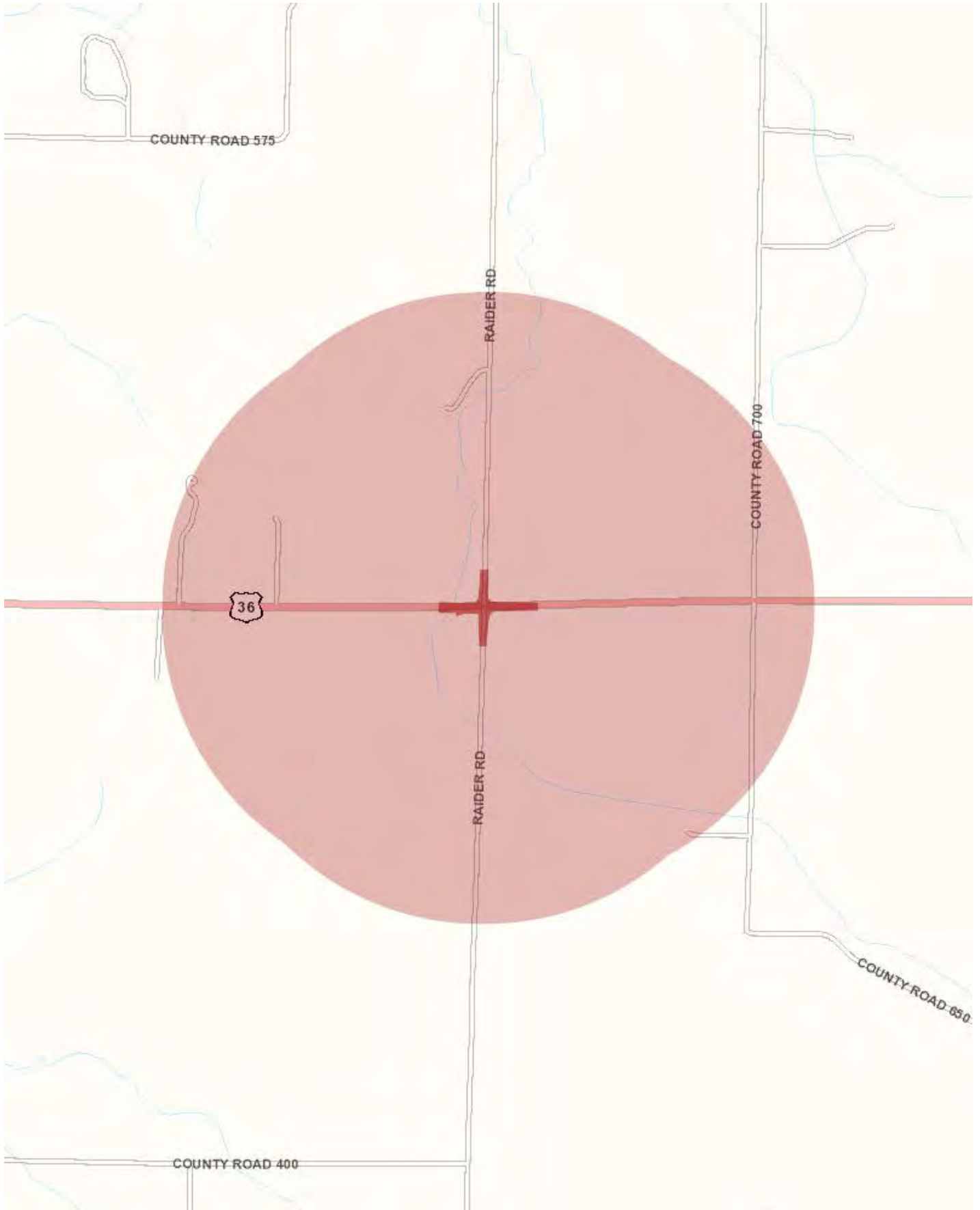
This information was furnished by Indiana Geological Survey

Address: 1001 E. 10th St., Bloomington, IN 47405

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: March 15, 2023





INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

March 15, 2023

Kaskaskia Engineering Group, LLC
Attention: Brigitte Moneymaker
323 Main Street, Suite E
Evansville, IN 4770

Dear Brigitte Moneymaker:

Re: Wellhead Protection Area
Proximity Determination
Des No 2000152,
Intersection Improvement of
US 36 & Raider Road, Henry County, Indiana.

Upon review of the above referenced project site, it has been determined that the proposed project area **is not located within** a Wellhead Protection Area. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases, we use a 3,000-foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at <http://www.in.gov/idem/cleanwater/2456.htm> and scroll to the bottom of the page.

The project area **is not located within** a Source Water Assessment Area for a PWSS's surface water intake. The Source Water Assessment Area relates to the surface water drainage area that water could potentially flow and influence water quality for a PWSS's source of drinking water.

In the future, **please consider using this self-service tool** if it suits your needs. The Drinking Water Branch has a self-service tool which allows one to determine wellhead proximity without submitting the application form. Go to <https://www.in.gov/idem/cleanwater/pages/wellhead/> and use the instructions at the bottom of the page.

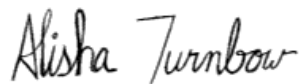


Please Reduce, Reuse, Recycle

Brigitte Moneymaker
Page 2

If you have any additional questions, please feel free to contact me at the address above or at 317-233-9158 and aturnbow@idem.in.gov.

Sincerely,

A handwritten signature in black ink that reads "Alisha Turnbow". The signature is written in a cursive, flowing style.

Alisha Turnbow,
Environmental Manager
Ground Water Section
Drinking Water Branch
Office of Water Quality

THIS IS NOT A PERMIT

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

DNR#: ER-25467

Request Received: March 15, 2023

Requestor:

Brigitte Moneymaker
 Kaskaskia Engineering Group, LLC
 208 East Main Street, Suite 100
 Belleville, IL 62220

Project:

US 36 & Raider Road roundabout construction and intersection improvements; KEG #21-1065.00, Des #2000152

County/Site Info: Henry

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:

This western end of the proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile for any construction that will take place at or lakeward of the legal shoreline of a public freshwater lake. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required.

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) Riparian Habitat:

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: <https://www.in.gov/nrc/files/IB-17.pdf>.

Impacts to non-wetland forest of one (1) acre or more in a rural or urban area should be mitigated at a minimum 2:1 ratio based on area of impact. Impacts to non-wetland forest under one (1) acre but at least 0.10 acre in a rural or urban area should be mitigated at a minimum 1:1 ratio based on area of impact. Impacts under 0.10 acre in a rural area typically do not require mitigation or additional plantings beyond seeding and

stabilizing disturbed areas, though there are exceptions for high quality habitat sites. Impacts under 0.10 acre in an urban area should be mitigated by replacing trees that are 10" diameter-at-breast height (dbh) or greater by planting five trees, 1" to 2" in dbh, for each tree which is removed that is 10" dbh or greater. Seeding and stabilizing disturbed areas is required regardless of the impact amount and location. If floodway impacts to forested wetland and non-wetland habitat areas combine to be 0.10 acres or more, mitigation should be done and coordinated with the biologist, as needed.

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 with a mixture of grasses (excluding all varieties of tall fescue) and legumes 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 regularly mowed areas only.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
4. Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway. Any incidental fallen material or debris in the waterway must be removed within 24 hours using best management practices, particularly lifting material out of the waterway and not dragging it across the streambed whenever possible.
5. 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.
6. 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 mbuffington@dnr.in.gov or (317) 233-4666 if we can be of further assistance.

Matt Buffington

Matt Buffington
Environmental Unit Supervisor
Division of Fish and Wildlife

Date: April 13, 2023

From: [Hiller, Jerod](#)
To: sr122jph@yahoo.com
Cc: [Molly Barletta](#); [Brigitte Moneymaker](#)
Subject: RE: US 36 and Raider Road Henry County Project [21-1065.00]
Date: Thursday, May 25, 2023 5:34:53 PM
Attachments: [image001.gif](#)

Joe,

I was forwarded your email and can help provide some responses as Fishbeck is leading the design for this project. I have provided responses in red below. I think it may be beneficial to have a meeting between INDOT, Henry County, emergency responders, and designers sometime in early summer. We will look to get something arranged on our end.

Couple of question:

1. How long is the project slated to take, start to finish For an intersection reconstruction like this roundabout under a full closure, we anticipate 60-75 days for full closure. There may be 30 days before and then 30 days after the full closure where ancillary work is being performed, but this would occur with all travel lanes open to traffic.

2. I know that the intersection will be closed during to construction. Is there a planned local detour. There is a planned detour for the intersection closure. US 36 will have a detour route and Raider Road will have a different detour route. The US 36 detour will be on INDOT maintained highways only and use SR 109, I-69, SR 67, and SR 3. The Raider Road detour has been initially discussed with Henry County (Joe Copeland as contact) and we are amenable to adjust this more localized detour route through input and coordination with Henry County and other emergency responders such as yourself.

Our department and Middletown fire (the primary fire protection for that area) respond on automatic aid calls often. The primary route to or from Middletown, or area north or west of that intersection

involve going through that intersection. Taking the list detour route would add up to 1/2 hour to an emergency response. We can use the local county road, but they are rough, narrow and we have the concern that

local resident will also be using those route make emergent travel difficult and dangerous.

We also have the concern of the load rating for the bridges on the county roads.

3. We also use that intersection for call in Adams Township and East Madison Fire Territory that are both west of the intersection and they too respond to our calls.

4. Will there be emergency vehicle access through the intersection during the project. This is certainly a possibility that can be further coordinated with INDOT and emergency responders.

Our concern is about delayed response either going to, or other agency coming to calls to assist us. This will certainly increase response time and could effect out firefighters safety and loss of life or property. We certainly appreciate your input and I think it would be beneficial to further coordinate on all these concerns at a meeting between all parties.

Please let me know what information that your have.

Jerod A. Hiller, PE | Senior Transportation Engineer/Project Manager

Fishbeck | w: 614.363.1010 | c: 740.513.8510 | Fishbeck.com

From: Brigitte Moneymaker <BMoneymaker@kaskaskiaeng.com>

Sent: Thursday, May 11, 2023 11:16 AM

To: Hiller, Jerod <jahiller@fishbeck.com>; Prasad, Dandi <dvprasad@fishbeck.com>
Cc: Molly Barletta <MBarletta@kaskaskiaeng.com>
Subject: Fw: US 36 and Raider Road Henry County Project [21-1065.00]

EXTERNAL EMAIL

Good Morning,

I wanted to forward this email we received for Des No. 2000152. Please let us know if you need anything further from us.

Thank you!
 Brigitte



Brigitte Moneymaker (she/her)

Environmental Scientist

Certified: WBE/DBE/WOSB/EDWOSB

434.962.3525 cell
bmoneymaker@kaskaskiaeng.com

From: Joe Hilburt <sr122jph@yahoo.com>
Sent: Wednesday, May 10, 2023 1:26 PM
To: Brigitte Moneymaker <BMoneymaker@kaskaskiaeng.com>; dmcghghy@indot.in.gov <dmcghghy@indot.in.gov>; Heath Hudnut <bhhudnut@gmail.com>
Subject: US 36 and Raider Road Henry County Project.

Concerning your project at US36 and Raider Road

First in your list of agencies you have Sulphur Springs Fire Department. The correct name is Jefferson Township Volunteer Fire Department POB 117 401 W. Main in Sulphur Springs, IN 47388.

Couple of question:

1. How long is the project slated to take, start to finish
2. I know that the intersection will be closed during to construction. Is there a planned local detour.

Our department and Middletown fire (the primary fire protection for that area) respond on automatic aid calls often. The primary route to or from Middletown, or area north or west of that intersection

involve going through that intersection. Taking the list detour route would add up to 1/2 hour to an emergency response. We can use the local county road, but they are rough, narrow and we have the concern that

local resident will also be using those route make emergent travel difficult and dangerous.

We also have the concern of the load rating for the bridges on the county roads.

3. We also use that intersection for call in Adams Township and East Madison Fire Territory that are both west of the intersection and they too respond to our calls.

4. Will there be emergency vehicle access through the intersection during the project.

Our concern is about delayed response either going to, or other agency coming to calls to assist us. This will certainly increase response time and could effect out firefighters safety and loss of life or property.

Please let me know what information that your have.

Joseph P. Hilburt FF/EMT-P
Assistant Fire Chief
Jefferson Township Volunteer Fire Department
765-620-8213
sr122jph@yahoo.com



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:

November 08, 2023

Project Code: 2024-0014310

Project Name: US 36 and Raider Road, Intersection Improvement, DES 2000152

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

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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

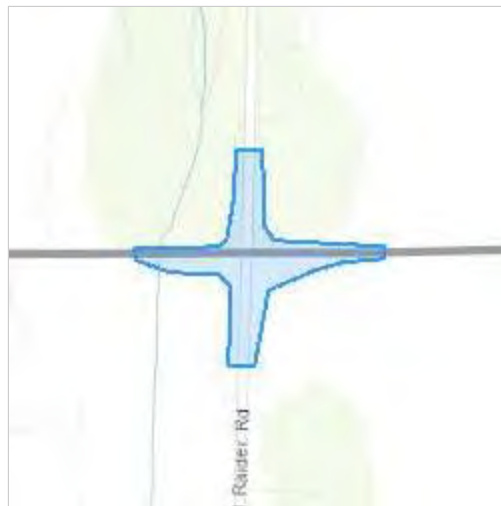
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

PROJECT SUMMARY

Project Code: 2024-0014310
Project Name: US 36 and Raider Road, Intersection Improvement, DES 2000152
Project Type: Road/Hwy - Maintenance/Modification
Project Description: This project is located at the intersection of US 36 and Raider Road in Henry County, Indiana. The proposed project is anticipated to convert the existing intersection into a single lane roundabout. Additionally, drainage improvements include the installation of new curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Also, new street lighting and landscaping are anticipated. There is suitable summer habitat within the project action area. Approximately 0.27 acre of trees within 100 feet of the roadway are anticipated for removal during the inactive season. The trees to be removed are located on the northeast corner property and southeast corner property. Dominant tree species include black walnut (*Juglans nigra*) and European ash (*Fraxinus excelsior*). On July 7, 2022, INDOT Greenfield District Environmental personnel stated, "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." Construction is anticipated to begin in Summer 2025. Permanent lighting changes are anticipated due to the installation of new street lighting. Temporary lighting changes are assumed due to the potential for nighttime construction.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.0045121,-85.52799558470582,14z>



Counties: Henry 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.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, 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.

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 <i>Myotis sodalis</i> 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 <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane <i>Grus americana</i> 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

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INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> 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 Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

-
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 NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

-
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)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

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.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED.
PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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IPAC USER CONTACT INFORMATION

Agency: Kaskaskia Engineering Group, LLC

Name: Chad Kelly

Address: 477 South Third Street

Address Line 2: Suite 280

City: Geneva

State: IL

Zip: 60134

Email: ckelly@kaskaskiaeng.com

Phone: 6303329157



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:

November 09, 2023

Project code: 2024-0014310

Project Name: US 36 and Raider Road, Intersection Improvement, DES 2000152

Subject: Concurrence verification letter for the 'US 36 and Raider Road, Intersection Improvement, DES 2000152' 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 November 09, 2023 to verify that the **US 36 and Raider Road, Intersection Improvement, DES 2000152** (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

US 36 and Raider Road, Intersection Improvement, DES 2000152

DESCRIPTION

This project is located at the intersection of US 36 and Raider Road in Henry County, Indiana. The proposed project is anticipated to convert the existing intersection into a single lane roundabout. Additionally, drainage improvements include the installation of new curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Also, new street lighting and landscaping are anticipated. There is suitable summer habitat within the project action area. Approximately 0.27 acre of trees within 100 feet of the roadway are anticipated for removal during the inactive season. The trees to be removed are located on the northeast corner property and southeast corner property. Dominant tree species include black walnut (*Juglans nigra*) and European ash (*Fraxinus excelsior*). On July 7, 2022, INDOT Greenfield District Environmental personnel stated, "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." Construction is anticipated to begin in Summer 2025. Permanent lighting changes are anticipated due to the installation of new street lighting. Temporary lighting changes are assumed due to the potential for nighttime construction.

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The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.0045121,-85.52799558470582,14z>



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

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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](#).

Yes

9. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

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

Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

11. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

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

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

12. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

19. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

11/09/2023

8

20. Are *all* trees that are being removed clearly demarcated?
Yes
21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?
Yes
22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?
No
23. Does the project include slash pile burning?
No
24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?
No
25. 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
26. Will the project involve the use of **temporary** lighting *during* the active season?
Yes
27. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?
Yes
28. Will the project install *any* new or replace any existing **permanent** lighting in addition to the lighting already indicated for habitat removal (including the removal or trimming of trees) or bridge/structure removal, replacement or maintenance activities?
Yes
29. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting (other than the lighting already indicated for habitat removal (including the removal or trimming of trees) or bridge/structure removal, replacement or maintenance activities) will be installed or replaced?
Yes
30. 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
-

31. 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

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

No

33. Are the 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 consistent with a No Effect determination in this key?

Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

34. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

35. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

36. **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

37. **Tree Removal AMM 1**

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

Yes

38. **Tree Removal AMM 3**

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

39. **Tree Removal AMM 4**

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

40. **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

41. **Lighting AMM 2**

Will the **permanent** lighting used during removal of suitable habitat and/or the removal/trimming of trees within suitable habitat 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

42. **Lighting AMM 1**

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

43. **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

44. **Lighting AMM 2**

Will the **permanent** lighting (other than any lighting already indicated for tree clearing or bridge/structure removal, replacement or maintenance activities) 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. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0.27

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

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

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

LIGHTING AMM 1

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

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

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.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

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: Delaney Weston

Address: 32 S Broadway

City: Greenfield

State: IN

Zip: 46140

Email: dweston@indot.in.gov

Phone: 3174673901

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

APPENDIX D

Section 106 of the NHPA

**FEDERAL HIGHWAY ADMINISTRATION'S
SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties) AND
SECTION 106 FINDINGS AND DETERMINATIONS
AREA OF POTENTIAL EFFECTS
ELIGIBILITY DETERMINATIONS
EFFECT FINDING
US 36 AND RAIDER ROAD INTERSECTION IMPROVEMENT PROJECT
IN HENRY COUNTY, INDIANA.
DES. NO.: 2000152; DHPA NO.: 30075**

AREA OF POTENTIAL EFFECTS

(Pursuant to 36 CFR Section 800.4(a)(1))

The Area of Potential Effects (APE) was generally drawn to include properties adjacent to and/or within view of the project. The APE for archaeology includes all existing permanent and proposed right-of way; it is encompassed by the survey area which includes the archaeology APE and any areas investigated beyond it (See Appendix A: Maps).

ELIGIBILITY DETERMINATIONS

(Pursuant to 36 CFR 800.4(c)(2))

No properties are listed in, or eligible for listing in, the National Register of Historic Places (National Register) within the APE.

EFFECT FINDING

The Indiana Department of Transportation (INDOT), acting on behalf of the Federal Highway Administration (FHWA), has determined a "No Historic Properties Affected" finding is appropriate for this undertaking. INDOT respectfully requests the Indiana State Historic Preservation Officer provide written concurrence with the Section 106 determination of effect.

SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties)

The undertaking will not convert property from any Section 4(f) historic property to a transportation use; INDOT, acting on FHWA's behalf, has determined the appropriate Section 106 finding is "No Historic Properties Affected"; therefore, no Section 4(f) evaluation is required.



Matt S. Coon, for FHWA
Manager
INDOT Cultural Resources

December 28, 2023

Approved Date

**FEDERAL HIGHWAY ADMINISTRATION'S
DOCUMENTATION OF SECTION 106 FINDING OF
NO HISTORIC PROPERTIES AFFECTED
SUBMITTED TO THE STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR Section 800.4(d)(1)
US 36 AND RAIDER ROAD INTERSECTION IMPROVEMENT PROJECT
IN HENRY COUNTY, INDIANA.
DES. NO.: 2000152; DHPA NO.: 30075**

1. DESCRIPTION OF THE UNDERTAKING

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with the United States Highway (US) 36 and Raider Road Intersection Improvement Project (DES No. 2000152). (Appendix A: Maps and Appendix F: Plans).

The proposed project will convert the existing intersection into single lane roundabout. Drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Intersection improvements will also include new street lighting and landscaping. The project requires the acquisition of 1.35 acres of permanent ROW and 0.40 acre of temporary ROW. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline. The project will be approximately 0.29 mile in length. No relocations are planned. The proposed method of traffic maintenance is anticipated to be a full closure when school is not in session, utilizing a detour via SR 38 and SR 3. Approximately 0.27 acre of trees will be cleared as part of this project. The project is anticipated to begin construction in late Spring or early Summer of 2025. (Appendix F: Plans).

The Area of Potential Effects (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” [36 CFR § 800.16(d)]

The APE was generally drawn to include properties adjacent to and/or within view of the project (Appendix A: Maps).

The APE for archaeology includes all existing and proposed right-of way; it is encompassed by the survey area which includes the archaeology APE and any areas investigated beyond it (Appendix A: Maps).

2. EFFORTS TO IDENTIFY HISTORIC PROPERTIES

A Section 106 Early Coordination Letter (ECL), dated November 14, 2022, invited the following consulting parties to join in consultation:

- Indiana Landmarks Eastern Regional Office
- Henry County Historical Society and Museum
- Middletown/Fall Creek Township Historical Society
- Preserve Henry County, Inc.

- Henry County Historian
- Henry County Commissioners
- Henry County Planning Commission
- Henry County Highway Department

Emails sent the same day provided instructions for accessing the ECL via INSCOPE (<http://erms.indot.in.gov/Section106Documents>). The SHPO, a designated consulting party, was sent a paper copy of the ECL (Appendix B. Consulting Parties and Appendix C. Correspondence).

On November 15, 2022, INDOT distributed the ECL to the following Tribes (Appendix C: Correspondence):

- Delaware Tribe of Indians
- Eastern Shawnee Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Pokagon Band of Potawatomi Indians
- Shawnee Tribe

On November 15, 2022, Bobbi Plummer, a Henry County Commissioner, responded to the ECL, stating that she had received calls from constituents about the project and “no one is in agreement nor happy about this proposed project. I have to agree with my constituents that this project should not move forward as a roundabout.” She added that she has “concerns regarding the proximity to the schools that are located at US 36 and Raider Rd as well as the farming equipment and over the road trucks being able to safely traverse the single lane roundabout.” W&A responded to this email on November 15, 2023 and added Commissioner Plummer as a consulting party (Appendix C: Correspondence).

On November 15, 2022, Ed Tarantino, a Henry County Commissioner, responded to the ECL, stating that his opinion is that [the intersection] should “remain as it is, or simply install a light. A round about seems like a great deal of work and disruption of the entire intersection with very little or perhaps nothing to gain.” W&A responded to this email on November 15, 2023 and added Commissioner Tarantino as a consulting party (Appendix C: Correspondence).

On November 15, 2022, Steve Dellinger, a Henry County Commissioner, responded to the ECL, stating that he “fail[ed] to see the logic of a roundabout at this location as opposed to a stop light...” and that while he understood the concern for safety, “it seems like a roundabout is going overboard.” He stated that he has “gotten NO positive response for proceeding with this plan for the roundabout.” W&A responded to this email on November 16, 2023 and added Commissioner Dellinger as a consulting party (Appendix C: Correspondence).

On November 15, 2022, the Tribal Historic Preservation Officer (THPO) of the Delaware Tribe responded to the ECL and stated that “[a]fter reviewing our files, we determined that there are no known religious or culturally significant sites within the selected project area. We have no objection to the proposed project.” The THPO asked that “if any archaeological or historical materials (artifacts, subsurface features, etc.) are discovered during the implementation of this project that work in the immediate area be halted until an archaeologist can view and assess the finds.” Additionally, the THPO asked “that if any human remains are inadvertently discovered during the project that you cease development immediately and inform the Delaware Tribe of

Indians of the discovery. We ask that you follow the Delaware Tribe's Inadvertent Discovery Policy" (Appendix C: Correspondence).

On November 16, 2022, Indiana Landmarks responded to the ECL, stating that they had concerns about how this project would affect the Fall Creek District School on the northwest corner of US 36 and Raider Road" W&A responded to this email on November 16, 2023 and added Indiana Landmarks as a consulting party (Appendix C: Correspondence).

On November 18, 2022, Commissioner Tarantino responded to W&A and asked why the roundabout is being considered at the US 36 and Raider Road intersection. Commissioner Tarantino stated that his accident records show very few accidents at the intersection over the past several years. W&A responded on the same day stating that the question would be forwarded to INDOT and the project manager for consideration (Appendix C: Correspondence).

On November 21, 2022, the Miami Tribe of Oklahoma THPO responded to the ECL and offered "no objection to the above-referenced project at this time." The THPO requested immediate consultation if "any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project..." (Appendix C: Correspondence).

On November 30, 2022, the staff of the SHPO responded to the ECL, stating that they were "not aware of any parties who should be invited to participate in the Section 106 consultation... beyond those whom INDOT already has invited." The SHPO staff stated that "if right-of-way is likely to be taken from a potentially historic property, it might be advisable to invite the owner of the property as soon as possible." The staff also asked to be advised in the "next regular correspondence on this project ... as to which of the invited consulting parties has accepted the invitation." Finally, the SHPO staff stated they looked forward to reviewing forthcoming "reports on investigations of above-ground and archaeological resources" (Appendix C: Correspondence).

The Eastern Shawnee responded to the ECL on December 27, 2022. The THPO stated that "the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. The THPO, however, said that "should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted" (Appendix C: Correspondence).

Pursuant to 36 CFR § 800.4(b), historians for Weintraut & Associates (W&A) reviewed the National Register of Historic Places (National Register), Indiana Register of Historic Sites and Structures (State Register), Indiana Historic Sites and Structures Inventory (IHSSI), the State Historical Architectural and Archaeological Research Database (SHAARD), the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM), the *Indiana Historic Bridge Inventory*, and the *Henry County Interim Report* (1993) for previously identified properties. They also reviewed prior Section 106 studies completed by W&A and conducted research in county histories, aerial photographs, and online resources.

Following the literature review, W&A conducted a field reconnaissance of the above-ground APE on December 15, 2022 (see details below). W&A historians recorded survey notes and took photographs of properties that would be more than fifty years of age by the letting date, which is 2025, and photographed representative landscapes/views of the APE. Historians evaluated

resources for architectural and contextual integrity and significance using the information gleaned from their research (Appendix A: Maps and Appendix D: Photographs).

Pursuant to 36 CFR § 800.4(b), W&A archaeologists conducted a Phase Ia records check on January 30, 2023, and a field reconnaissance on February 8, 2023. The records check identified no previously recorded sites in the survey area. (Appendix E: Report Summaries).

Qualified professional (QP) historians for W&A prepared a Historic Property Short Report (HPSR). Historians identified one Contributing resource within the APE and recommended no properties as eligible for listing in the National Register. W&A notified consulting parties of the availability of the HPSR on May 8, 2023, and provided directions to access it and the transmittal letter (dated May 5, 2023) on INDOT's online document portal INSCOPE (at <https://erms12c.indot.in.gov/Section106Documents/>). In addition, paper copies of the documents were sent to the Indiana SHPO as a designated consulting party for review and comment on the same day. INDOT was copied on the correspondence (Appendix C: Correspondence and Appendix E: Report Summaries).

On May 9, 2023, INDOT notified tribal organizations of the availability of the HPSR and provided directions to access the transmittal letter and reports on INSCOPE (Appendix C: Correspondence).

On May 12, 2023, Indiana Landmarks responded to the HPSR and asked if the Fall Creek District School would be undisturbed by the roundabout project or if it would have work done to it. (Appendix C: Correspondence).

In response to Landmarks question, project designers have stated that the former school/residence will be left undisturbed. Current plans would reconstruct some of its driveway and remove a few feet of its concrete walk near US 36. Additionally, there will be some permanent and temporary right-of-way taken from the property.

On May 30, 2023, Indiana SHPO responded to the HPSR via letter. The SHPO staff stated that the APE “appears to be of adequate size to encompass the geographic area in which direct and indirect effects of a project of this nature could occur.” Additionally, the SHPO staff agreed with the conclusions of the HPSR that “there are no historic properties listed in or eligible for listing in the National Register of Historic Places within the APE for this project.” The SHPO staff looked forward to reviewing the forthcoming report on archaeological resources. (Appendix C: Correspondence.)

Qualified professional (QP) archaeologists for W&A prepared an Archaeology Report (AR) (Goldbach, September 2023). The report identified two new archaeological sites—12HN524 and 12HN525. Both sites were historic artifact scatters that lack deposits or features with the potential to yield important information that would meet National Register eligibility. Based on the results of the fieldwork, the archaeologist recommended “project clearance and no further archaeological investigations appear necessary” for the sites. SHPO was notified of the availability of the AR and a report distribution letter on October 13, 2023, while other consulting parties were notified on October 16, 2023. INDOT was copied on all correspondence. In addition, a paper copy of the document was sent to the Indiana SHPO as a designated consulting party for review and comment (Appendix C: Correspondence and Appendix E: Report Summaries).

On October 13, 2023, INDOT notified tribal organizations of the availability of the AR and the report distribution letter on INSCOPE (Appendix C: Correspondence).

On November 1, 2023, staff from the Indiana SHPO responded to the AR and its distribution letter. The staff of the SHPO concurred with the opinion of the archaeologist “that further archaeological investigation of the portion of sites 12HN524 and 12HN525 surveyed for this project are unlikely to produce additional important information and no further work in these areas is warranted.” However, the staff noted that the unsurveyed portions of the sites remain unevaluated for inclusion in the National Register and that if the “project boundaries change at these site locations, further archaeological investigations will be necessary to delineate the site boundaries and provide an evaluation.” The staff of the SHPO stated that the surveyed limits “be clearly marked at sites 12HN524 and 12HN525 so that the unsurveyed portions of these sites are avoided by all ground-disturbing project activities.” Finally, the SHPO Staff stated that “[u]nless another consulting party expresses a different opinion about historic properties, it might now be appropriate to ask INDOT for a finding.” (Appendix B: Correspondence).

On December 6, 2023, the THPO of the Eastern Shawnee Tribe responded to the AR stating that “the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe.” The THPO, however, said that “should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted” (Appendix C: Correspondence).

No other efforts were undertaken to identify and evaluate historic properties, and no other comments were received.

3. BASIS FOR FINDING

A finding of “No Historic Properties Affected” is appropriate for this undertaking because there are no resources listed in, or eligible for listing in, the National Register within the APE.

A public notice of “No Historic Properties Affected” will be posted in the *Courier-Times* (Henry County), and the public will be afforded thirty (30) days to respond. If appropriate, this document will be revised after the expiration of the public comment period.

Appendices**Appendix A: Maps****Appendix B: Consulting Parties****Appendix C: Correspondence****Appendix D: Photographs****Appendix E: Report Summaries****Appendix F: Plans**

Project plans have been omitted to avoid duplication. Please see plans in Appendix B of this CE document.

Appendix A: Maps

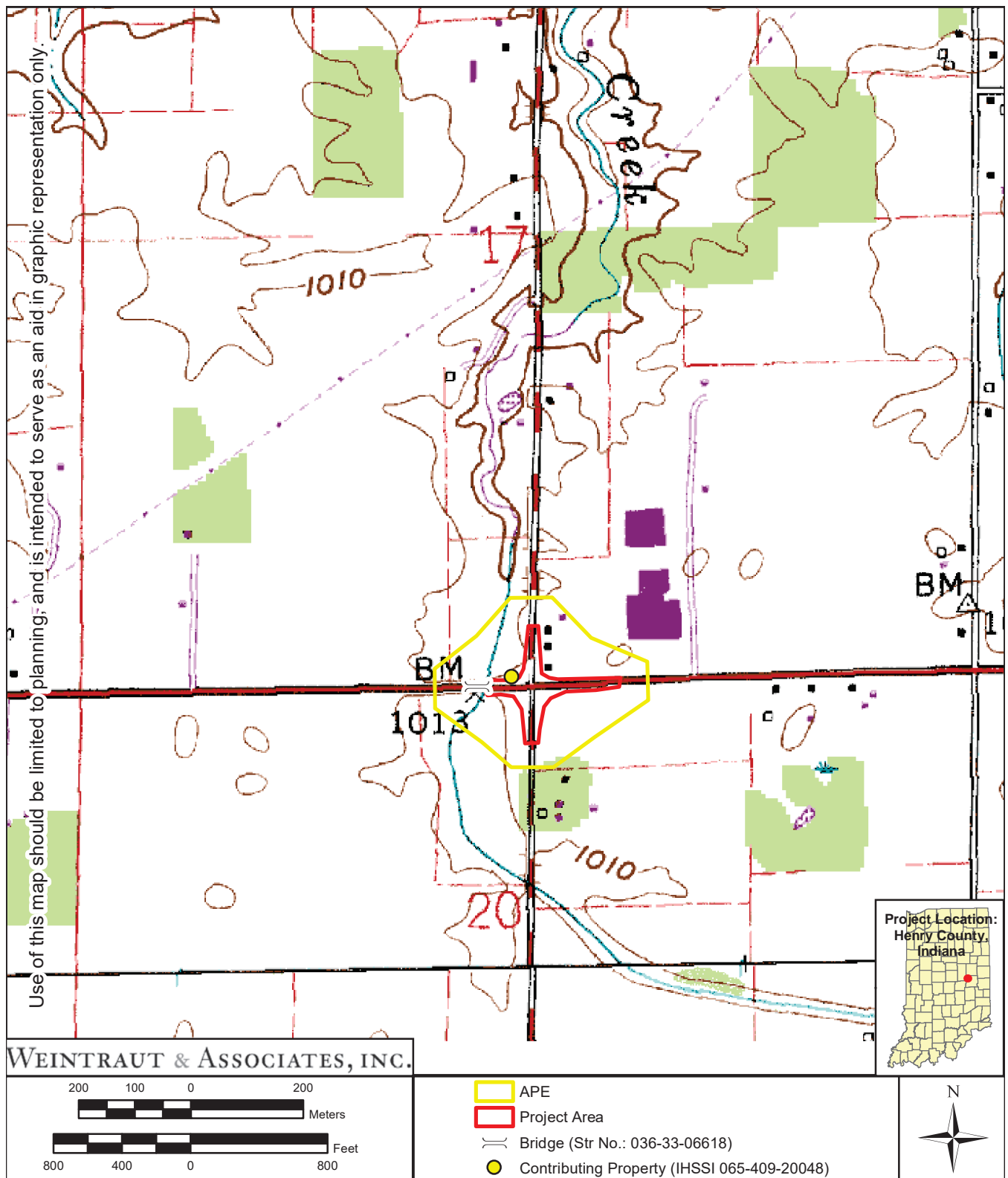


FIGURE I. PROJECT LOCATION AND AREA OF POTENTIAL EFFECTS SHOWN ON PORTIONS OF THE MIDDLE-TOWN, INDIANA USGS TOPOGRAPHIC QUADRANGLE (1:24,000).

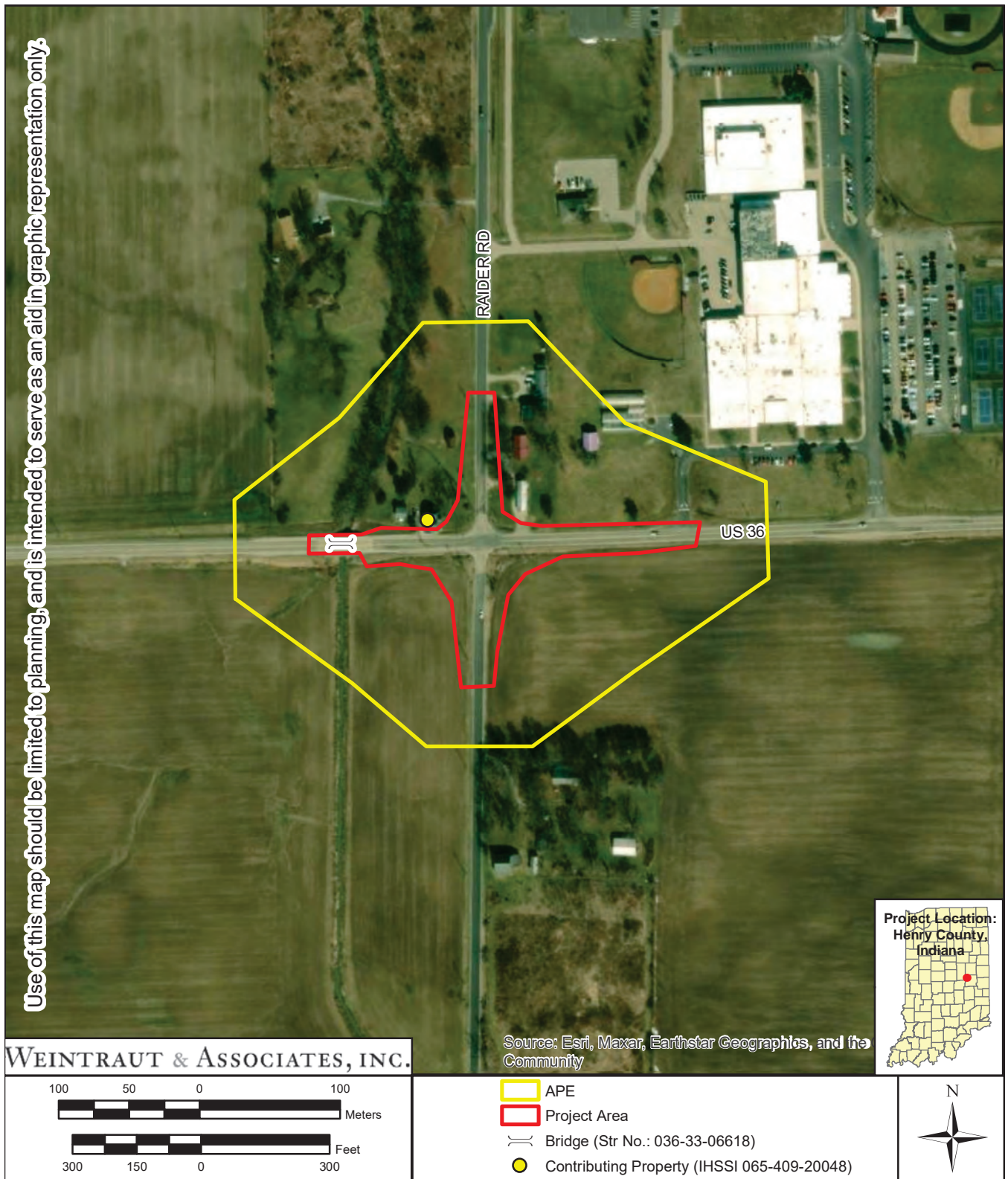


FIGURE 2. PROJECT LOCATION AND AREA OF POTENTIAL EFFECTS SHOWN ON AN AERIAL PHOTOGRAPH (2021).

Appendix B: Consulting Parties

US36 and Raider Road Intersection Improvement Project									
Des No.: 2000152									
Henry County, Indiana									
Name	Title	Agency/Company	Address 1	City	State	Zip	Method	Notes	Response?
		Indiana SHPO					email	bmccord@dnr.in.gov ; cslider@dnr.in.gov	Yes (Designated)
Brittany Miller		Indiana Landmarks Eastern Regional Office					email	east@indianalandmarks.org	YES (email 11/16/2022)
Kaye Ford	Director	Henry County Historical Society & Museum					email	henrycountymuseum@gmail.com	
Jacob Smith	President	Middletown/Fall Creek Township Historical Society					email	contact@middletownhistory.us	
Jeff Ray	President	Preserve Henry County, Inc					email	Jaray56@gmail.com	
Darrel Radford		Henry County Historian					email	d.radford@comcast.net	
Ed Tarantino		Henry County Commissioner					email	etarantino@henrycounty.in.gov	YES (email 11/15/2022)
Steve Dellinger		Henry County Commissioner					email	sdellinger@henrycounty.in.gov	YES (email 11/15/2022)
Bobbi Plummer		Henry County Commissioner					email	bplummer@henrycounty.in.gov	YES (email 11/15/2022)
Tom Green	Zoning Administrator	Henry County Planning Commission					email	tgreen@henrycounty.in.gov	
Joe Copeland	Administrator	Henry County Highway Dept.					email	jcopeland@henrycounty.in.gov	
		Delaware Tribe of Indians		INDOT Coordination					YES (email 11/15/2022)
		Eastern Shawnee Tribe of Oklahoma		INDOT Coordination					YES (email 12/27/2022)
		Miami Tribe of Oklahoma		INDOT Coordination					YES (email 11/21/2022)
		Peoria Tribe of Indians of Oklahoma		INDOT Coordination					
		Pokagon Band of Potawatomi Indians		INDOT Coordination					
		Shawnee Tribe		INDOT Coordination					

Appendix C: Correspondence

FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Linda Weintraut <linda@weintrautinc.com>

Mon 11/14/2022 4:21 PM

To: bmccord@dnr.in.gov <bmccord@dnr.in.gov>; cslider@dnr.in.gov <cslider@dnr.in.gov>; east@indianalandmarks.org <east@indianalandmarks.org>; henrycountymuseum@gmail.com <henrycountymuseum@gmail.com>; contact@middletownhistory.us <contact@middletownhistory.us>; jaray56@gmail.com <jaray56@gmail.com>; d.radford@comcast.net <d.radford@comcast.net>; etarantino@henrycounty.in.gov <etarantino@henrycounty.in.gov>; sdellinger@henrycounty.in.gov <sdellinger@henrycounty.in.gov>; bplummer@henrycounty.in.gov <bplummer@henrycounty.in.gov>; tgreen@henrycounty.in.gov <tgreen@henrycounty.in.gov>; jcopeland@henrycounty.in.gov <jcopeland@henrycounty.in.gov>; DHPARReview@dnr.IN.gov <DHPARReview@dnr.IN.gov>

Cc: Kelly, Clint <CKelly1@indot.IN.gov>; Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Molly Barletta <MBarletta@kaskaskiaeng.com>; Hiller, Jerod <jahiller@fishbeck.com>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Brinker, Haley <HBrinker@indot.IN.gov>; Mcghghy, Donald <DMcghghy@indot.IN.gov>; Ron Bales <rbales@indot.IN.gov>

 1 attachments (4 MB)

US36_RaiderRd_Des2000152_Section 106 ECL_2022.1114.pdf;

Des. No.: 2000152

Project Description: US 36 and Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 and Raider Road Intersection Improvement Project (Des No.: 2000152).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The following agencies/individuals are being invited to become consulting parties:

State Historic Preservation Officer
Delaware Tribe of Indians
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Shawnee Tribe
Indiana Landmarks Eastern Regional Office
Henry County Historical Society and Museum
Middletown/Fall Creek Township Historical Society
Preserve Henry County, Inc.
Henry County Historian
Henry County Commissioners
Henry County Planning Commission
Henry County Highway Department

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

Please review the attached letter, which is also located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. If we do not receive a response from an invited consulting party within the time allotted, the project will proceed consistent with the proposed design. Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.

Tribal Contacts, please respond to INDOT's Acting Tribal Liaison, Matt Coon at mcoon@indot.in.gov (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

November 14, 2022

This letter was sent to the listed parties.

RE: US 36 and Raider Road Intersection Improvement Project (Des. No.: 2000152) in Henry County, Indiana.

Dear Consulting Party (see attached list),

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with United States Highway (US) 36 and Raider Road Intersection Improvement. Kaskaskia Engineering Group, LLC is under contract with Fishbeck, INDOT's consultant, to advance the environmental documentation for the referenced project. Weintraut & Associates is under contract with Fishbeck to complete the cultural resource studies.

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Number and project description in your reply, and your comments will be incorporated into the formal environmental study.

The proposed undertaking is located at the intersection of US 36 and Raider Road in Henry County, Indiana. It is within Fall Creek Township on the Middletown USGS Quadrangle, in Section 17 and 20, Township 18 North, Range 9 East. The project area can be viewed online at <https://arcg.is/jqueP> (the Des. No. is the most efficient search term once in the CRO - Public Web Map App).

US 36 and Raider Road are two-lane *Rural Major Collectors*. The existing US 36 and Raider Road cross sections consist of one 12-foot lane in each direction with 5-foot aggregate shoulders. The approximate existing right-of-way (ROW) is 40 feet each side of centerline on US 36 and 10 feet each side of centerline on Raider Road. The need is to improve the Index of Crash Frequency (ICF), the Index of Crash Cost (ICC), and the level of service (LOS) for the intersection. In 2017, a traffic study reported an ICF of 0.57 and an ICC of 0.85. Another study performed in 2019 reported a marked increase in the ICF (1.77) and the ICC (2.12).¹ The purpose of the project is to reduce crash potential and provide a long-term solution to ensure safe and efficient operation of the intersection.

The proposed project is anticipated to convert the existing intersection into single lane roundabout. Drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility

¹ Engineering Assessment Report – US 36 & Raider Road Intersection Improvement, produced for Indiana Department of Transportation, 2019, 4.

relocations for utility poles will be required at the corners of the existing intersection. Intersection improvements will also include new street lighting and landscaping. The project requires the acquisition of 1.35 acres of permanent ROW and 0.40 acre of temporary ROW. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline. The project will be approximately 0.29 mile in length. No relocations are planned. The proposed method of traffic maintenance is anticipated to be a full closure when school is not in session, utilizing a detour via SR 38 and SR 3. Approximately 0.27 acre of trees will be cleared as part of this project. The project is anticipated to begin construction in late Spring or early Summer of 2025.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. In accordance with 36 CFR 800.2 (c), you are hereby requested to be a consulting party to participate in the Section 106 process. Entities that have been invited to participate in the Section 106 consultation process for this project are identified in the attached list. Per 36 CFR 800.3(f), we hereby request that the Indiana State Historic Preservation Officer (SHPO) notify this office if the SHPO staff is aware of any other parties that may be entitled to be consulting parties or should be contacted as potential consulting parties for the project.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. At this time, no cultural resource investigations have occurred; however, the results of cultural resource identification and evaluation efforts, both above-ground and archaeological, will be forthcoming. Consulting parties will receive notification when these reports are completed.

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party, or if you do not respond, you will not be included on the list of consulting parties for this project. If we do not receive your response in the time allotted, the project will proceed consistent with the proposed design and you will not receive further information about the project unless the design changes.

For questions concerning specific project details, you may contact Dr. Linda Weintraut of Weintraut & Associates, Inc. at (317) 733-9770 or Linda@weintrautinc.com. All future responses regarding the proposed project should be forwarded to Weintraut & Associates, Inc. at the following address:

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077
Linda@weintrautinc.com

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon at mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Sincerely,



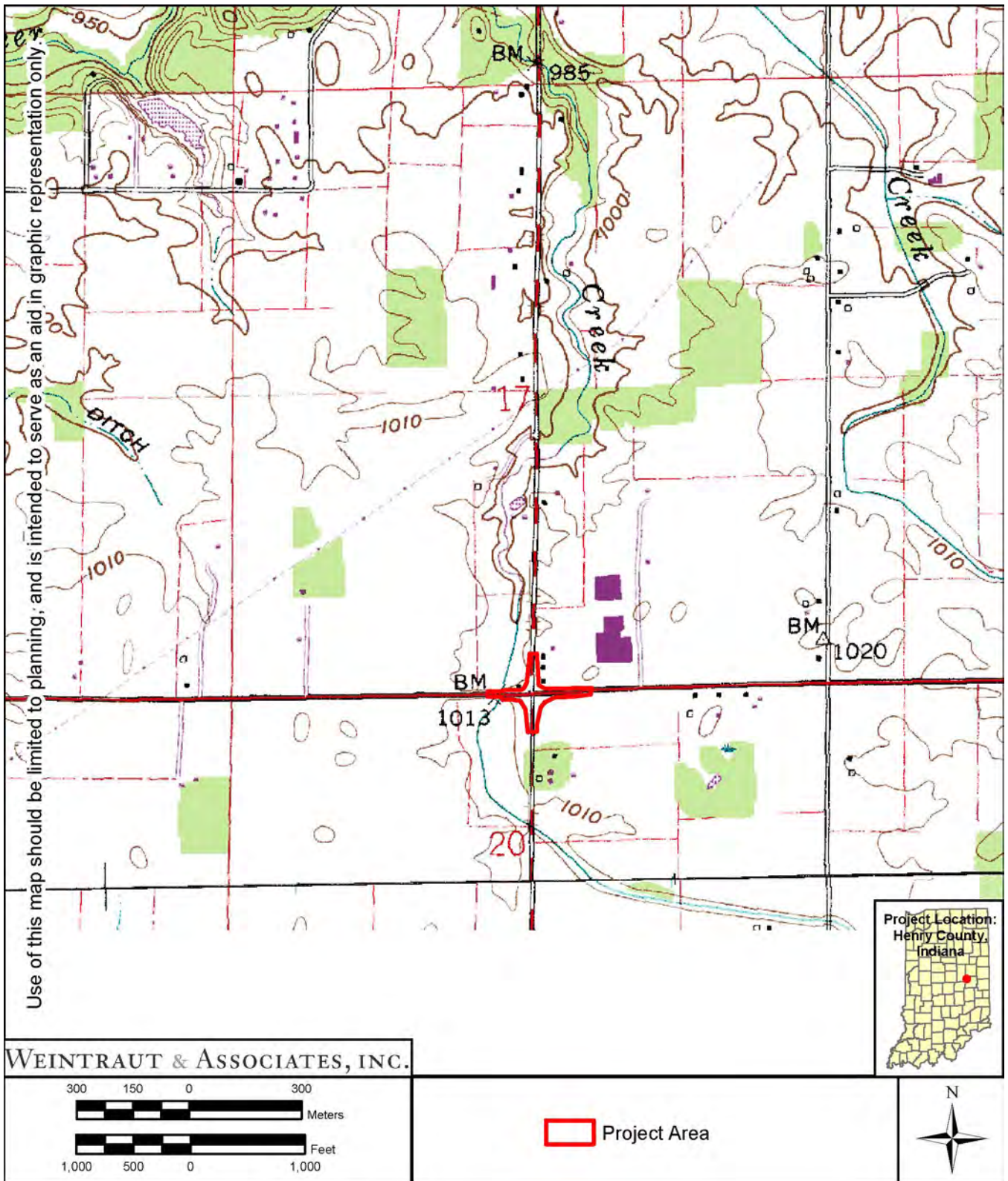
Matthew S. Coon, Acting Manager
Cultural Resources Office
Environmental Services

Enclosures:

Topographic map showing project area

Distribution List:

*State Historic Preservation Officer
Delaware Tribe of Indians
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Shawnee Tribe
Indiana Landmarks Eastern Regional Office, east@indianalandmarks.org
Henry County Historical Society and Museum, henrycountymuseum@gmail.com
Middletown/Fall Creek Township Historical Society, contact@middletownhistory.us
Preserve Henry County, Inc., Jaray56@gmail.com
Henry County Historian
Daniel Radford, d.radford@comcast.com
Henry County Commissioners
Ed Tarantino, etarantino@henrycounty.in.gov
Steve Dellinger, sdellinger@henrycounty.in.gov
Brian Plummer, bplummer@henrycounty.in.gov
Henry County Planning Commission
Timothy Green, tgreen@henrycounty.in.gov
Henry County Highway Department
Joe Copeland, jcopeland@henrycounty.in.gov*



FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Kelly, Clint <CKelly1@indot.IN.gov>

Tue 11/15/2022 6:52 PM

To: THPO@MiamiNation.com <THPO@MiamiNation.com>; thpo@estoo.net

<thpo@estoo.net>; cechohawk@peoriatribe.com

<cechohawk@peoriatribe.com>; Matthew.Bussler@pokagonband-nsn.gov <Matthew.Bussler@pokagonband-nsn.gov>; Section106@shawnee-tribe.com <Section106@shawnee-tribe.com>; lheady@delawaretribe.org <lheady@delawaretribe.org>; Susan Bachor <sbachor@DelawareTribe.onmicrosoft.com>

Cc: Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Mcghghy, Donald <DMcghghy@indot.IN.gov>; Linda Weintraut <linda@weintrautinc.com>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>; Brinker, Haley <HBrinker@indot.IN.gov>

Des. No.: 2000152

Project Description: US 36 and Raider Road Intersection Improvement Project

Location: Henry County, Indiana

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Thank you in advance for your input,

Clint Kelly

Section 106 Specialist/Historian

Cultural Resources Office

Environmental Services

100 N. Senate Ave., Rm. N758-ES

Indianapolis, IN 46204

Office: (317) 447-8707

Email: ckelly1@indot.in.gov

Core Office Hours: M-F 7:30-3:30



From: Bobbi Plummer

Sent: Tuesday, November 15, 2022 4:11 PM

To: Linda Weintraut; bmccord@dnr.in.gov; cslider@dnr.in.gov; east@indianalandmarks.org; henrycountymuseum@gmail.com; contact@middletownhistory.us; jaray56@gmail.com; d.radford@comcast.net; Ed Tarantino; Steve Dellinger; Tom Green; Joe Copeland; DHPARreview@dnr.IN.gov

Cc: Kelly, Clint; Coon, Matthew; Branigin, Susan; Molly Barletta; Hiller, Jerod; Doug Fivecoat; Brinker, Haley; Mcghghy, Donald; Ron Bales

Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Linda:

As Henry County Commissioner, I have received calls from constituent in that area as the rumors began that INDOT was looking at placing a roundabout in that area. I will tell you, no one is in agreement nor happy about this proposed project. I have to agree with my constituents that this project should not move forward as a roundabout. I have concerns regarding the proximity to the schools that are located at US36 and Raider Rd as well as the farming equipment and over the road trucks being able to safely traverse the single lane roundabout. I recognize that I am not a highway nor traffic expert, however to the common person, this project in this location does not make sense.

I am open to hearing more about the project and the reasoning behind proposing these changes.

Thank you for reaching out to all parties involved for their input.

Respectfully,

Bobbi Plummer
Henry County Commissioner
765-465-0571

From: [Linda Weintraut](#)
To: [Bobbi Plummer](#)
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana
Date: Tuesday, November 15, 2022 4:49:00 PM

Thank you for your comment. We will register you as a consulting party so that you continue to receive information about the project.

Linda Weintraut

From: Ed Tarantino <etarantino@henrycounty.in.gov>
Sent: Tuesday, November 15, 2022 3:36 PM
To: Linda Weintraut <linda@weintrautinc.com>
Cc: Bobbi Plummer <bplummer@henrycounty.in.gov>; Steve Dellinger <sdellinger@henrycounty.in.gov>
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Linda, I have been driving through this particular intersection for over 40 years. My opinion is that it should remain as it is, or simply install a light. A round about seems like a great deal of work and disruption of the entire intersection with very little or perhaps nothing to gain. It is called an intersection improvement project, I don't believe that most people living in this area would consider this an improvement. Thank you for considering my opinion.

Ed Tarantino
 Henry County Commissioner
 765-465-6984

From: Linda Weintraut <linda@weintrautinc.com>
Sent: Monday, November 14, 2022 4:21 PM
To: bmccord@dnr.in.gov; slider@dnr.in.gov; east@indianalandmarks.org; henrycountymuseum@gmail.com; contact@middletownhistory.us; jaray56@gmail.com; d.radford@con
 Ed Tarantino <etarantino@henrycounty.in.gov>; Steve Dellinger <sdellinger@henrycounty.in.gov>; Bobbi Plummer <bplummer@henrycounty.in.gov>; Tom Green <tgreen@henrycounty.in.gov>; Joe Copeland <jcopeland@henrycounty.in.gov>; DHPARReview@dnr.IN.gov
Cc: Kelly, Clint <CKelly1@indot.IN.gov>; Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBRanigin@indot.IN.gov>; Molly Barletta <MBarletta@kaskaskiaeng.com>; Hiller, Jerod <jahiller@fishbeck.com>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Brinker, Haley <HBrinker@indot.IN.gov>; Mcghghy, Donald <DMcghghy@indot.IN.gov>; Ron Bales <rbales@indot.IN.gov>
Subject: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Des. No.: 2000152

Project Description: US 36 and Raider Road Intersection Improvement Project

Location: Henry County, Indiana

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Thank you in advance for your input,

Linda Weintraut, Ph.D.
 Weintraut & Associates, Inc.

From: [Linda Weintraut](#)
To: [Ed Tarantino](#)
Cc: [Bobbi Plummer](#); [Steve Dellinger](#)
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana
Date: Tuesday, November 15, 2022 4:49:00 PM

Thank you for your comment. We will register you as a consulting party so that you continue to receive information about the project.

Linda Weintraut

From: Steve Dellinger <sdellinger@henrycounty.in.gov>
Sent: Tuesday, November 15, 2022 8:38 PM
To: Linda Weintraut <linda@weintrautinc.com>
Cc: Ed Tarantino <etarantino@henrycounty.in.gov>; Bobbi Plummer <bplummer@henrycounty.in.gov>
Subject: Re: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Linda, I was born and raised in Henry County. I fail to see the logic of a roundabout at this location as opposed to a stop light. I understand the need for safety at high profile intersections, but it seems like a roundabout is going overboard. As an elected official it is my responsibility to listen to my constituents and as the rumors started concerning this proposed project, I will have to say that I have gotten NO positive response for proceeding with this plan for the roundabout. I will continue to listen to residents and relay all concerns to you and your department.

Respectfully, Steve Dellinger, Henry County Commissioner

Sent from my iPhone

From: [Linda Weintraut](#)
To: [Steve Dellinger](#)
Cc: [Ed Tarantino](#); [Bobbi Plummer](#)
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana
Date: Wednesday, November 16, 2022 3:23:00 PM

Thank you for your comment. We will register you as a consulting party so that you continue to receive information about the project.

Linda Weintraut

From: Kelly, Clint
Sent: Thursday, November 17, 2022 11:15 AM
To: Linda Weintraut
Cc: Branigin, Susan; Coon, Matthew; Mcghghy, Donald; Doug Fivecoat
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Hi Linda,
Please see below for a response from the Delaware Tribe of Indians.
Thanks,
Clint

Clint Kelly
Section 106 Specialist/Historian
Cultural Resources Office
Environmental Services
100 N. Senate Ave., Rm. N758-ES
Indianapolis, IN 46204
Office: (317) 447-8707
Email: ckelly1@indot.in.gov
Core Office Hours: M-F 7:30-3:30



From: Larry Heady <lheady@delawaretribe.org>
Sent: Tuesday, November 15, 2022 10:04 PM
To: Kelly, Clint <CKelly1@indot.IN.gov>; Coon, Matthew <mcoon@indot.IN.gov>
Subject: Re: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Dear Mr. Kelly and Mr. Coon:

Thank you for notifying the Delaware Tribe of the plans for the above-referenced project. The Delaware Tribe is committed to protecting sites and resources important to our tribal heritage, culture, and religion. After reviewing our files, we determined that there are no known religious or culturally significant sites within the selected project area. We have no objection to the proposed project.

We ask that if any archaeological or historical materials (artifacts, subsurface features, etc.) are discovered during the implementation of this project that work in the immediate area be halted until an archaeologist can view and assess the finds. Furthermore, we ask that if any human remains are

inadvertently discovered during the project that you cease development immediately and inform the Delaware Tribe of Indians of the discovery. We ask that you follow the Delaware Tribe's Inadvertent Discovery Policy. The Tribe reserves the right to engage in government-to-government consultation at any time during project implementation and to initiate its own archaeological investigation if warranted. If you have any questions, feel free to contact this office.

Wanishi! Anushiik!
Thank You!

LARRY HEADY | Tribal Historic Preservation Officer

Delaware Tribe of Indians

125 Dorry Lane | Grants Pass, OR 97527

262.825.7586 | lheady@delawaretribe.org

"Preserving the Legacy of Lenape Culture and the Delaware Diaspora"

I recognize that I am a guest in the ancient and sacred homeland of the living nations of the Coos, Hupa, Karuk, Klamath, Modoc, Takelma, Shasta, Siuslaw, Cow Creek Band of Umpqua, Yahooskin, and Yurok. I extend my respect and gratitude to the Indigenous people who call these lands home.

RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Brittany Miller <bmillier@indianalandmarks.org>

Wed 11/16/2022 10:21 AM

To: Linda Weintraut <linda@weintrautinc.com>;bmccord@dnr.in.gov <bmccord@dnr.in.gov>;cslider@dnr.in.gov <cslider@dnr.in.gov>;East <east@indianalandmarks.org>;henrycountymuseum@gmail.com <henrycountymuseum@gmail.com>;contact@middletownhistory.us <contact@middletownhistory.us>;jaray56@gmail.com <jaray56@gmail.com>;d.radford@comcast.net <d.radford@comcast.net>;etarantino@henrycounty.in.gov <etarantino@henrycounty.in.gov>;sdellinger@henrycounty.in.gov <sdellinger@henrycounty.in.gov>;bplummer@henrycounty.in.gov <bplummer@henrycounty.in.gov>;tgreen@henrycounty.in.gov <tgreen@henrycounty.in.gov>;jcopeland@henrycounty.in.gov <jcopeland@henrycounty.in.gov>;DHPARReview@dnr.IN.gov <DHPARReview@dnr.IN.gov>
Cc: Kelly, Clint <CKelly1@indot.IN.gov>;Coon, Matthew <mcoon@indot.IN.gov>;Branigin, Susan <SBranigin@indot.IN.gov>;Molly Barletta <MBarletta@kaskaskiaeng.com>;Hiller, Jerod <jahiller@fishbeck.com>;Doug Fivecoat <dfivecoat@weintrautinc.com>;Brinker, Haley <HBrinker@indot.IN.gov>;Mcghghy, Donald <DMcghghy@indot.IN.gov>;Ron Bales <rbales@indot.IN.gov>

Hi Linda,

Thank you for including Indiana Landmarks in the conversation. We have concerns about how this project would affect the Fall Creek District School on the northwest corner of US 36 and Raider Road. Please continue to include us as a consulting party.

Best,

.....
Brittany Miller (she/her)

Director, Eastern Regional Office

.....
Indiana Landmarks

Ph. 765-231-6429, 800-450-4534

Cell 765-593-1218

indianalandmarks.org

From: Linda Weintraut <linda@weintrautinc.com>

Sent: Monday, November 14, 2022 4:21 PM

To: bmccord@dnr.in.gov; cslider@dnr.in.gov; East <east@indianalandmarks.org>; henrycountymuseum@gmail.com; contact@middletownhistory.us; jaray56@gmail.com; d.radford@comcast.net; etarantino@henrycounty.in.gov; sdellinger@henrycounty.in.gov; bplummer@henrycounty.in.gov; tgreen@henrycounty.in.gov; jcopeland@henrycounty.in.gov; DHPARReview@dnr.IN.gov

Cc: Kelly, Clint <CKelly1@indot.IN.gov>; Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Molly Barletta <MBarletta@kaskaskiaeng.com>; Hiller, Jerod <jahiller@fishbeck.com>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Brinker, Haley <HBrinker@indot.IN.gov>; Mcghghy, Donald <DMcghghy@indot.IN.gov>; Ron Bales <rbales@indot.IN.gov>

Subject: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Des. No.: 2000152

Project Description: US 36 and Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 and Raider Road Intersection Improvement Project (Des No.: 2000152).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The following agencies/individuals are being invited to become consulting parties:

State Historic Preservation Officer
Delaware Tribe of Indians
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma
Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Shawnee Tribe
Indiana Landmarks Eastern Regional Office
Henry County Historical Society and Museum
Middletown/Fall Creek Township Historical Society
Preserve Henry County, Inc.
Henry County Historian
Henry County Commissioners
Henry County Planning Commission
Henry County Highway Department

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

Please review the attached letter, which is also located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. If we do not receive a response from an invited consulting party within the time allotted, the project will proceed consistent with the proposed design. Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.

Tribal Contacts, please respond to INDOT's Acting Tribal Liaison, Matt Coon at mcoon@indot.in.gov (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Linda Weintraut, Ph.D.
 Weintraut & Associates, Inc.

From: [Linda Weintraut](#)
To: [Brittany Miller](#)
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana
Date: Wednesday, November 16, 2022 3:24:00 PM

Thank you for your comment. We will register you as a consulting party so that you continue to receive information about the project.

Linda Weintraut

From: [Linda Weintraut](#)
To: ["Ed Tarantino"](#)
Cc: ["Kelly, Clint"](#)
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana
Date: Friday, November 18, 2022 3:16:00 PM

Ed,

Thank you for your email. I have forwarded your concerns to INDOT and to my manager.

Thank you again, Linda

From: Ed Tarantino <etarantino@henrycounty.in.gov>
Sent: Friday, November 18, 2022 3:02 PM
To: Linda Weintraut <linda@weintrautinc.com>
Subject: RE: FHWA Project: Des. No. 2000152; US 36 and Raider Road Intersection Improvement Project, Henry County, Indiana

Linda, Our Highway Superintendent just gave us an accident report for that intersection, and it showed very few accidents at that intersection over the past several years. What is the reason why it is being considered for a roundabout?

Ed Tarantino
Henry County Commissioner
765-465-6984



Miami Tribe of Oklahoma

3410 P St. NW, Miami, OK 74354 • P.O. Box 1326, Miami, OK 74355
 Ph: (918) 541-1300 • Fax: (918) 542-7260
www.miamination.com



Via email: mcoon@indot.in.gov

November 21, 2022

Matt Coon, Tribal Liaison
 INDOT, Cultural Resources Office
 100 North Senate Avenue, N758-ES
 Indianapolis, Indiana 46204

Re: Des. No. 2000152, US 36 and Raider Road Intersection Improvements, Henry County, Indiana –
 Comments of the Miami Tribe of Oklahoma

Dear Mr. Coon:

Aya, kweehsitoolaani– I show you respect. The Miami Tribe of Oklahoma, a federally recognized Indian tribe with a Constitution ratified in 1939 under the Oklahoma Indian Welfare Act of 1936, respectfully submits the following comments regarding Des. No. 2000152, US 36 and Raider Road Intersection Improvements in Henry County, Indiana.

The Miami Tribe offers no objection to the above-referenced project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, given the Miami Tribe's deep and enduring relationship to its historic lands and cultural property within present-day Indiana, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at THPO@miamination.com to initiate consultation.

The Miami Tribe accepts the invitation to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer I am the point of contact for consultation.

Respectfully,

Diane Hunter
 Tribal Historic Preservation Officer

Division of Historic Preservation & Archaeology · 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 · Fax 317-232-0693 · dhpa@dnr.IN.gov ·



November 30, 2022

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077

Federal Agency: Indiana Department of Transportation (“INDOT”),
on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Early coordination letter for the US Highway 36 and Raider Road intersection improvement (Des.
No. 2000152; DHPA No. 30075)

Dear Dr. Weintraut:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your November 14, 2022 submission which enclosed INDOT’s early coordination letter, received by our office the same day for the US Highway 36 and Raider Road intersection improvement project in Henry County, Indiana.

We are not aware of any parties who should be invited to participate in the Section 106 consultation on this federal undertaking, beyond those whom INDOT already has invited. However, if right-of-way is likely to be taken from a potentially historic property, it might be advisable to invite the owner of that property as soon as possible. In your next regular correspondence on this project, please advise us as to which of the invited consulting parties has accepted the invitation.

We look forward to reviewing the proposed area of potential effects and the reports on investigations of above-ground cultural resources and archaeological resources that the early coordination letter indicated will be forthcoming.

The Indiana SHPO staff’s archaeological reviewer for this project is Beth McCord, and the structures reviewer is Toni Lynn Giffin. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US Highway 36 and Raider Road intersection improvement project in Henry County (Des. No. 2000152), please refer to DHPA No. 30075.

Dr. Linda Weintraut
November 30, 2022
Page 2

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:TLG:tlg

emc: Matt Coon, INDOT
Susan Branigin, INDOT
Beth McCord, DNR-DHPA
Toni Lynn Giffin, DNR-DHPA
Indiana Landmarks Eastern Regional Office
Henry County Historical Society and Museum
Middletown/Fall Creek Township Historical Society
Preserve Henry County, Inc.
Daniel Radford, Henry County Historian
Henry County Commissioners
Timothy Green, Henry County Planning Commission
Joe Copeland, Henry County Highway Department



EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT
 70500 East 128 Road, Wyandotte, OK 74370

December 27, 2022

INDOT - Indiana Department of Transportation
 100 N. Senate Ave. IGCN642
 Indianapolis, IN 46201

RE: *Des No. 2000152, Henry County, IN*

Dear Mr. Coon,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Henry County, IN. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Paul Barton, Tribal Historic Preservation Officer (THPO)
 Eastern Shawnee Tribe of Oklahoma
 (918) 666-5151 Ext:1833
 THPO@estoo.net



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

May 5, 2023

This letter was sent to the listed parties.

RE: US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana, Des No.: 2000152;
DHPA No. 30075.

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana (Des No. 2000152).

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

A Section 106 early coordination letter was distributed on November 14, 2022.

The proposed undertaking is located at the intersection of US 36 and Raider Road in Henry County, Indiana. It is within Fall Creek Township on the Middletown USGS Quadrangle, in Section 17 and 20, Township 18 North, Range 9 East. The project area can be viewed online at <https://arcg.is/jqueP> (the Des. No. is the most efficient search term once in the CRO - Public Web Map App).

The need for this project is the above average crash severity at the existing intersection. Per RoadHAT 3.0 analysis (INDOT traffic engineering safety modeling software) of 2016-2018 crash data, the most recent data available at the time of this analysis, the index of crash frequency (ICF) is 1.61 (well above average) and the index of crash cost (ICC) is 2.40 (well above average). These indices compare the crash cost and crash frequency for this intersection to intersections with similar volumes, roadway classifications, and control type throughout Indiana. The ICC and ICF exceeds the threshold of 1.00 set by INDOT's Office of Traffic Safety, flagging the intersection as a safety concern. The purpose of the project is to reduce crash potential, improve the ICC and ICF to below 1.00, and provide a long-term solution to ensure safe and efficient operation of the intersection.

The proposed project is anticipated to convert the existing intersection into single lane roundabout. Drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Intersection

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improvements will also include new street lighting and landscaping. The project requires the acquisition of 1.35 acres of permanent ROW and 0.40 acre of temporary ROW. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline.

The project will be approximately 0.29 mile in length. No relocations are planned. The proposed method of traffic maintenance is anticipated to be a full closure when school is not in session, utilizing a detour via SR 38 and SR 3. Approximately 0.27 acre of trees will be cleared as part of this project. The project is anticipated to begin construction in late Spring or early Summer of 2025.

Fishbeck is under contract with INDOT to advance the environmental documentation for the referenced project. Weintraut & Associates, Inc. (W&A) has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status--as well as additional entities that are currently being invited to become consulting parties--are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

A historian who meets the Secretary of the Interior's Professional Qualification Standards identified and evaluated above-ground resources within the APE for potential eligibility for the NRHP. As a result of the historic property identification and evaluation efforts, no above-ground resources are recommended as eligible for listing in the NRHP.

An archaeologist who meets the Secretary of the Interior's Professional Qualification Standards is conducting a survey of archaeological resources within the APE for potential eligibility for listing in the NRHP. A report of that investigation is forthcoming and will be distributed to the appropriate consulting parties for review at a later date.

Consulting party status has been accepted by three Henry County Commissioners, Indiana Landmarks, the Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, and the Miami Tribe of Oklahoma. Henry County Commissioners, Bobbi Plummer, Ed Tarantino, and Steve Dellinger, responded to the ECL with comments about the need for a roundabout at the US 36 and Raider Road intersection and noted their constituents do not support the proposed project. Commissioner Bobbi Plummer also expressed concern regarding the proximity of the project to the schools near the US 36 and Raider Road intersection and the ability of farm equipment to navigate the proposed roundabout. Indiana Landmarks also questioned the project's potential effects to the Fall Creek District School (IHSSI No.: 065-409-20048).

W&A responded via email to the Commissioners and to Indiana Landmarks thanking them for their comments and notifying them that they would be added as consulting parties to ensure they receive all future correspondence regarding the project. (See enclosed copies of this correspondence). The Section 106 process focuses on impacts to historic properties; therefore, the Commissioner's specified concerns will not be addressed as part of this process. However, W&A forwarded their comments to the project management and design team for further consideration.

The Historic Property Short Report is available for review in IN SCOPE at <http://erms12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review these documents and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes.

For questions concerning specific project details, you may contact Dr. Linda Weintraut of Weintraut & Associates, Inc. at (317) 733-9770 or Linda@weintrautinc.com. All future responses regarding the proposed project should be forwarded to Weintraut & Associates at the following address:

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077
Linda@weintrautinc.com

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Sincerely,



Matthew S. Coon, Manager
Cultural Resources Office
Environmental Services

Enclosures:

Email comments from Henry County Commissioners and responses
Email comments from Indiana Landmarks and responses

Distribution List:

Accepting Consulting Parties:

State Historic Preservation Office (SHPO)

Indiana Landmarks (east@indianalandmarks.org)

Henry County Commissioners

- Ed Tarantino (etarantino@henrycounty.in.gov)
- Steve Dellinger (sdellinger@henrycounty.in.gov)
- Bobbi Plummer (bplummer@henrycounty.in.gov)

Delaware Tribe of Indians

Eastern Shawnee Tribe of Oklahoma

Miami Tribe of Oklahoma

The emails from the Henry County Commissioners and Indiana Landmarks and project team responses that were originally attached to this letter have been omitted here because they have already appeared in this correspondence appendix.

FHWA Project: Des. No. 2000152; HPSR, US 36 & Raider Road Intersection Improvement Project, Henry County, Indiana; DHPA No. 30075

Linda Weintraut

Mon 5/8/2023 2:12 PM

To: east@indianalandmarks.org <east@indianalandmarks.org>; Ed Tarantino <etarantino@henrycounty.in.gov>; Bobbi Plummer <bplummer@henrycounty.in.gov>; Steve Dellinger <sdellinger@henrycounty.in.gov>; dhpapreview@dnr.in.gov <dhpapreview@dnr.in.gov>; Slider, Chad (DNR) <CSlider@dnr.IN.gov>; McCord, Beth K <BMccord@dnr.IN.gov>; tgiffin@dnr.in.gov <tgiffin@dnr.in.gov>
Cc: Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Molly Barletta <MBarletta@kaskaskiaeng.com>; Hiller, Jerod <jahiller@fishbeck.com>

Des. No.: 2000152; DHPA No 30075

Project Description: US 36 & Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with **US 36 & Raider Road Intersection Improvement Project (Des. No. 2000152; DHPA No. 30075)**. The Section 106 Early Coordination Letter for this project was originally distributed on November 14, 2022.

As part of Section 106 of the National Historic Preservation Act, a Historic Property Short Report (HPSR) has been prepared and is ready for review and comment by consulting parties.

Please review this documentation located in IN SCOPE at <http://erms12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).
Thank you in advance for your input,

Linda Weintraut, Ph.D. | Weintraut & Associates, Inc. | 4649 Northwestern Drive | Zionsville, Indiana 46077
Tel: 317.733.9770 | www.weintrautinc.com

FHWA Project: Des. No. 2000152; HPSR, US 36 & Raider Road Intersection Improvement Project, Henry County, Indiana; DHPA No. 30075

Kelly, Clint

Tue 5/9/2023 9:00 AM

To: lheady@delawaretribe.org <lheady@delawaretribe.org>; Susan Bacher <sbacher@DelawareTribe.onmicrosoft.com>; thpo@estoo.net <thpo@estoo.net>; THPO@MiamiNation.com <THPO@MiamiNation.com>
Cc: Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Mcghghy, Donald <DMcghghy@indot.IN.gov>; Linda Weintraut <linda@weintrautinc.com>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>

Des. No.: 2000152; DHPA No 30075

Project Description: US 36 & Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with **US 36 & Raider Road Intersection Improvement Project (Des. No. 2000152; DHPA No. 30075)**. The Section 106 Early Coordination Letter for this project was originally distributed on November 14, 2022.

As part of Section 106 of the National Historic Preservation Act, a Historic Property Short Report (HPSR) has been prepared and is ready for review and comment by consulting parties.

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Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Clint Kelly

Section 106 Specialist/Historian

Cultural Resources Office

Environmental Services

100 N. Senate Ave., Rm. N758-ES

Indianapolis, IN 46204

Office: (317) 447-8707

Email: ckelly1@indot.in.gov

Core Office Hours: M-F 7:30-3:30



From: Brittany Miller <bmillier@indianalandmarks.org>

Sent: Friday, May 12, 2023 2:13 PM

To: Linda Weintraut <linda@weintrautinc.com>

Subject: Re: FHWA Project: Des. No. 2000152; HPSR, US 36 & Raider Road Intersection Improvement Project, Henry County, Indiana; DHPA No. 30075

Thank you for the report, Linda. Will Fall Creek District School have any work done to it in relation to the roundabout work or will it be left undisturbed?

Brittany

Best,

.....
Brittany Miller (she/her)

Director, Eastern Regional Office

.....
Indiana Landmarks

Ph. 765-231-6429, 800-450-4534

Cell 765-593-1218

indianalandmarks.org

Division of Historic Preservation & Archaeology · 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 · Fax 317-232-0693 · dhpa@dnr.IN.gov ·



May 30, 2023

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077

Federal Agency: Indiana Department of Transportation (“INDOT”),
on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Historic property short report (Fivecoat, 4/18/2023) for the US Highway 36 and Raider Road
intersection improvement project (Des. No. 2000152; DHPA No. 30075)

Dear Dr. Weintraut:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your May 5, 2023 review request submittal form which enclosed the historic property short report (“HPSR”; Fivecoat, 4/18/2023), received by our office on May 8, 2023, for this project in Henry County, Indiana.

The area of potential effects (“APE”) proposed in the HPSR appears to be of adequate size to encompass the geographic area in which direct and indirect effects of a project of this nature could occur.

For the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions of the HPSR that there are no historic properties listed in or eligible for listing in the National Register of Historic Places within the APE for this project.

Furthermore, we appreciate that the HPSR submission also included correspondence from and responses to the consulting parties who contacted your office regarding the US Highway 36 and Raider Road intersection improvement project (Des. No. 2000152).

The review request submittal form indicates the report on investigations of archaeological resources is forthcoming. We look forward to receiving that report.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana SHPO within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

Linda Weintraut
 May 30, 2023
 Page 2

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewer is Toni Lynn Giffin. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US Highway 36 and Raider Road intersection improvement project in Henry County (Des. No. 2000152), please refer to DHPA No. 30075.

Very truly yours,



Beth K. McCord
 Deputy State Historic Preservation Officer

BKM:TLG:tlg

emc: Matt Coon, INDOT
 Susan Branigin, INDOT
 Beth McCord, DNR-DHPA
 Toni Lynn Giffin, DNR-DHPA
 Linda Weintraut, Weintraut & Associates, Inc.
 Indiana Landmarks Eastern Regional Office
 Henry County Historical Society and Museum
 Middletown/Fall Creek Township Historical Society
 Preserve Henry County, Inc.
 Daniel Radford, Henry County Historian
 Henry County Commissioners
 Timothy Green, Henry County Planning Commission
 Joe Copeland, Henry County Highway Department



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

October 3, 2023

This letter was sent to the listed parties.

RE: US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana, Des No.: 2000152;
DHPA No. 30075.

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana (Des No. 2000152).

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

A Section 106 early coordination letter was distributed on November 14, 2022. A Historic Property Short Report (HPSR) was distributed on May 8, 2023.

The proposed undertaking is located at the intersection of US 36 and Raider Road in Henry County, Indiana. It is within Fall Creek Township on the Middletown USGS Quadrangle, in Section 17 and 20, Township 18 North, Range 9 East. The project area can be viewed online at <https://arcg.is/jqueP> (the Des. No. is the most efficient search term once in the CRO - Public Web Map App).

The need for this project is the above average crash severity at the existing intersection. Per RoadHAT 3.0 analysis (INDOT traffic engineering safety modeling software) of 2016-2018 crash data, the most recent data available at the time of this analysis, the index of crash frequency (ICF) is 1.61 (well above average) and the index of crash cost (ICC) is 2.40 (well above average). These indices compare the crash cost and crash frequency for this intersection to intersections with similar volumes, roadway classifications, and control type throughout Indiana. The ICC and ICF exceeds the threshold of 1.00 set by INDOT's Office of Traffic Safety, flagging the intersection as a safety concern. The purpose of the project is to reduce crash potential, improve the ICC and ICF to below 1.00, and provide a long-term solution to ensure safe and efficient operation of the intersection.

The proposed project is anticipated to convert the existing intersection into single lane roundabout. Drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility

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relocations for utility poles will be required at the corners of the existing intersection. Intersection improvements will also include new street lighting and landscaping. The project requires the acquisition of 1.35 acres of permanent ROW and 0.40 acre of temporary ROW. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline.

The project will be approximately 0.29 mile in length. No relocations are planned. The proposed method of traffic maintenance is anticipated to be a full closure when school is not in session, utilizing a detour via SR 38 and SR 3. Approximately 0.27 acre of trees will be cleared as part of this project. The project is anticipated to begin construction in late Spring or early Summer of 2025.

Fishbeck is under contract with INDOT to advance the environmental documentation for the referenced project. Weintraut & Associates, Inc. (W&A) has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status--as well as additional entities that are currently being invited to become consulting parties--are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

A historian who meets the Secretary of the Interior's Professional Qualification Standards identified and evaluated above-ground resources within the APE for potential eligibility for the NRHP. As a result of the historic property identification and evaluation efforts, no above-ground resources are recommended as eligible for listing in the NRHP.

With regard to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards identified two sites within the project area—12HN524 and 12HN525. As a result of these efforts, sites 12HN524 and 12HN525 were recommended as not eligible for listing in the NRHP and no further work is recommended.

Consulting party status has been accepted by three Henry County Commissioners, Indiana Landmarks, the Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, and the Miami Tribe of Oklahoma. Henry County Commissioners, Bobbi Plummer, Ed Tarantino, and Steve Dellinger, responded to the ECL with comments about the need for a roundabout at the US 36 and Raider Road intersection and noted their constituents do not support the proposed project. Indiana Landmarks also questioned the project's potential effects to the Fall Creek District School (IHSSI No.: 065-409-20048). These comments and project team responses were previously summarized in the distribution letter for the HPSR.

The Archaeological Report (Tribes only) is available for review in IN SCOPE at <http://erns12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review these documents and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes.

For questions concerning specific project details, you may contact Dr. Linda Weintraut of Weintraut & Associates, Inc. at (317) 733-9770 or Linda@weintrautinc.com. All future responses regarding the proposed project should be forwarded to Weintraut & Associates at the following address:

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077
Linda@weintrautinc.com

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Sincerely,



Matthew S. Coon, Manager
Cultural Resources Office
Environmental Services

Distribution List:

Accepting Consulting Parties:

- State Historic Preservation Office (SHPO)
- Indiana Landmarks (east@indianalandmarks.org)
- Henry County Commissioners
 - Ed Tarantino (etarantino@henrycounty.in.gov)
 - Steve Dellinger (sdellinger@henrycounty.in.gov)
 - Bobbi Plummer (bplummer@henrycounty.in.gov)

Delaware Tribe of Indians
Eastern Shawnee Tribe of Oklahoma
Miami Tribe of Oklahoma

Peoria Tribe of Indians of Oklahoma
Pokagon Band of Potawatomi Indians
Shawnee Tribe

FHWA Project: Des. No. 2000152; ASR, US 36 & Raider Road Intersection Improvement Project, Henry County, Indiana

Coon, Matthew <mcoon@indot.IN.gov>

Fri 10/13/2023 2:07 PM

To: thpo@estoo.net <thpo@estoo.net>; thpo@miamination.com <THPO@MiamiNation.com>; Burgundy Fletcher <bffletcher@peoriatribe.com>; Matthew Bussler <Matthew.Bussler@pokagonband-nsn.gov>; Section106@shawnee-tribe.com <Section106@shawnee-tribe.com>; sbachor@delawaretribe.org <sbachor@delawaretribe.org>
Cc: Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Linda Weintraut <linda@weintrautinc.com>

Des. No.: 2000152

Project Description: US 36 & Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 & Raider Road Intersection Improvement Project (Des. No. 2000152; DHPA No. 30075). The Section 106 Early Coordination Letter for this project was originally distributed on November 14, 2022.

As part of Section 106 of the National Historic Preservation Act, an Archaeological Report (Tribes only) has been prepared and is ready for review and comment by consulting parties.

Please review this documentation located in IN SCOPE at <http://erms12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Matt Coon

Manager, Cultural Resources Office

Interim Archaeology Team Lead

Acting Tribal Liaison

Indiana Department of Transportation

100 North Senate Ave., N758 — Environmental Services

Indianapolis, IN 46204

Phone: 317-697-9752

Email: mcoon@indot.in.gov



RE: FHWA Project: Des. No. 2000152; HPSR, US 36 & Raider Road Intersection Improvement Project, Henry County, Indiana; DHPA No. 30075

Linda Weintraut <linda@weintrautinc.com>

Mon 10/16/2023 3:16 PM

To: east@indianalandmarks.org <east@indianalandmarks.org>; Ed Tarantino <etarantino@henrycounty.in.gov>; Bobbi Plummer <bplummer@henrycounty.in.gov>; Steve Dellinger <sdellinger@henrycounty.in.gov>; dhpapreview@dnr.in.gov <dhpapreview@dnr.in.gov>; Slider, Chad (DNR) <CSlider@dnr.IN.gov>; McCord, Beth K <BMccord@dnr.IN.gov>; tgiffin@dnr.in.gov <tgiffin@dnr.in.gov>
Cc: Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Molly Barletta <MBarletta@kaskaskiaeng.com>; Hiller, Jerod <jahiller@fishbeck.com>

 1 attachments (243 KB)

US36&RaiderRd_Des2000152_Phase1a_RDL_2023-10-03.pdf;

Des. No.: 2000152

Project Description: US 36 & Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with the US 36 & Raider Road Intersection Improvement Project (Des. No. 2000152; DHPA No. 30075). The Section 106 Early Coordination Letter for this project was originally distributed on November 14, 2022.

As part of Section 106 of the National Historic Preservation Act, an Archaeological Report (Tribes only) has been prepared and is ready for review and comment by consulting parties.

Please review this documentation located in IN SCOPE at <http://erms12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Thank you in advance for your input,

Linda Weintraut, Ph.D. | Weintraut & Associates, Inc. | 4649 Northwestern Drive | Zionsville, Indiana 46077
Tel: 317.733.9770 | www.weintrautinc.com

From: Linda Weintraut

Sent: Monday, May 8, 2023 2:12 PM

To: east@indianalandmarks.org; Ed Tarantino <etarantino@henrycounty.in.gov>; Bobbi Plummer <bplummer@henrycounty.in.gov>; Steve Dellinger <sdellinger@henrycounty.in.gov>; dhpapreview@dnr.in.gov; Slider, Chad (DNR) <CSlider@dnr.IN.gov>; McCord, Beth K <BMccord@dnr.IN.gov>; tgiffin@dnr.in.gov

Cc: Coon, Matthew <mcoon@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Doug Fivecoat <dfivecoat@weintrautinc.com>; Molly Barletta <MBarletta@kaskaskiaeng.com>; Hiller, Jerod <jahiller@fishbeck.com>

Subject: FHWA Project: Des. No. 2000152; HPSR, US 36 & Raider Road Intersection Improvement Project, Henry County, Indiana; DHPA No. 30075

Des. No.: 2000152; DHPA No 30075

Project Description: US 36 & Raider Road Intersection Improvement Project

Location: Henry County, Indiana

The Indiana Department of Transportation, with funding from the Federal Highway Administration, proposes to proceed with **US 36 & Raider Road Intersection Improvement Project** (Des. No. **2000152; DHPA No. 30075**). The Section 106 Early Coordination Letter for this project was originally distributed on November 14, 2022.

As part of Section 106 of the National Historic Preservation Act, a Historic Property Short Report (HPSR) has been prepared and is ready for review and comment by consulting parties.

Please review this documentation located in IN SCOPE at <http://erms12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629). Thank you in advance for your input,

Linda Weintraut, Ph.D. | Weintraut & Associates, Inc. | 4649 Northwestern Drive | Zionsville, Indiana 46077
Tel: 317.733.9770 | www.weintrautinc.com

Division of Historic Preservation & Archaeology · 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 · Fax 317-232-0693 · dhpa@dnr.IN.gov ·



November 1, 2023

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077

Federal Agency: Indiana Department of Transportation (“INDOT”), on behalf of Federal Highway Administration, Indiana Division (“FHWA”)

Re: Phase Ia archaeological field reconnaissance report (Goldbach 9/15/2023) for the US Highway 36 and Raider Road intersection improvement project (Des. No. 2000152; DHPA No. 30075)

Dear Dr. Weintraut:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. § 306108), 36 C.F.R. Part 800, and the “Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana,” the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has reviewed your submission dated and received on October 13, 2023 for this project in Henry County, Indiana.

As previously stated, for the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions of the HPSR that there are no historic properties listed in or eligible for listing in the National Register of Historic Places within the APE for this project.

Regarding archaeological resources, thank you for the submission of the Phase Ia archaeological survey report (Goldbach 9/15/23). We concur with the opinion of the archaeologist that further archaeological investigation of the portion of sites 12HN524 and 12HN525 surveyed for this project are unlikely to produce additional important information and no further work in these areas is warranted. As the site boundaries extend beyond the limits surveyed, the unsurveyed portions of sites 12HN524 and 12HN525 remain unevaluated for inclusion in the NRHP. If the project boundaries should change at these site locations, further archaeological investigations will be necessary to delineate the site boundaries and provide an evaluation. The surveyed limits should be clearly marked at sites 12HN524 and 12HN525 so that unsurveyed portions of these sites are avoided by all ground-disturbing project activities. Thank you for submitting the archaeological report and site survey forms for sites 12HN524 and 12HN525 to SHAARD. They have been approved.

Unless another consulting party expresses a different opinion about the historic properties, it might now be appropriate to ask INDOT for a finding.

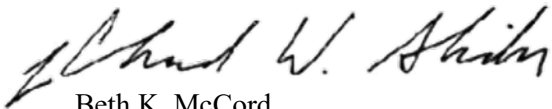
Linda Weintraut
November 1, 2023
Page 2

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana SHPO within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

The Indiana SHPO staff's archaeological reviewer for this project is Beth McCord, and the structures reviewer is Toni Lynn Giffin. However, if you have a question about the Section 106 process, please contact initially the INDOT Cultural Resources staff members who are assigned to this project.

In all future correspondence about the US Highway 36 and Raider Road intersection improvement project in Henry County (Des. No. 2000152), please refer to DHPA No. 30075.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:TLG:BKM:tlg

emc: Matt Coon, INDOT
Susan Branigin, INDOT
Beth McCord, DNR-DHPA
Toni Lynn Giffin, DNR-DHPA
Linda Weintraut, Weintraut & Associates, Inc.
Indiana Landmarks Eastern Regional Office
Henry County Historical Society and Museum
Middletown/Fall Creek Township Historical Society
Preserve Henry County, Inc.
Daniel Radford, Henry County Historian
Henry County Commissioners
Timothy Green, Henry County Planning Commission
Joe Copeland, Henry County Highway Department



EASTERN SHAWNEE
CULTURAL PRESERVATION DEPARTMENT
 70500 East 128 Road, Wyandotte, OK 74370

December 6, 2023

INDOT - Indiana Department of Transportation
 100 N. Senate Ave. IGCN642
 Indianapolis, IN 46201

RE: *Des No. 2000152, Henry County, Indiana*

Dear Mr. Coon,

The Eastern Shawnee Tribe has received your letter regarding the above referenced project(s) within Henry County, Indiana. The Eastern Shawnee Tribe is committed to protecting sites important to Tribal Heritage, Culture and Religion. Furthermore, the Tribe is particularly concerned with historical sites that may contain but not limited to the burial(s) of human remains and associated funerary objects.

As described in your correspondence, and upon research of our database(s) and files, we find our people occupied these areas historically and/or prehistorically. However, the project proposes **NO Adverse Effect** or endangerment to known sites of interest to the Eastern Shawnee Tribe. Please continue project as planned. However, should this project inadvertently discover an archeological site or object(s) we request that you immediately contact the Eastern Shawnee Tribe, as well as the appropriate state agencies (within 24 hours). We also ask that all ground disturbing activity stop until the Tribe and State agencies are consulted. Please note that any future changes to this project will require additional consultation.

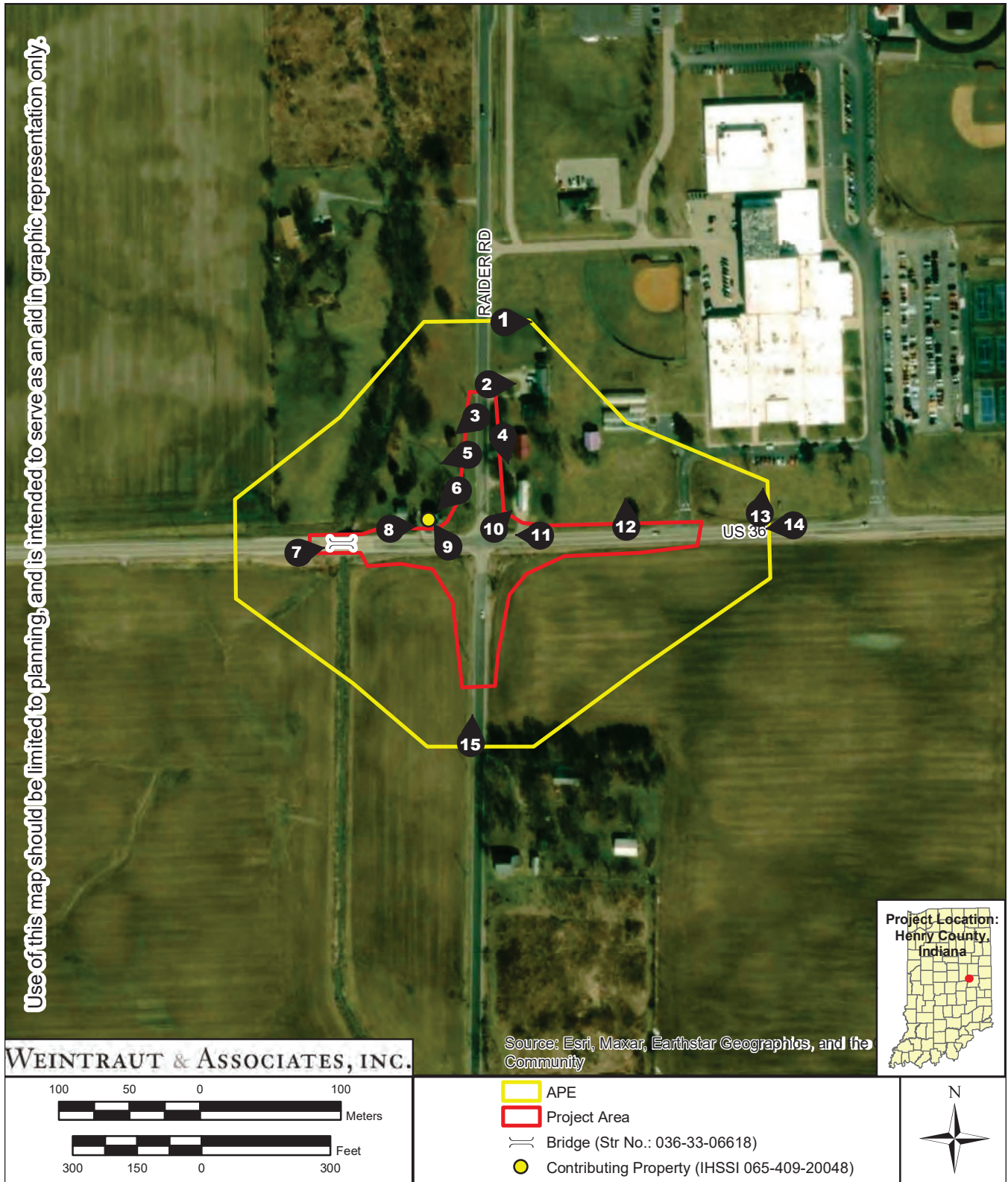
In accordance with the NHPA of 1966 (16 U.S.C. § 470-470w-6), federally funded, licensed, or permitted undertakings that are subject to the Section 106 review process must determine effects to significant historic properties. As clarified in Section 101(d)(6)(A-B), historic properties may have religious and/or cultural significance to Indian Tribes. Section 106 of NHPA requires Federal agencies to consider the effects of their actions on all significant historic properties (36 CFR Part 800) as does the National Environmental Policy Act of 1969 (43 U.S.C. § 4321-4347 and 40 CFR § 1501.7(a)). This letter evidences NHPA and NEPA historic properties compliance pertaining to consultation with this Tribe regarding the referenced proposed projects.

Thank you, for contacting the Eastern Shawnee Tribe, we appreciate your cooperation. Should you have any further questions or comments please contact our Office.

Sincerely,

Paul Barton, Tribal Historic Preservation Officer (THPO)
 Eastern Shawnee Tribe of Oklahoma
 (918) 666-5151 Ext:1833
 THPO@estoo.net

Appendix D: Photographs





1. This view looks at the large addition between the Shenandoah Middle School and High School from the north end of the APE, looking east.



2. The residential property at 5062 North Raider Road (c. 1948) has several additions, looking east.



3. The residence at 7538 US 36 (IHSSI No. 065-409-20048) has a barn/garage (c. 1912), looking southwest.



4. The American Small House at 5036 North Raider Road (c. 1950) is an example of a Non-Contributing rated property in the APE, looking southeast.



5. This stone and mortar bridge (c. 1920) on the property at 7538 US 36 crosses a small tributary to Deer Creek, looking southwest.



6. The former one-room schoolhouse (IHSSI No. 065-409-20048, 7538 US 36) has been converted into a residence, looking south-southwest.



7. This view looks east from the west end of the APE at the US 36 and Deer Creek bridge (Str. No. 036-33-06618).



8. The residence at 7538 US 36 (IHSSI No. 065-409-20048) has had its typical window pattern changed on its the west elevation, looking east.



9. The residence at 7538 US 36 (IHSSI No. 065-409-20048) has alterations including a side porch (now main entry), central dormer, new bow windows, looking north-northwest.



10. The house at 5036 North Raider Road has a detached garage, looking north-northeast.



11. The APE contains large agricultural fields south of US 36, looking west-southwest from the intersection.



12. A pair of greenhouses and a garage/barn are built on the Shenandoah High School property, looking north.



13. This view looks at the façade of the Shenandoah High School from US 36, looking north.



14. This view looks west along US 36 from the east end of the APE.



15. This view looks north along Raider Road from near the south end of the APE.

Appendix E: Report Summaries



**Phase Ia Archaeological Field Reconnaissance:
Intersection Improvement and Roundabout Construction Project at
US 36 and Raider Road in Henry County, Indiana
Des. No.: 2000152**

Prepared for:

Fishbeck, Inc.

Federal Highway Administration/Indiana Department of Transportation

Prepared by:

WEINTRAUT & ASSOCIATES

Principal Investigator: Jason Goldbach, M.A.

P. O. Box 5034 | Zionsville, Indiana 46077 | 317.733.9770 | (jason@weintrautinc.com)

September 15, 2023

Management Summary

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the Intersection Improvement and Roundabout Construction Project at the intersection of United States Highway (US) 36 and Raider Road in Henry County, Indiana (Des No.: 2000152). The project is in part federally funded, and therefore Phase Ia archaeological investigations were undertaken to meet requirements of Section 106 of the National Historic Preservation Act (Advisory Council on Historic Preservation [ACHP] 1966) that requires Federal agencies to take into account the effects of their undertakings on historic properties (Code of Federal Regulations [CFR] 2016). In response to a request by Fishbeck, Inc. (Fishbeck), Weintraut & Associates, Inc. (W&A) conducted an archaeological records check and Phase Ia field reconnaissance for the proposed project.

The Area of Potential Effects (APE) for this project is defined as the combined new, temporary, and permanent right-of-way (ROW). At the time of the submission of this report, Stage 1 plans were not available, and therefore, an area intended to encompass the APE was the subject of the Phase Ia reconnaissance and records check. This area is referred to as the “survey area” throughout the report. The survey area totals approximately 1.24 hectares (ha), or 3.06 acres (ac).

W&A conducted an archaeological records check of the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) of the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (IDNR/DHPA) on January 30, 2023. SHAARD records indicated the survey area had not been previously investigated archaeologically and that there were no sites within the survey area (IDNR/DHPA 2023).

The Phase Ia archaeological field reconnaissance of the survey area was conducted on February 8, 2023. As a result, archaeological sites 12HN524 and 12HN525 were recorded. Site 12HN524 is a small historical artifact scatter within the survey area. Historical maps depict no structures in the area of the site, and no evidence for foundations or other features were encountered. Based on the absence of evidence for a structure nearby, the artifacts found at 12HN524 are likely the result incidental discard or spread from adjacent properties. As a small scatter of unassociated fragmentary artifacts, site 12HN524 lacks significant deposits or features with the potential to yield important information that would meet National Register of Historic Places (NRHP) eligibility Criterion D. Therefore, site 12HN524 is not eligible for listing on the Indiana Register of Historic Sites and Structures (IRHSS) and/or the NRHP, and no further archaeological investigation is warranted.

Site 12HN525 is a historical artifact scatter in the southwest quadrant of the survey area. Historical maps depict a church at its location beginning in the late nineteenth century that likely stood until the mid-twentieth century. Artifacts recovered from 12HN525 are consistent with the demolition of a brick structure, and the subsequent exposure to weathering and plowing during the later use of the property as farmland. Few artifacts unrelated to the demolition of the structure were recovered, and no evidence for foundations or other features were encountered. As a scatter of primarily architectural artifacts, site 12HN525 lacks significant deposits or features with the potential to yield important information that would meet NRHP eligibility Criterion D. Therefore, site 12HN525 is not eligible for listing on the IRHSS and/or the NRHP, and no further archaeological investigation is warranted.

Based on the results of the Phase Ia archaeological fieldwork, W&A offers the following recommendations:

Project clearance and no further archaeological investigations appear necessary for sites 12HN524 and 12HN525 prior to the commencement of construction.

However, these recommendations are made with the understanding that if any previously unidentified intact archaeological deposits or human remains are uncovered during construction, demolition, or earth-moving activities, work within the area will stop and the IDNR/DHPA will be notified of the discovery

within two (2) business days as required by Indiana Code 14-21-1-27 and 29.



Historic Property Short Report
United States (US) Highway 36 and Raider Road Intersection Improvement
Project
Henry County, Indiana
(Des. No.: 2000152, DHPA No. 30075)

Prepared for
Fishbeck/Indiana Department of Transportation

Prepared by
WEINTRAUT & ASSOCIATES, INC.
Principal Investigator: Linda Weintraut, Ph.D. | *Author:* Douglas K. Fivecoat, M.A.
PO Box 5034 | Zionsville, Indiana | (317) 733-9770 | (Linda@weintrautinc.com)

Contact for Fishbeck: Jerod Hiller
8520 Allison Pointe Boulevard, Suite 100, Indianapolis, IN 46250 | (317) 577-9050
(jahiller@fishbeck.com)

March 2023

Executive Summary: United States (US) Highway 36 and Raider Road Intersection Improvement Project Henry County, Indiana, (DES. No.: 2000152)

This report documents the identification and evaluation efforts for properties included in the Area of Potential Effects (APE) for the US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana. Above-ground resources located within the project APE were identified and evaluated in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and the regulations implementing Section 106 (36 CFR Part 800).

As a result of the NHPA, as amended, and CFR Part 800, federal agencies are required to take into account the impact of federal undertakings upon historic properties in the area of the undertaking. Historic properties include buildings, structures, sites, objects, and/or districts that are eligible for or listed in the National Register of Historic Places (National Register). As this project is receiving funding from the Federal Highway Administration (FHWA), it is subject to a Section 106 review.

The APE contains no properties listed in the National Register.

The APE contains no properties that are recommended eligible for listing in the National Register.



INDIANA DEPARTMENT OF TRANSPORTATION

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

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

December 28, 2023

This letter was sent to the listed parties.

RE: US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana, Des No.: 2000152;
DHPA No. 30075.

Dear Consulting Party,

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the US 36 and Raider Road Intersection Improvement Project in Henry County, Indiana (Des No. 2000152).

This letter is part of the Section 106 review process for this project. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. We are requesting comments from you regarding the possible effects of this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

A Section 106 early coordination letter was distributed on November 14, 2022. A Historic Property Short Report (HPSR) was distributed on May 8, 2023. An Archaeology Report was made available to the appropriate consulting parties on October 13, 2023.

The proposed undertaking is located at the intersection of US 36 and Raider Road in Henry County, Indiana. It is within Fall Creek Township on the Middletown USGS Quadrangle, in Section 17 and 20, Township 18 North, Range 9 East. The project area can be viewed online at <https://arcg.is/jqueP> (the Des. No. is the most efficient search term once in the CRO - Public Web Map App).

The need for this project is the above average crash severity at the existing intersection. Per RoadHAT 3.0 analysis (INDOT traffic engineering safety modeling software) of 2016-2018 crash data, the most recent data available at the time of this analysis, the index of crash frequency (ICF) is 1.61 (well above average) and the index of crash cost (ICC) is 2.40 (well above average). These indices compare the crash cost and crash frequency for this intersection to intersections with similar volumes, roadway classifications, and control type throughout Indiana. The ICC and ICF exceeds the threshold of 1.00 set by INDOT's Office of Traffic Safety, flagging the intersection as a safety concern. The purpose of the project is to reduce crash potential, improve the ICC and ICF to below 1.00, and provide a long-term solution to ensure safe and efficient operation of the intersection.

The proposed project is anticipated to convert the existing intersection into single lane roundabout. Drainage improvements will include installation of curb turnouts, new drainage structures, and ditch grading. Utility relocations for utility poles will be required at the corners of the existing intersection. Intersection improvements will also include new street lighting and landscaping. The project requires the acquisition of 1.35 acres of permanent ROW and 0.40 acre of temporary ROW. Proposed ROW widths vary along US 36 from 40 feet to 70 feet from centerline and vary along Raider Road from 10 feet to 60 feet from centerline.

The project will be approximately 0.29 mile in length. No relocations are planned. The proposed method of traffic maintenance is anticipated to be a full closure when school is not in session, utilizing a detour via SR 38 and SR 3. Approximately 0.27 acre of trees will be cleared as part of this project. The project is anticipated to begin construction in late Spring or early Summer of 2025.

Fishbeck is under contract with INDOT to advance the environmental documentation for the referenced project. Weintraut & Associates, Inc. (W&A) has been subcontracted to complete the Section 106 documentation for the project.

In accordance with 36 CFR 800.2 (c), you were invited to become a consulting party as part of the Section 106 process, or you are hereby invited to become a consulting party as part of the Section 106 process. Entities that have previously accepted consulting party status--as well as additional entities that are currently being invited to become consulting parties--are identified in the attached list.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, to assess the undertaking's effects and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP).

A historian who meets the Secretary of the Interior's Professional Qualification Standards identified and evaluated above-ground resources within the APE for potential eligibility for the NRHP. As a result of the historic property identification and evaluation efforts, no above-ground resources are recommended as eligible for listing in the NRHP.

With regard to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards identified two sites within the project area—12HN524 and 12HN525. As a result of these efforts, sites 12HN524 and 12HN525 were recommended as not eligible for listing in the NRHP and no further work is recommended.

Consulting party status has been accepted by three Henry County Commissioners, Indiana Landmarks, the Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, and the Miami Tribe of Oklahoma. Henry County Commissioners, Bobbi Plummer, Ed Tarantino, and Steve Dellinger, responded to the ECL with comments about the need for a roundabout at the US 36 and Raider Road intersection and noted their constituents do not support the proposed project. Indiana Landmarks also questioned the project's potential effects to the Fall Creek District School (IHSSI No.: 065-409-20048). These comments and project team responses were previously summarized in the distribution letter for the HPSR.

On May 12, 2023, Indiana Landmarks responded to the HPSR via email and asked if the Fall Creek District School would be undisturbed by the roundabout project or if it would have work done to it (see enclosed correspondence). Project designers state that the former school/residence would be left undisturbed. Current plans would reconstruct some of its driveway and remove a few feet of its concrete walk near US 36. Additionally, there would be some permanent and temporary right-of-way taken from the property; however, the project would not disturb the building.

INDOT, on behalf of FHWA, has signed a determination of “No Historic Properties Affected.” This determination of “No Historic Properties Affected” is available for review in IN SCOPE at <http://erns12c.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review this determination and to respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party or if you have not previously accepted consulting party status and you do not respond to this letter, you will not be included on the list of consulting parties for this project and will not receive further information about the project unless the design changes.

For questions concerning specific project details, you may contact Dr. Linda Weintraut of Weintraut & Associates, Inc. at (317) 733-9770 or Linda@weintrautinc.com. All future responses regarding the proposed project should be forwarded to Weintraut & Associates at the following address:

Linda Weintraut, Ph.D.
Weintraut & Associates, Inc.
P.O. Box 5034
Zionsville, IN 46077
Linda@weintrautinc.com

Tribal Contacts please respond to INDOT's Acting Tribal Liaison, Matt Coon mcoon@indot.in.gov; (317-697-9752) with any responses pertaining to this project including to provide INDOT/Indiana FHWA additional information about Tribal resources/concerns and questions/comments regarding cultural resources. The FHWA point of contact is Kari Carmany-George at K.CarmanyGeorge@dot.gov (317-226-5629).

Sincerely,



Matthew S. Coon, Manager
Cultural Resources Office
Environmental Services

Enclosures:

Distribution List:

Accepting Consulting Parties:

State Historic Preservation Office (SHPO)

Indiana Landmarks (east@indianalandmarks.org)

Henry County Commissioners

- Ed Tarantino (etarantino@henrycounty.in.gov)
- Steve Dellinger (sdellinger@henrycounty.in.gov)
- Bobbi Plummer (bplummer@henrycounty.in.gov)

Delaware Tribe of Indians

Eastern Shawnee Tribe of Oklahoma

Miami Tribe of Oklahoma

APPENDIX E

Red Flag Investigation 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: November 17, 2022

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: April Arroyo-Monroe
Kaskaskia Engineering Group, LLC
477 South Third Street, Suite 280
Geneva, IL 60134
April@kaskaskiaeng.com

Re: RED FLAG INVESTIGATION
DES 2000152, State Project
Intersection Improvement
US 36 & Raider Road
Henry County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) has identified the need to improve the safety of the two-way stop controlled intersection of US 36 and Raider Road, located approximately 0.05 mile west of reference post 100 in Henry County. INDOT proposes to convert the current two-way stop-controlled intersection into a single lane roundabout. Additionally, minor drainage ditch modifications may be necessary for the intersection.

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) _____

Proposed right of way: Temporary ☒ # Acres 0.40 Permanent ☒ # Acres 1.35 Not Applicable ☐

Type and proposed depth of excavation: Excavation will occur for pavement and subgrade work, drainage ditches, storm sewer, and lighting circuitry; depth of excavation will be less than or equal to 5 feet below ground surface (ft/bgs).

Maintenance of traffic (MOT): Full closure of US 36 with official detour utilizing SR 38 and SR 3.

Work in waterway: Yes ☐ No ☒ Below ordinary high water mark: Yes ☐ No ☒

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	N/A	Recreational Facilities	2
Airports ¹	N/A	Pipelines	N/A
Cemeteries	N/A	Railroads	N/A
Hospitals	N/A	Trails	N/A
Schools	3	Managed Lands	N/A

¹In order to complete the required airport review, a review of public-use airports within 3.8 miles (20,000 feet) is required.

Explanation:

Schools: Three (3) schools are located within the 0.5 mile search radius. The nearest facility, Shenandoah High School, is adjacent to the northeast quadrant of the project area. Coordination with Shenandoah High School will occur.

Recreational Facilities: Two (2) recreational facilities are located within the 0.5 mile search radius. The nearest facility, Shenandoah High School & Shenandoah Middle School, are adjacent to the northeast quadrant of the project. Coordination with Shenandoah High School and Shenandoah Middle School will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	1	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	9
Canal Structures – Historic	N/A	Lakes	1
NPS NRI Listed	N/A	Floodplain - DFIRM	2
NWI-Lines	1	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	1	Sinkhole Areas	N/A
Rivers and Streams	4	Sinking-Stream Basins	N/A

If unmapped water features are identified that might impact the project area, direct coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Explanation:

NWI-Points: One (1) NWI-Point is located within the 0.5 mile search radius. The NWI-Point is located approximately 0.25 mile east of the project area. No impact is expected.

NWI-Lines: One (1) NWI-Line is located within the 0.5 mile search radius. The NWI-Line is located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

IDEM 303d Listed Streams and Lakes (Impaired): One (1) 303d Listed Stream is located within the 0.5 mile search radius. Deer Creek is located within the project area. Deer Creek is listed as impaired for E. Coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

Rivers and Streams: Four (4) rivers and streams segments are located within the 0.5 mile search radius. One (1) stream, Deer Creek, is located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

NWI-Wetlands: Nine (9) NWI-Wetlands are located within the 0.5 mile search radius. The nearest wetland is located approximately 0.24 mile north of the project area. No impact is expected.

Lakes: One (1) lake is located within the 0.5 mile search radius. The lake is located approximately 0.22 mile southeast of the project area. No impact is expected.

Floodplain – DFIRM: Two (2) floodplain polygons are located within the 0.5 mile search radius. The project area is located within one (1) of the floodplain polygons. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	5	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Petroleum Wells: Five (5) petroleum wells are located within the 0.5 search radius. The nearest petroleum well is located approximately 0.09 mile north-northwest of the project area. No impact is expected.

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	1
Leaking Underground Storage (LUST) Sites	1	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:

Leaking Underground Storage (LUST) Sites: There is one (1) LUST site within the 0.5 mile search radius. The nearest site, Shenandoah School Site, 5100 North Raider Road, AI ID# 41124, is located approximately 0.04 mile northeast of the project area and currently operates as a high school. Two Underground Storage Tanks (USTs), one 1,000-gallon gasoline UST and one 550-gallon diesel fuel UST, were removed from property. Subsequent site characterization and contamination soil removal ensued. Remaining petroleum impacts appear to be confined to the site and former diesel UST location, approximately 0.24 mile from the north end of the project area. No impact is expected.

NPDES Facilities: There is one (1) NPDES site within the 0.5 mile search radius. The nearest site, Shenandoah Middle and High School, 5100 North Raider Road, is located approximately 0.04 mile and 0.14 mile northeast, respectively, of the project area. The associated permit has expired as of May 31, 2020. No impact is expected.

NPDES Pipe Locations: There is one (1) NPDES Pipe location within the 0.5 mile search radius. The nearest site, Shenandoah Middle and High School, 5100 North Raider Road, is located approximately 0.04 mile and 0.14 mile northeast, respectively, of the project area. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Henry 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_henry.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. Due to the nature of the project activities, this project may fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation

Projects in Indiana dated May 29, 2013. However, if a Waters of the US Report is prepared for the project, coordination will need to occur with IDNR at a minimum.

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 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:

INFRASTRUCTURE:

Schools: The nearest school, Shenandoah High School, is adjacent to the northeast quadrant of the project area. Coordination with Shenandoah High School will occur.

Recreational Facilities: The nearest facilities, Shenandoah High School and Shenandoah Middle School, are adjacent to the northeast quadrant of the project area. Coordination with Shenandoah High School and Shenandoah Middle School will occur.

WATER RESOURCES: A Waters of the US Report is recommended based on mapped features and coordination with the appropriate agency, if applicable, will occur for the following features:

- One (1) stream segment, Deer Creek, flows through the project area.
- One (1) NWI-Line segment is located within the project area.
- The project area is located within a floodplain (coordination only).

IDEM 303d Listed Streams and Lakes (Impaired): Deer Creek is listed as impaired for E. Coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A

ECOLOGICAL INFORMATION: Coordination with IDNR will occur. 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 INDOT Projects".

INDOT ESD concurrence: Chad Pitcher, CHMM (Signature)
Digitally signed by Chad Pitcher, CHMM
 Date: 2022.11.29 07:37:56 -05'00'

Prepared by:

April Arroyo-Monroe

April Arroyo-Monroe
 Environmental Scientist
 Kaskaskia Engineering Group, LLC

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

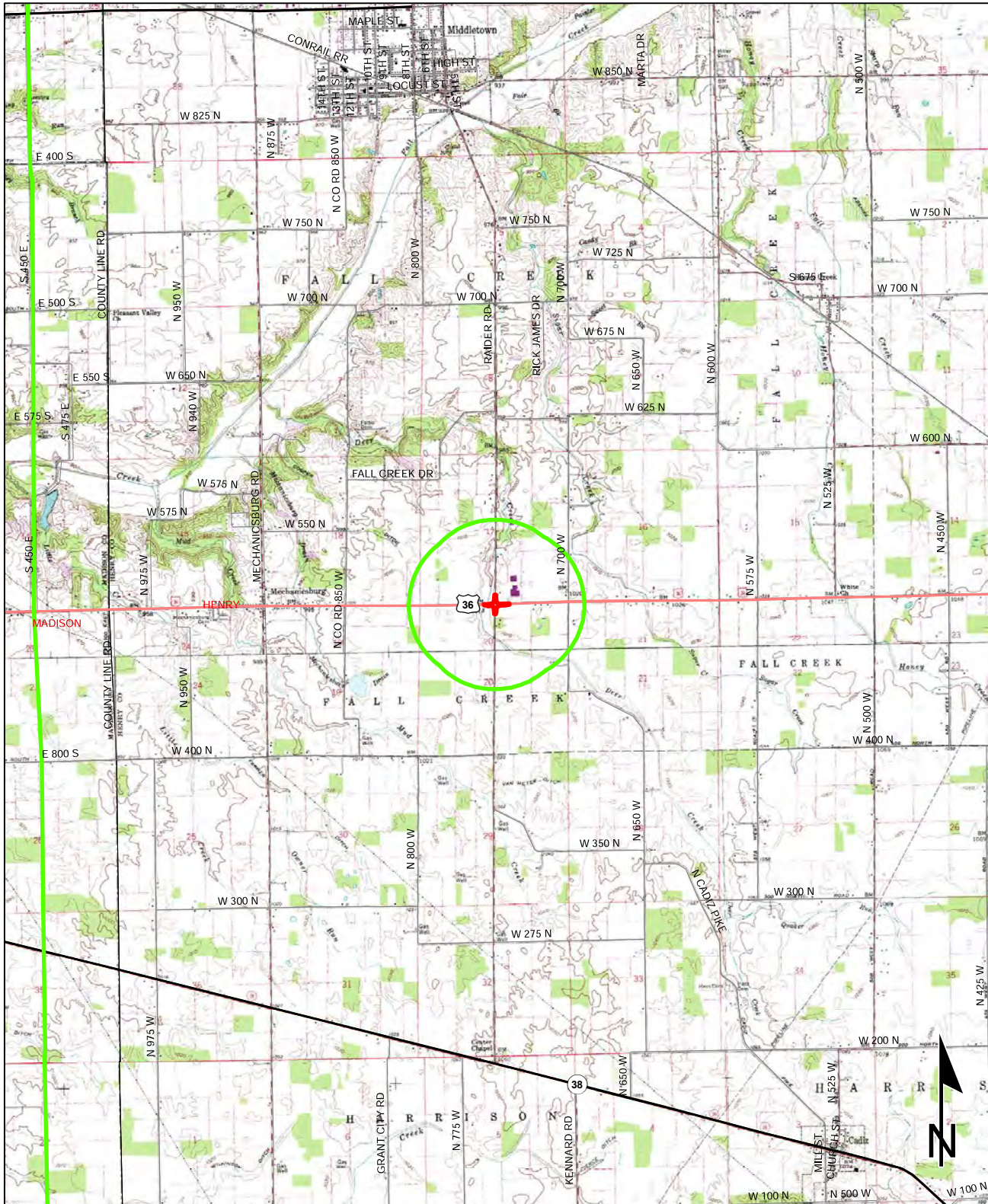
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
US 36 & Raider Road
Des. No. 2000152, Intersection Improvement
Henry County, Indiana



Sources: 0.8 0.4 0 0.8 Miles
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
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

MIDDLETOWN QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

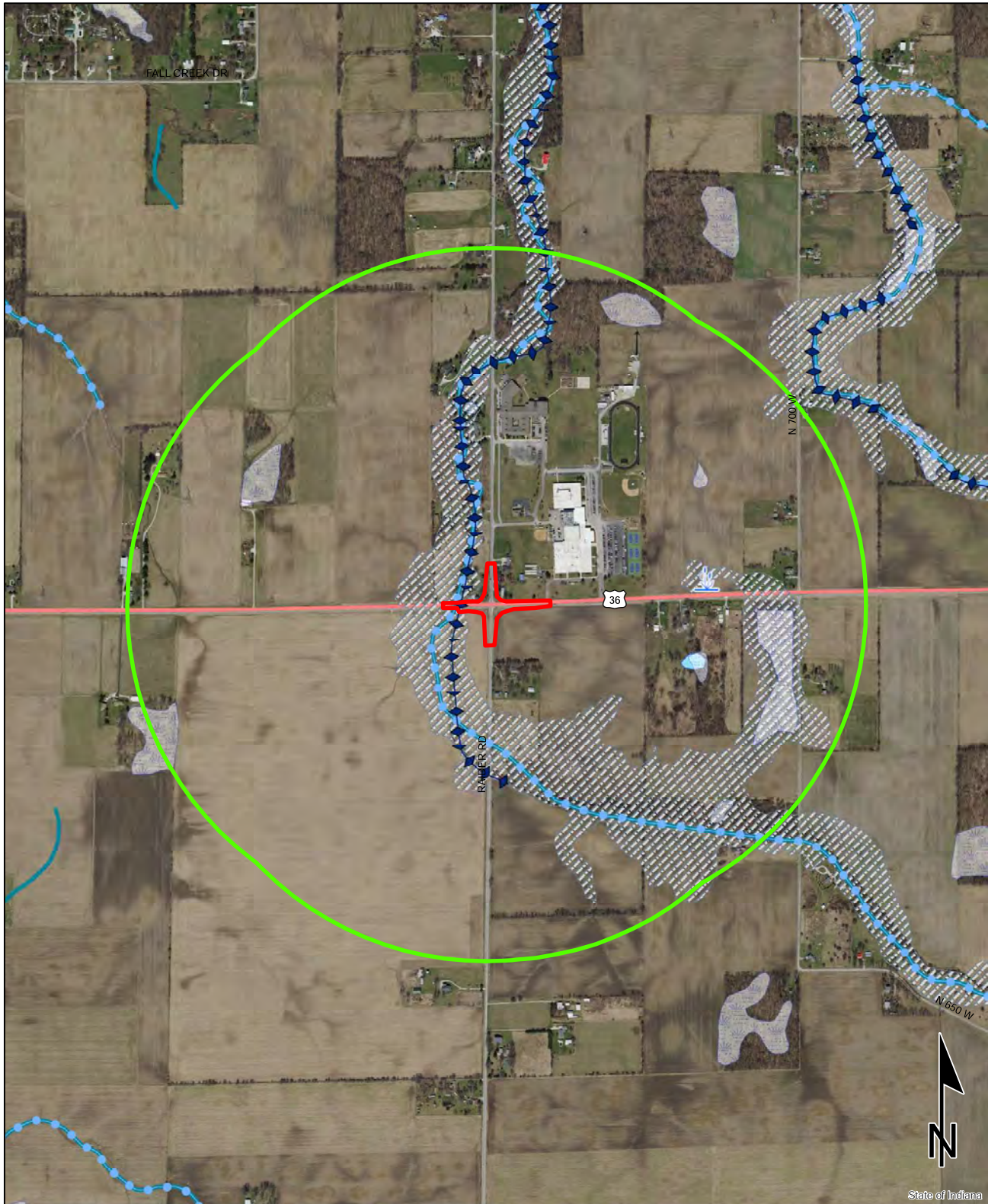
Red Flag Investigation - Infrastructure
US 36 & Raider Road
Des. No. 2000152, Intersection Improvement
Henry County, Indiana



Sources: 0.15 0.075 0 0.15 Miles
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
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources
US 36 & Raider Road
Des. No. 2000152, Intersection Improvement
Henry County, Indiana



Sources:

Non Orthophotography

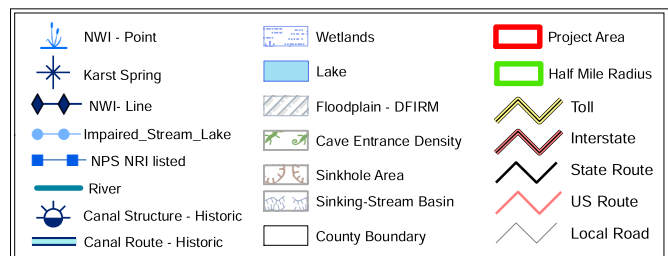
Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data

(www.indianamap.org)

Map Projection: UTM Zone 16 N Map Datum: NAD83

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

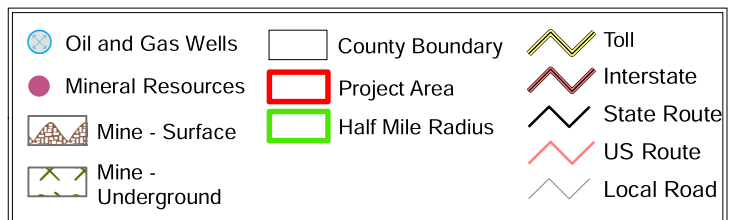


Red Flag Investigation - Mining & Mineral Resources
 US 36 & Raider Road
 Des. No. 2000152, Intersection Improvement
 Henry County, Indiana

E-10



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



Red Flag Investigation - Hazardous Material Concerns

US 36 & Raider Road

Des. No. 2000152, Intersection Improvement

Henry County, Indiana

E-11



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

0.2 0.1 0 0.2 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

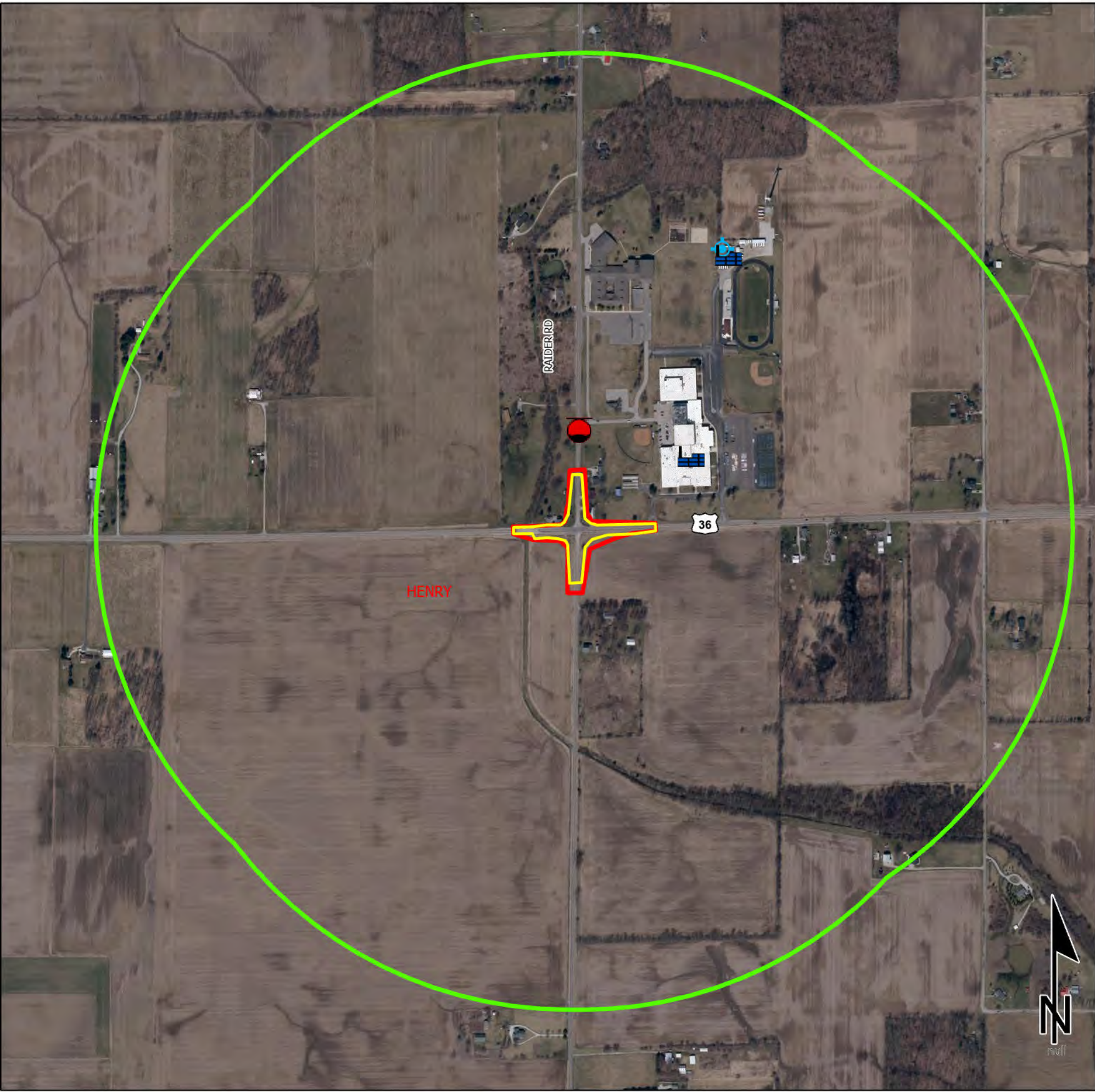
Red Flag Investigation - Hazardous Material Concerns

US 36 and Raider Road

Des. No. 2000152, Intersection Improvement

Henry County, Indiana

E-12



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

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
US 36 and Raider Rd, Roundabout,
State Project INDOT DES. NO. 2000152
Asset ID: 036-33-06618/ NBI# 011740
Update to Report Approved by Aidan Gessler, April 13, 2023
Completed Date: December 7, 2023

1.0 PROJECT INFORMATION

Date of Waters Field Investigation:

October 12 and 13, 2022

Photo directional map and
photo log omitted to avoid
duplication.

Project Location:

Middleton, Indiana Quadrangle
Section 17 Township 18 N Range 9 E
Section 20 Township 18 N Range 9 E
Latitude: 40.00454, Longitude: -85.52805
Henry County, Indiana

Project Description:

The proposed state project (Des. No. 2000152) is located in Henry County, Washington Township, Middleton Quadrangle. The Indiana Department of Transportation (INDOT) has identified the need to improve the safety of the two-way stop controlled intersection of US 36 and Raider Road, located approximately 0.05 mile west of reference post 100 in Fall Creek Township, Henry County (Figure 1). INDOT proposes to convert the current two-way stop-controlled intersection into a single lane roundabout. Additionally, minor drainage ditch modifications and small drainage structures may be necessary for the intersection.

The investigated area has changed, as of November 29, 2023, because the utility company, Duke Energy requested additional right of way for their activities to complete this project.

2.0 OFFICE EVALUATION

Results:

USGS Mapping

The USGS Middleton, Indiana 7.5-minute topographic quadrangle map indicates a (solid blue line) perennial stream associated with Deer Creek within the investigated area. (Figures 2 and 3). The change in area did not affect the USGS mapping results.

NWI Mapping

The NWI map was reviewed for the presence of potential wetlands in, or adjacent to, the investigated area (Figure 4). One NWI feature is mapped within the investigated area. It is listed below in Table 1 and is associated with Deer Creek. The change in the investigated area did not affect the NWI mapping results.

Table 1: NWI Wetlands Within/Adjacent the Investigated Area

Wetland Type	Cowardin Classification Code	Location
Riverine intermittent streambed cobble-gravel	R4SBCx	Deer Creek, on west side of investigated area.

Source: USFWS NWI, 2023

Mapped Soil Units

According to the Web Soil Survey geographic database for Henry County, Indiana (USDA- NRCS Web Soil Survey, 2022), the investigated area contains five map units (Figure 5, Table 2). The change in the investigated area did not affect the mapped soil unit results.

Table 2 - Soil Units within the Investigated Area

Soil Unit Symbol	Soil Unit Name	Hydric Rating	Hydric Status
CrA	Celina silt loam, stony subsoil, 2% to 6% slopes, eroded	5%	Predominantly Non-Hydric
Ge	Genesee loam, occasionally flooded	3%	Predominantly Non-Hydric
La	Landes loam, rarely flooded	0%	Non-Hydric
MmB2	Miamian silt loam, New Castle Till Plain, 2% to 6% slopes, eroded	5%	Predominantly Non-Hydric
Cy	Cyclone silty clay loam, 0% to 2% slopes	83%	Predominantly Hydric

Source: NRCS Web Soil Survey, 2023

Hydrology

According to the USGS NHD map, there are three flowlines located within the investigated area (Figure 6). A stream/river flowline, associated with Deer Creek, flows from south to north in the west side of the investigated area. One stream/ river flowline meets the Deer Creek flowline in the lower southwest of the investigated area. There is also a drainage flowline that flows from

east to west, across the central east side to the west of the investigated area to meet the Deer Creek flowline. It is within USGS 12-digit Hydrological Unit Code (HUC) 051202010803 (Deer Creek-Fall Creek sub-watershed).

According to the IDNR Best Available Floodplain Layer the investigated area is located within the floodplain associated with Deer Creek (Figure 7).

This project does not lie within the karst region of Indiana.

3.0 FIELD RECONNAISSANCE

Methodology:

A field visit was conducted by Kaskaskia Engineering Group, LLC staff on October 12 and 13, 2022, to document and survey the presence of streams, wetlands, and other water resources within the investigated area. The investigated area is shown on the attached maps. The field investigation area encompassed a slightly larger area than the construction survey footprint to account for water resources adjacent to the project site. It was determined that the original field investigation and resulting photographs sufficiently covered the additional area within the updated investigated limits.

Any roadside ditches within the investigated area were also evaluated for consideration as jurisdictional or non-jurisdictional aquatic resources.

Water resources are summarized in Table 3 and 4 below. The resource map with identified features within the investigated area on Figure 8. Photographs and a photo direction map (Figure 9) are included after the figures.

Results:

Birds and Bats

The bridge was investigated for the presence of migratory bird nests and/or evidence of bats during the site visit. Several bird's nests were found attached to the center of the bridge. They appeared to be Eastern phoebe nests (photos 8, 10-12). There was no evidence of the presence of bats. There are no new structures within the updated investigated area, thus the results of the field visit regarding bats and birds have not changed nor was a new field investigation necessary.

Wildlife

Deer and racoon tracks were found in the stream bed under the bridge providing evidence of wildlife using underneath of the bridge as a wildlife crossing. There are no new structures within the updated investigated area, thus the results of the field visit regarding wildlife have not changed nor was a new field investigation necessary.

Karst

There were no karst features found within the investigated area. It was determined that the original field investigation sufficiently covered the additional area within the updated investigated limits thus the results of the karst investigation have not changed.

Streams

One stream, Deer Creek, was identified within the investigated area.

Deer Creek

Deer Creek would likely be classified a perennial stream though it did not exhibit a consistent base flow during the field visit, water was present but not flowing. The observed OHWM was 17.5 feet wide and 1.33 feet deep (Latitude 40.00485 Longitude -85.52914) approximately 147 feet downstream from the bridge in order for the OHWM to be outside of the influence of the bridge. Hydrologic conditions were drier than normal based on the previous three months of rainfall data from the U.S. Army Corps of Engineers (USACE) Antecedent Precipitation Tool (APT)¹. The OHWM was characterized by absent vegetation and washed away leaf litter. Deer Creek had a well-defined bed and bank. It flows southwest to northeast under US 36. Deer Creek flows to Fall Creek which flows to the White River which is a Section 10 Navigable River. Upstream drainage consists of agricultural land and rural residential areas. According to USGS StreamStats, Deer Creek has an upstream drainage of 5.57 square miles.

The substrate within the channel in this section was gravel and muck. Riprap was found on the slopes and in the stream under the bridge to about 20 feet out on each bank up and down stream. There were no riffle-pool complexes. In-stream cover from overhanging vegetation was approximately ninety percent.

Dominant vegetation along the banks consisted of amur honeysuckle (*Lonicera maackii*- NA), black walnut (*Juglans nigra*- FACU), red mulberry (*Morus rubra*- FACU), European ash (*Fraxinus excelsior*- NA), white mulberry (*Morus alba*-FAC), and giant fox tail (*Setaria faberi*-FACU). Based on a qualitative assessment, this resource is an average quality resource within this reach due to substrate, riparian cover and it being a perennial stream. It was determined that the original field investigation sufficiently covered the additional area within the updated investigated limits thus the results of the streams investigation have not changed.

Table 3 – Stream Summary Table

ID	Coordinates (Decimal Degrees)		USGS Blue- Line (Y/N)	Stream Type	Riffles/ Pools (Y/N)	Substrate	OHWM Width (ft)	OHWM Depth (ft)	Stream Relative Quality	Estimated Amount of Stream within Investigated Area (acres or linear feet)	Photo Numbers	Likely Water of the U.S.?
	Latitude	Longitude										
Deer Creek	40.00485	-85.52914	Yes	Perennial	No	Gravel Muck	17.5	1.33	Average	356 lf / 0.14 acre	6, 7,9,13,	Yes

¹ The APT system was not working at the time of this report, but one was generated for report Des No 2000156, 26 road miles (18 overland miles) away. The fieldwork was conducted the same day.

Wetlands

No wetlands were found within the investigated area. Though there was wetland vegetation present along the stream banks, it did not occur in sufficient quantities to pass any of the tests for hydrophytic vegetation. Since this wetland indicator was not present, no further wetland tests were necessary. The land within the investigated area consisted of steep mown vegetated highway side slopes, mown highway grassy swales/flat grassy verges, residential land with mown lawns, and active row crop land. This land is not conducive to wetland formation either due to the steepness of the slopes or the maintenance of the vegetation and drainage. It was determined that the original field investigation sufficiently covered the additional area within the updated investigated limits thus the results of the wetlands investigation have not changed.

Roadside Ditches:

There were two roadside ditches (RSD) identified in the investigated area. They were determined to be roadside ditches because they did not have an OHWM, did not have a naturally defined bed or bank (they are excavated), drain only uplands, do not carry a permanent flow of water, and transport mainly overland flow generated from precipitation. It was determined that the original field investigation sufficiently covered the additional area within the updated investigated limits thus the results of the roadside ditch investigation have not changed.

Table 4 – Roadside Ditches Summary Table

ID	Coordinates (Decimal Degrees)		Description	Bed	Length	Photo Numbers
	Latitude	Longitude				
RSD1	40.00443	-85.52898	South of US 36, on the east side of the bridge, flowing west to Deer Creek	Concrete	130 ft	16
RSD2	40.00467	-85.52901	North of US 36, on the east side of the bridge, flowing west to Deer Creek	Concrete	157 ft	14

4.0 CONCLUSIONS

Field observations and desktop research revealed one likely, jurisdictional stream, Deer Creek, and no wetlands. Deer Creek is a solid blue line stream on the USGS Middleton, Indiana 7.5-minute topographic quadrangle map, it has an OHWM, and is connected to the White River, a Section 10 Navigable River. Every effort should be taken to avoid and minimize impacts to the waterway. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by the USACE. There was no change to the streams, wetlands, and roadside ditches determination due to the change in the investigated area thus the original conclusions have not changed.

5.0 ACKNOWLEDGEMENT

This waters determination report 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 Delineation Manual*, the appropriate regional supplement, the USACE *Jurisdictional Determination Form Instructional Guidebook*, and other appropriate agency guidelines.

Respectfully,

A handwritten signature in cursive script that reads "April Arroyo-Monroe".

April C. Arroyo-Monroe, Environmental Scientist
Kaskaskia Engineering Group, LLC

Date: December 7, 2023

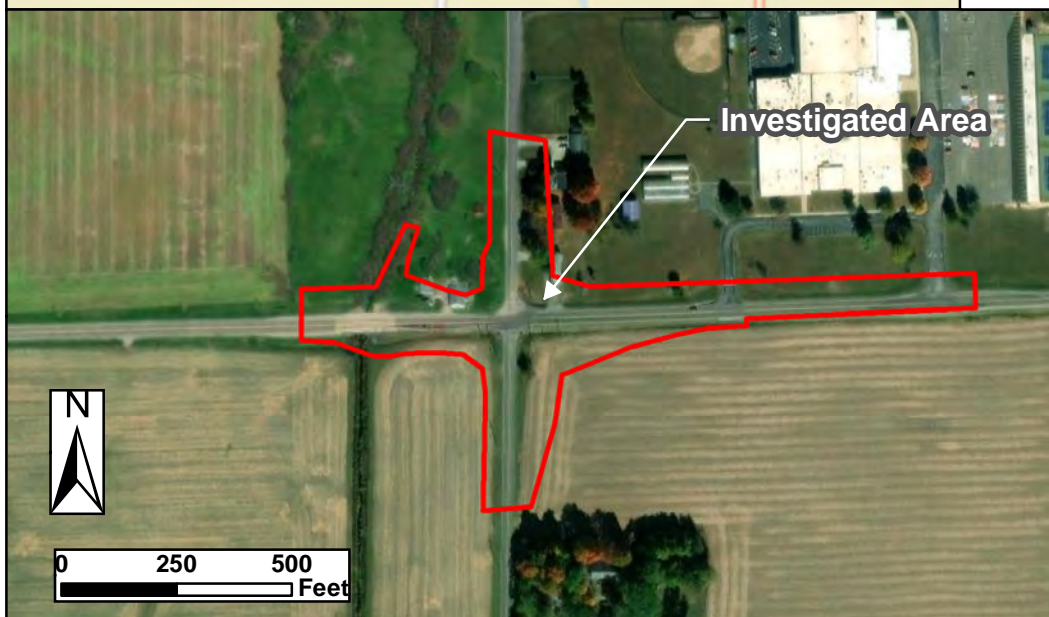
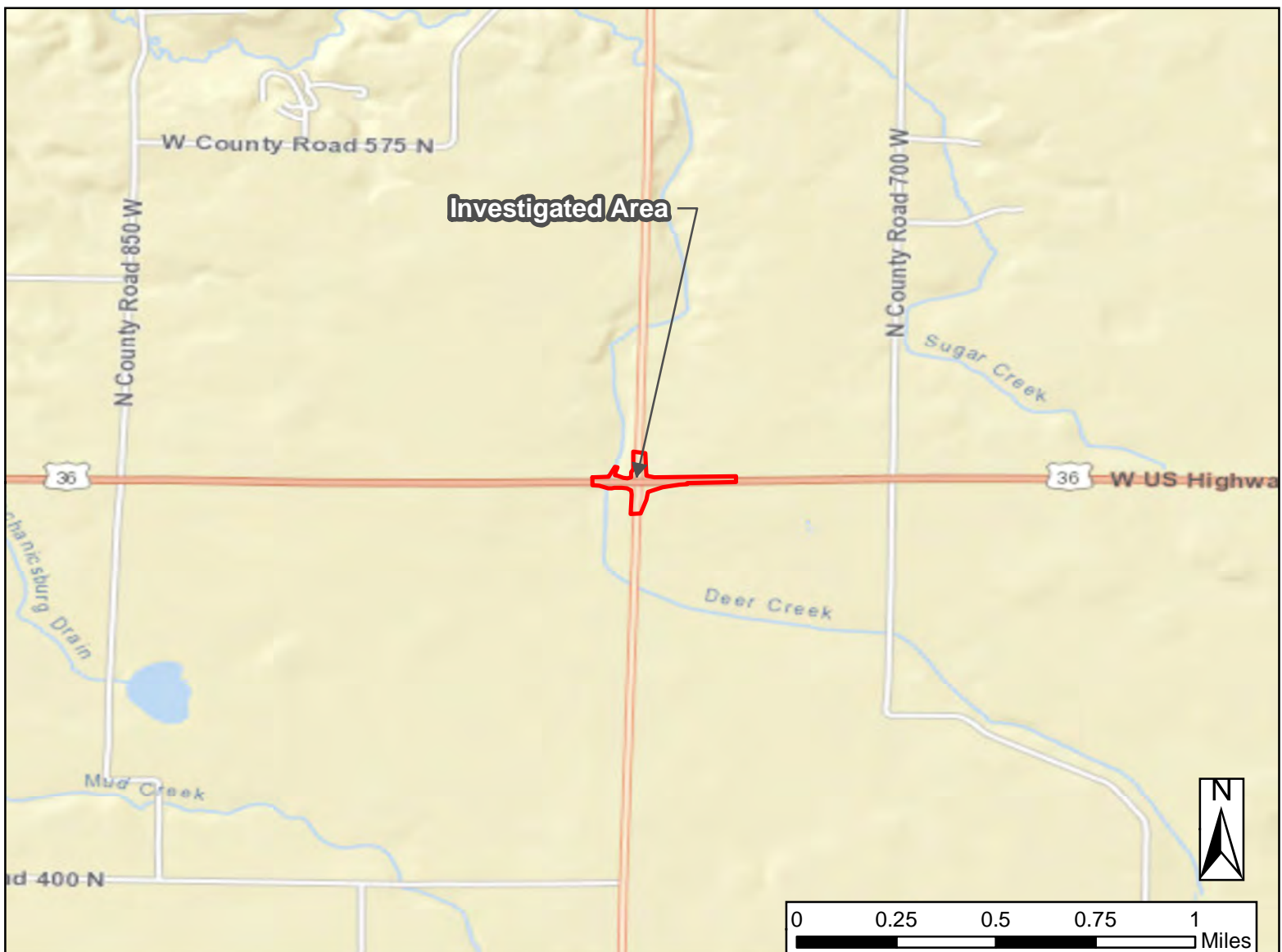


Figure 1
Site Location Map
 Roundabout, State Project
 US 36 and Raider Rd,
 Fall Creek Township
 Henry County, Indiana
 Des No 2000152



Investigated Area

Map Source: Esri and IndianaMAP, 2022



Date: 11/29/2023

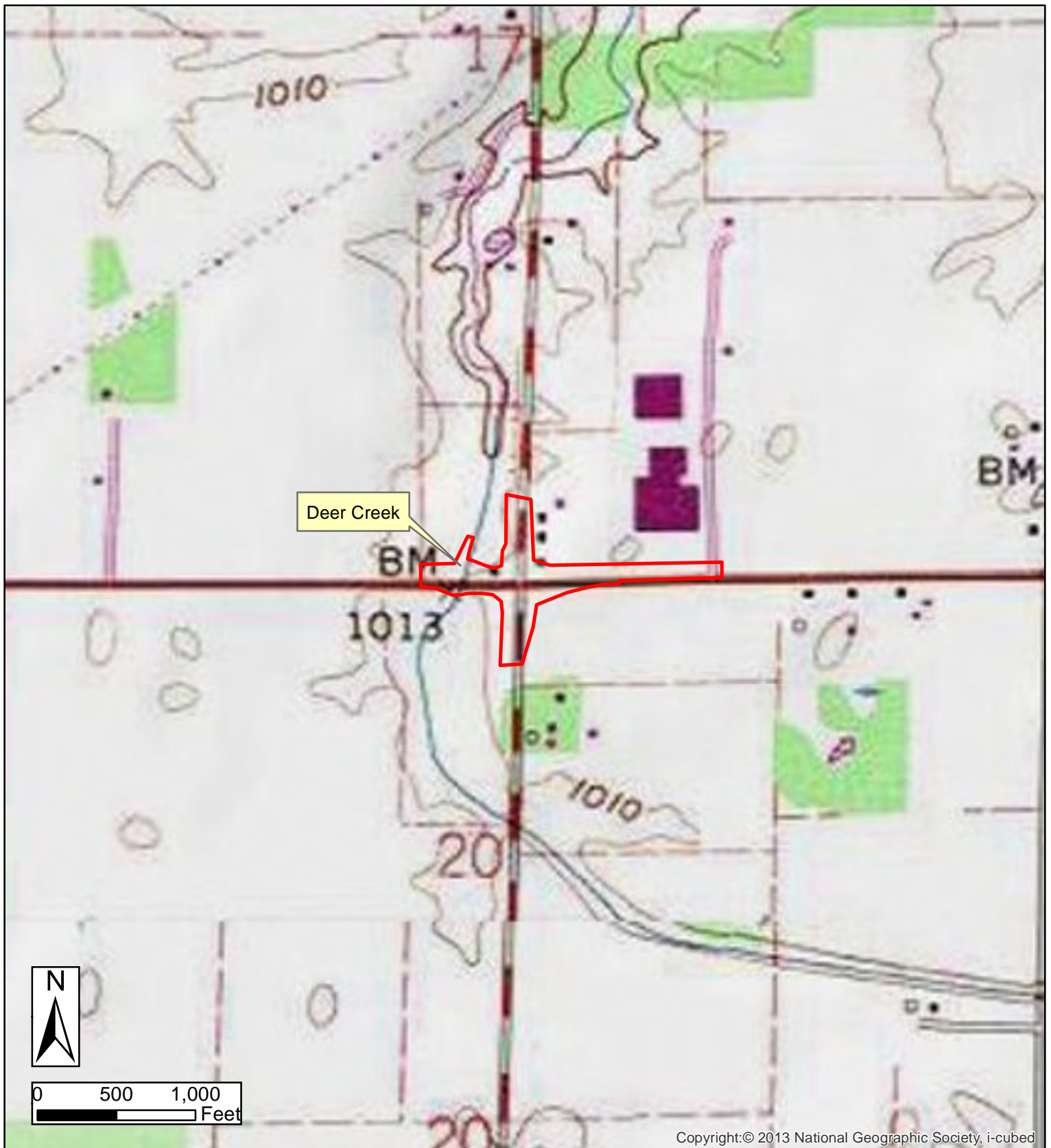


Figure 2
 USGS Topographic Middleton Quadrangle
 Large Scale Map (1:10,000)
 US 36 and Raider Rd,
 Fall Creek Township
 Henry County, Indiana
 Des No 2000152

 Investigated Area



Date: 11/29/2023

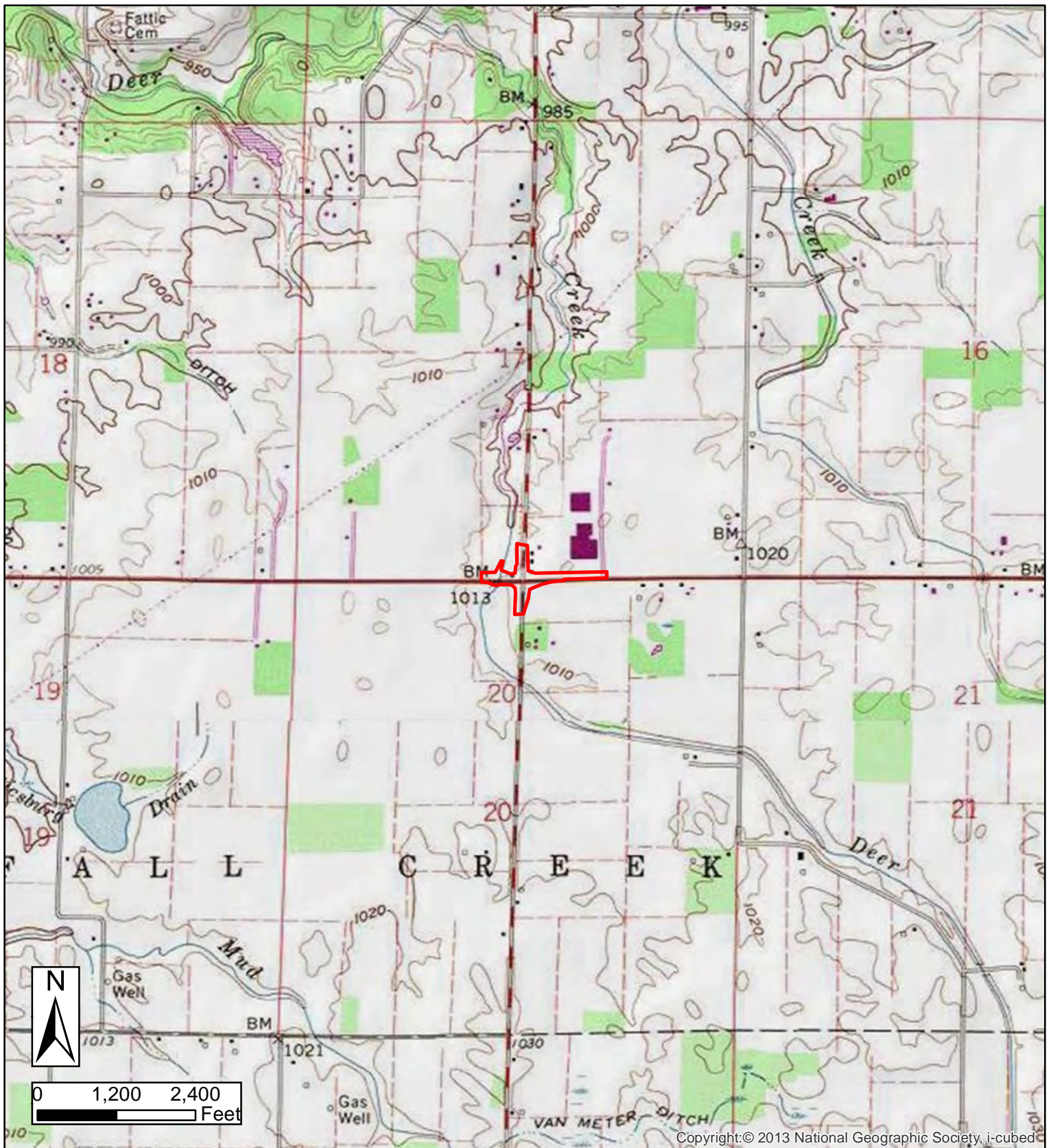


Figure 3
 USGS Topographic Middleton Quadrangle
 Small Scale Map (1:24,000)
 US 36 and Raider Rd,
 Fall Creek Township
 Henry County, Indiana
 Des No 2000152



Investigated Area



Date: 11/29/2023

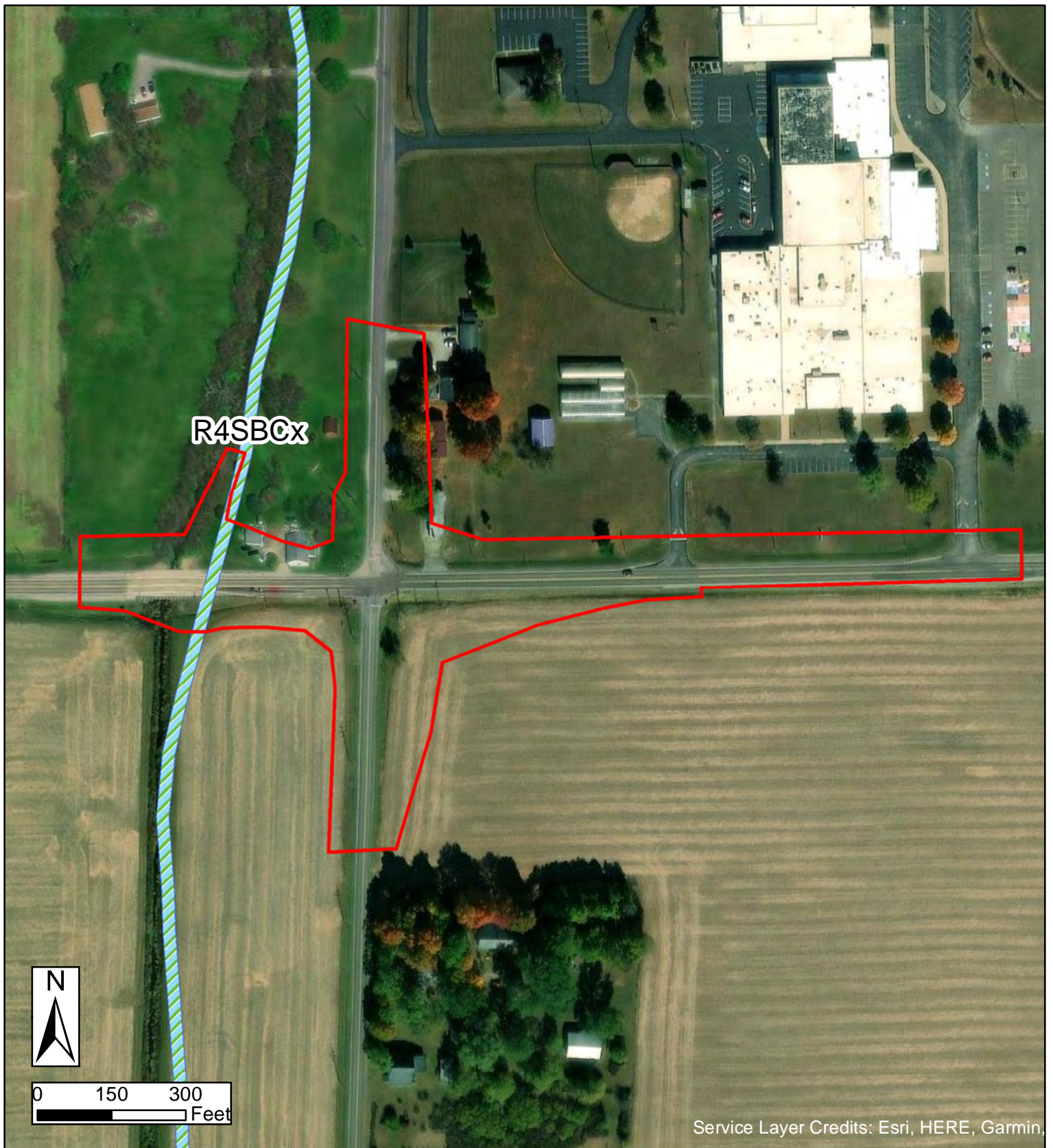



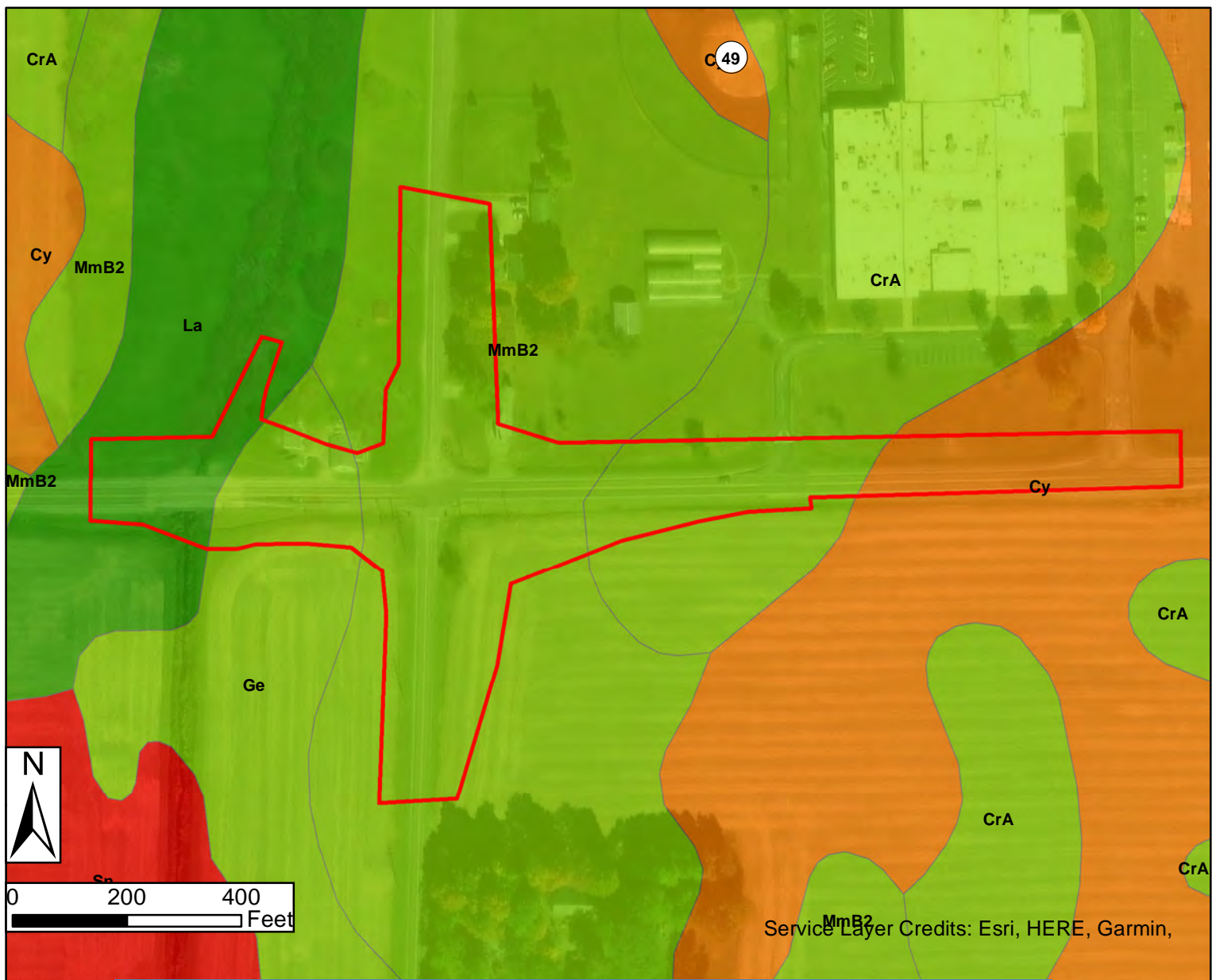
Figure 4
USFWS National Wetland Inventory Map
Roundabout, State Project
US 36 and Raider Rd,
Fall Creek Township
Henry County, Indiana
Des No 2000152

 Investigated Area
 Riverine Wetland

Source: USFWS NWI Wetlands 2022

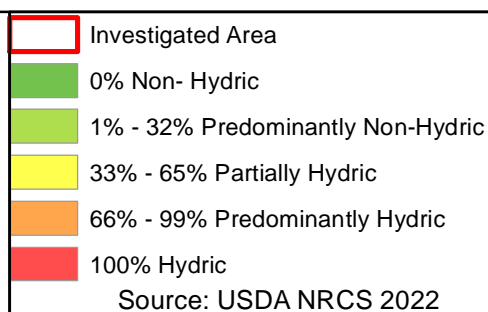


Date: 11/29/2023



Soil Unit Symbol	Soil Unit Name	Hydric Rating	Hydric Status
CrA	Celina silt loam, stony subsoil, 2% to 6% slopes, eroded	5%	Predominantly Non-Hydric
Ge	Genesee loam, occasionally flooded	3%	Predominantly Non-Hydric
La	Landes loam, rarely flooded	0%	Non-Hydric
MmB2	Miamian silt loam, New Castle Till Plain, 2% to 6% slopes, eroded	5%	Predominantly Non-Hydric
Cy	Cyclone silty clay loam, 0% to 2% slopes	83%	Predominantly Hydric

Figure 5
USDA NRCS Soil Map
Roundabout, State Project
US 36 and Raider Rd,
Fall Creek Township
Henry County, Indiana
Des No 2000152



Date: 11/29/2023

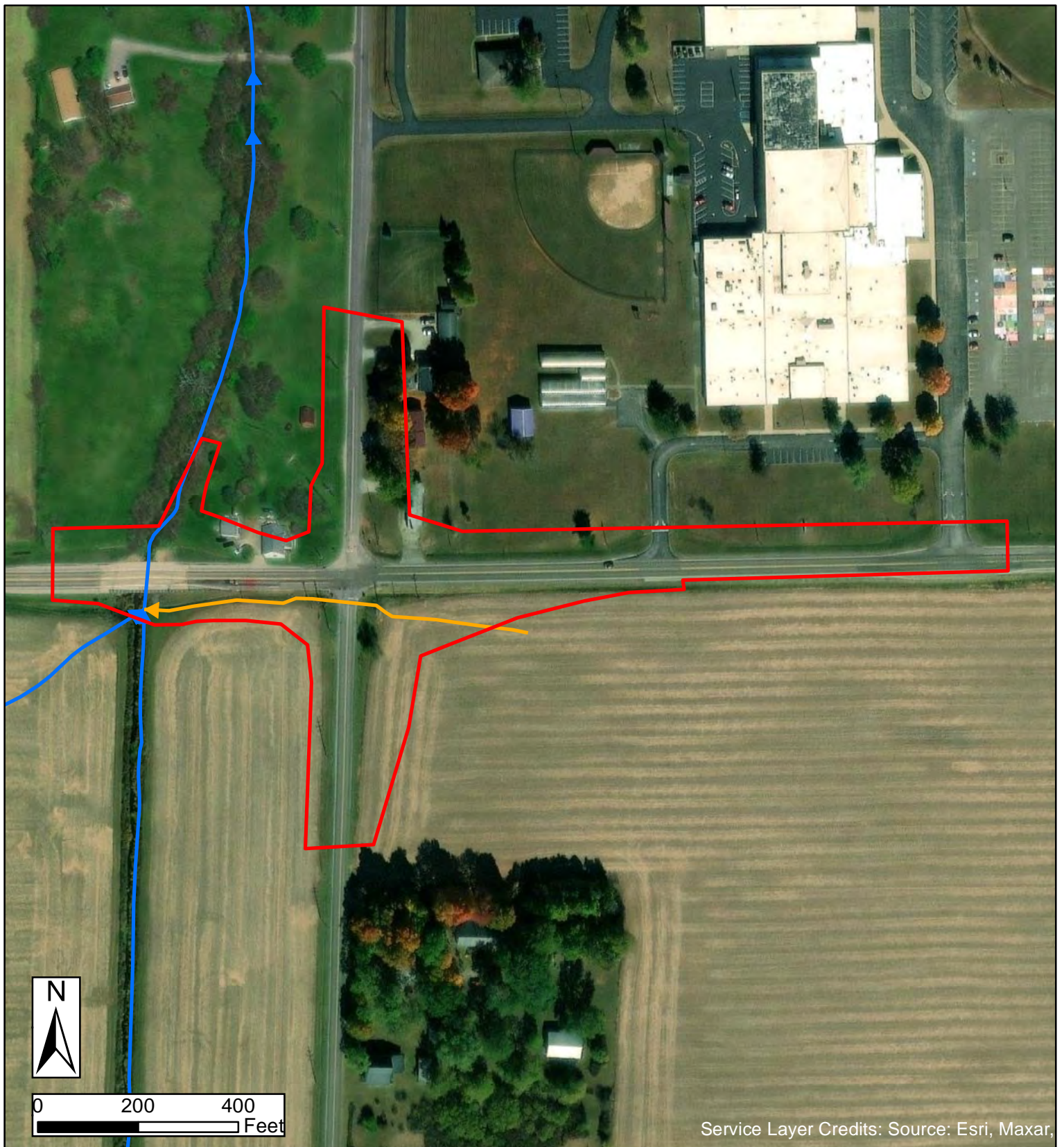
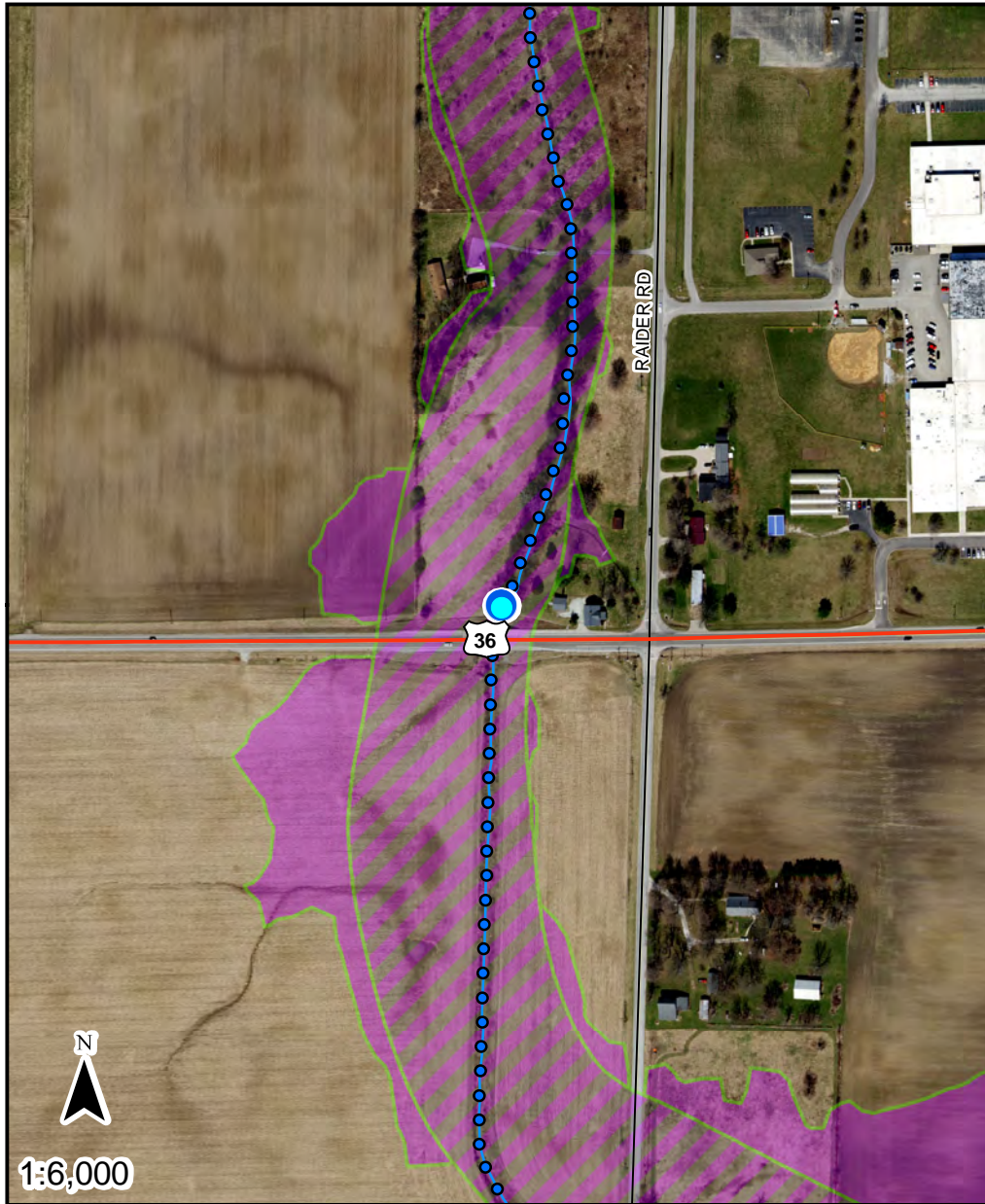


Figure 6
USGS National Hydrography Data Map
Roundabout, State Project
US 36 and Raider Rd,
Fall Creek Township
Henry County, Indiana
Des No 2000152

- Investigated Area
 - CanalDitch
 - StreamRiver
- Source: USGS NHD 2022



Date: 11/29/2023



- Point of Interest
- Base Flood Elevation Point

Flood Elevation Points

- STUDIED STREAM

Rivers and Streams at least 1 square mile

Drainage Area (sq. miles)

— 1 - 10

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates
(WGS84)

Long: **-85.5292490029**

Lat: **40.0047476949**

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

County: **Henry**

Approximate Ground Elevation: **1,000.3 feet (NAVD88)**

Stream Name:
Deer Creek

Base Flood Elevation: **1,007.0 feet (NAVD88)**

Drainage Area: **Not available**

Best Available Flood Hazard Zone: **DNR Approximate Floodway**

National Flood Hazard Zone: **FEMA Zone A**

Is a Flood Control Act permit from the DNR needed for this location? **yes**

Is a local floodplain permit needed for this location? **yes-**

Floodplain Administrator: **Darrin Jacobs, Zoning Administrator**

Community Jurisdiction: **Henry County, County proper**

Phone: **(765) 529-7408**

Email: **djacobs@henryco.net**

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

Date Generated: 3/14/2023

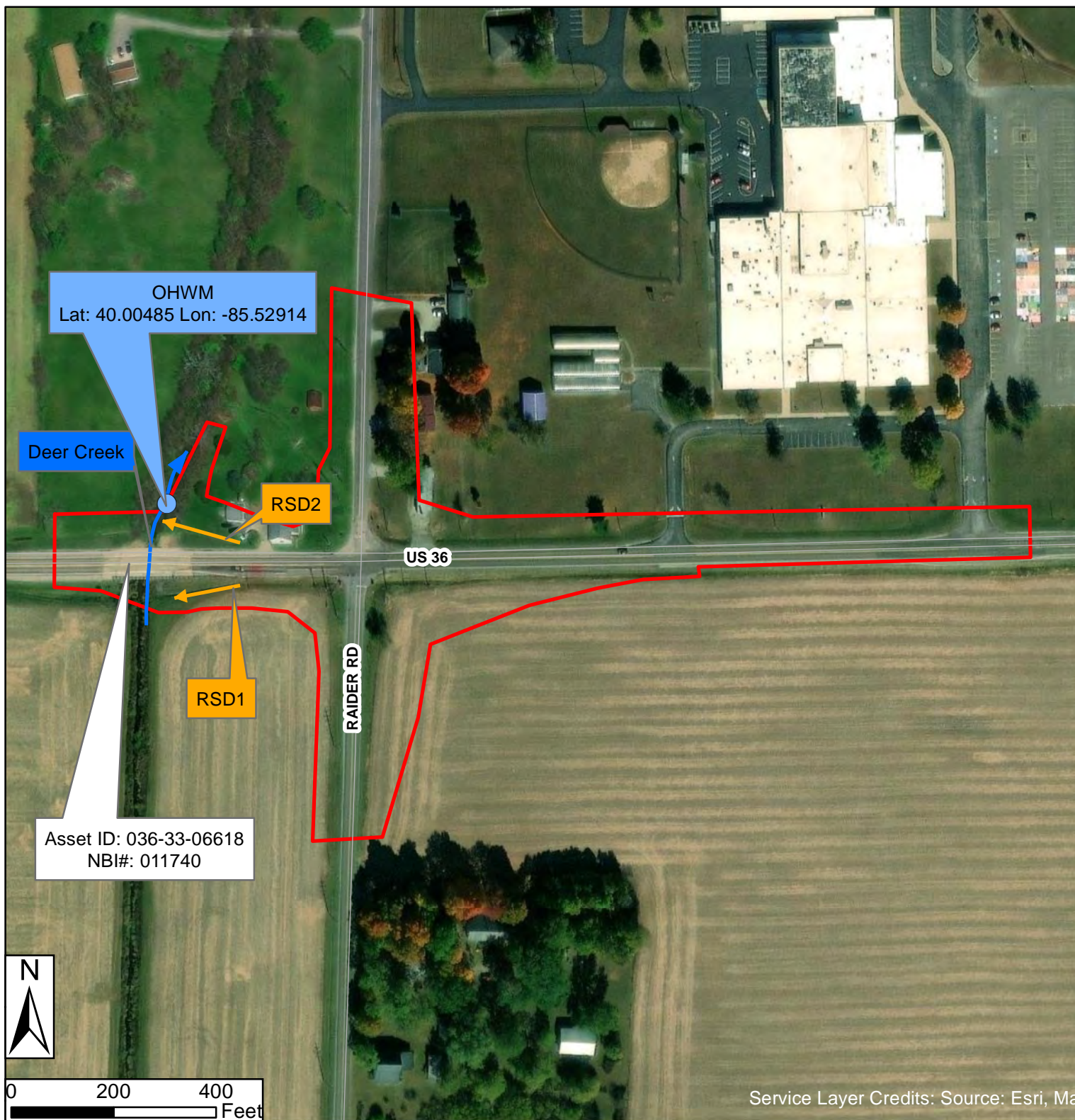


Figure 8
Water Resources Map
Roundabout, State Project
US 36 and Raider Rd,
Fall Creek Township
Henry County, Indiana
Des No 2000152

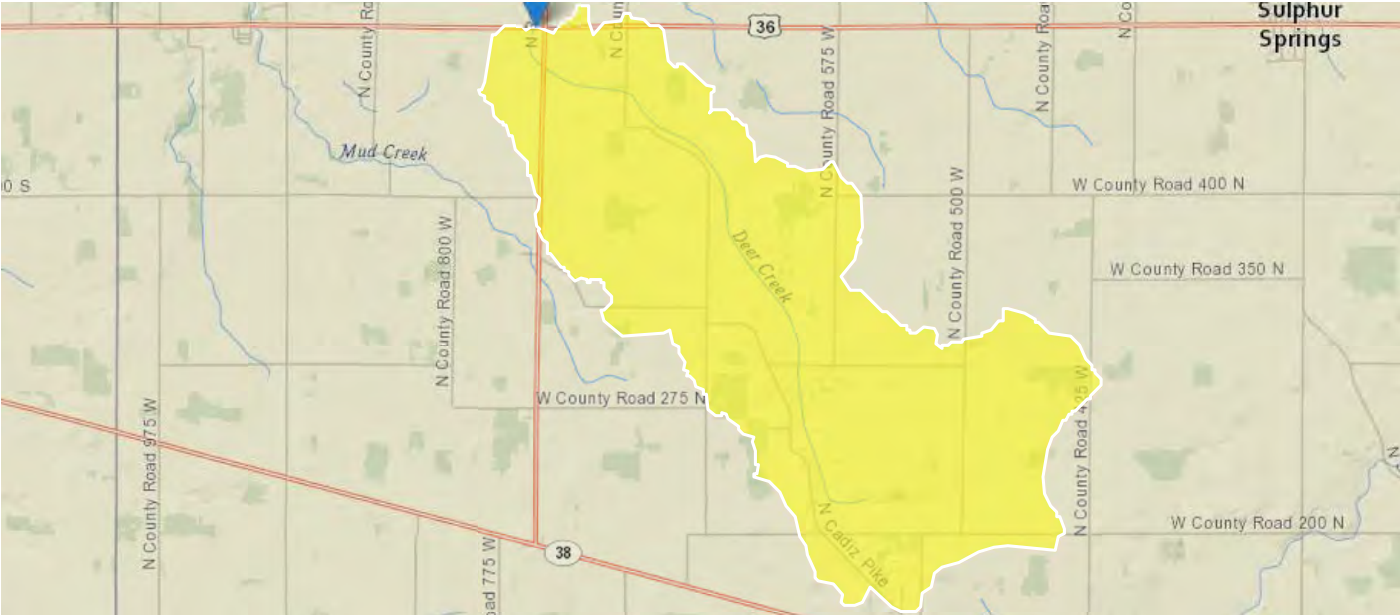
- Investigated Area
- Stream Data Point
- RSD
- ← Stream



Date: 11/29/2023

StreamStats Report Des No 2000152

Region ID: IN
Workspace ID: IN20230314135739849000
Clicked Point (Latitude, Longitude): 40.00457, -85.52929
Time: 2023-03-14 08:57:59 -0500



+ Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	5.574	square miles
K2INDNR	Average hydraulic conductivity (ft/d) for the full depth of unconsolidated deposits from InDNR well database.	14	ft per day
LC01FOREST	Percentage of forest from NLCD 2001 classes 41-43	5.5	percent
LOWREG	Low Flow Region Number	1729	dimensionless
QSSPERMTHK	Index of the permeability of surficial Quaternary sediments computed as in SIR 2014-5177	298.5	dimensionless
T2INDNR	Average transmissivity (ft2/d) for the full depth of unconsolidated deposits from InDNR well database.	2621	square feet per day

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

**(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR
AQUATIC RESOURCES AT DIFFERENT SITES)**

State: County/parish/borough: City:

Center coordinates of site (lat/long in degree decimal format):

Lat.: Long.:

Universal Transverse Mercator:

Name of nearest waterbody:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

[illegible]

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "*may be*" waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ☐ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: _____.
- ☐ Data sheets prepared/submitted by or on behalf of the PJD requestor.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report. Rationale: _____.
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☐ U.S. Geological Survey Hydrologic Atlas: _____.
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name: _____.
- ☐ Natural Resources Conservation Service Soil Survey. Citation: _____.
- ☐ National wetlands inventory map(s). Cite name: _____.
- ☐ State/local wetland inventory map(s): _____.
- ☐ FEMA/FIRM maps: _____.
- ☐ 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- ☐ Photographs: ☐ Aerial (Name & Date): _____.
or ☐ Other (Name & Date): _____.
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☐ Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory staff member
completing PJD

April Arroyo-Monroe December 7, 2023

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Permit Determination Checklist 2023

INDOT Ecology and Waterway Permitting Office
(EWPO) Revised 2/3/2023

1. PROJECT SPECIFIC INFORMATION		Date:
Project Route/Type		
INDOT Des. Number	Contract # -	
County		
RFC Date	Letting Date -	Stage 3 Due Date -
INDOT PM		
2. Preparer Contact Information		
3. Detailed Activity Description including Impacts to Regulated Resources (refer to permit checklists for required information)		
4. Materials Used	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> Waters Report</div> <div style="width: 33%;"><input type="checkbox"/> Regulatory Guidance</div> <div style="width: 33%;"><input type="checkbox"/> Waterway Permit Manual</div> <div style="width: 33%;"><input type="checkbox"/> NEPA Documents</div> <div style="width: 33%;"><input type="checkbox"/> Project Plans</div> <div style="width: 33%;"><input type="checkbox"/> USGS IN StreamStats</div> <div style="width: 33%;"><input type="checkbox"/> Scope of Work</div> <div style="width: 33%;"><input type="checkbox"/> IndianaMAP</div> <div style="width: 33%;"><input type="checkbox"/> _____</div> </div>	
Timeline 1. The target permit approval/on-hand date is two (2) weeks prior to Stage 3 submittal. 2. To calculate the first draft permit application submittal to EWPO, use the following formula. Please note, EWPO review time is based on the complexity of the permit application or the project: Stage 3 Date - (Agency Review Time + EWPO Review Time) = Submittal Date to EWPO Agency Review Timeframes: 4 months – 404/401 NWP or RGP, County Regulated Drain 5 months – CSGP, USACE Section 5 6-9 months – 401 IP 7 months – Section 10 9-12 months – CIF 20 months – 404 IP		

5. 401 WQC (IDEM)/ 404 (USACE)

- a. Are there jurisdictional streams, wetlands and/or open water within the project area?
☐ Yes – Type: ☐ Stream(s) ☐ Wetland(s) ☐ Open Water ☐ No [NPR]
- b. If yes, what are the total impacts to the resources (reference the waters report)?

	PERMANENT IMPACTS	TEMPORARY IMPACTS
<i>Wetlands</i>		
Total Acres		
<i>Streams</i>		
LF Below OHWM		
Acres Below OHWM		
LF Stream Relocation		
Net Gain/Loss		
<i>Open Water</i>		
Total Acres		
<i>Floodway</i>		
Acreage Below BFE		

6. IDNR Construction in a Floodway (CIF)

- a. Is there any work being conducted below BFE (Including changes in elevation)? ☐ Yes ☐ No [NPR]
- b. Is any stream's individual drainage area ≥ 1 mile²? ☐ Yes ☐ No [NPR]
- Each crossing that will impact a DNR jurisdictional floodway will require a permit.
- c. Upstream Drainage Area _____ sq mi
- d. Rural Bridge Exemption ☐ Yes [NPR] ☐ No
- Project must meet the following five requirements:
- ☐ Construction/reconstruction project of a state highway bridge funded by INDOT.
 - ☐ Upstream drainage area of the waterway is less than or equal to 50 square miles (does not exceed 50 square miles).
 - ☐ Project is in a rural area (if within two miles of an urban planning zone, include coordination with the local entity with jurisdiction).
 - ☐ Project is limited to a bridge or culvert (bank stabilization, roadway repair, and stream relocation are not exempt activities).
 - ☐ Each building impacted by the project is higher than the regulatory flood elevation (lowest elevation in the structure including the basement).
- e. Logjam and Sandbar Removal General License ☐ Yes [NPR] ☐ No
- f. Qualified Outfall Projects General License ☐ Yes [NPR] ☐ No
- g. Mitigation ☐ Yes ☐ No

7. Construction Stormwater General Permit

- Will one (1) acre or more of soil be disturbed? ☐ Yes ☐ No [NPR]
- (Such as tree clearing, full-depth replacement, shoulder work, construction access, etc.) _____ ac
- [Coordination with INDOT-ES Storm Water Team is required.]

8. County Regulated Drains

- Is the project located in a regulated drain? ☐ Yes ☐ No [NPR]
- Is the project in a county that requires notification? ☐ Yes ☐ No [NPR]
- Allen, Elkhart, Hamilton, Hendricks, Lake, LaPorte.
- Designation as a regulated drain may prevent construction of on-site mitigation. Include coordination with the entity with jurisdiction.*

9. Section 9 (USCG) and Section 10 (USACE)

- Does the project impact a navigable waterway? ☐ Yes ☐ No [NPR]

10. Levee

- Does the project impact a levee? ☐ Yes ☐ No [NPR]

11. Additional Considerations

Fish Spawning (restriction of instream work between April 1 – June 30)
Tree Clearing (restriction of clearing between April 1 – September 30)
Wildlife Concerns (e.g. wildlife crossing, etc.)
Adjacent project(s) - may be looked at cumulatively for impacts and mitigation
Endangered, Threatened or Rare Species (see DNR Early Coordination letter, USFWS species list)
Migratory Birds (see DNR Early Coordination letter, USFWS species list, visual evidence such as nests)
Bats (see USFWS species list, visual evidence such as guano, staining, etc.)
Other Protected Species (see DNR Early Coordination letter, USFWS species list)
Indiana designated waters - salmonid or outstanding state resource waters, critical wetland and aquatic sites
US EPA Class V Injection Well
St. Joseph Aquifer System
Waters Report <5 years from date of first field visit
USFWS and IDNR Early Coordination requirements
Section 106 consultation

If there are any special concerns, notify designer that the project should take these into consideration when completing the design and permit applications. Some special concerns may require extra coordination with agencies and possibly permits. If marked, notify the project manager in your permit determination response of these conflicts.

12. EWPO Preliminary Permit Determination Concurrence ***For EWPO Use Only***

This is a **preliminary** permit determination based on the information presented at the time of the request. **If scope and plans change the designer should contact us for a revised determination.** A final permit determination will be done at the time of permit application submittal and/or any changes to the scope of the project.

Permit Determination:

▶ No Permits Required

Project does not impact jurisdictional aquatic resources and has less than one acre of soil disturbance.

▶ State Form 51937

☐ Cumulative impacts are < ☐500 \square ' <0.25 ac ☐ <150' encapsulation ☐ < 1 cy/ft discharge under OHWM.

☐ There **is no** stream relocation associated with a structure or it meets 401 NWP 14 Condition 6.

▶ State Form 51821

☐ Cumulative impacts are > ☐500 \square ' >0.25 ac ☐ >150' encapsulation ☐ >1 cy/ft discharge under OHWM.

☐ There **is** stream relocation which doesn't meet 401 NWP 14 Condition 6, or the relocation is not associated with a structure.

☐ NWP and/or RGP conditions are not met.

▶ USACE Form 4345

☐ 404 IP – a single wetland or stream is impacted that is >1.0 acre or > 1,500'.

▶ Mitigation

☐ If there is a loss of > 0.1 ac wetland or 0.03 ac of streambed (explain in Detailed Activity Description, item 3 above).

☐ Cumulative impacts > 300' stream and/or 0.1 ac wetland/stream.

Permit Type

- ☐ 404 NWP
 ☐ 3a ☐ 3b ☐ 3c ☐ 13 ☐ 14 ☐ 33 ☐ PCN ☐ no PCN (pre-construction notification)
- ☐ 404 RGP
- ☐ 404 IP
- ☐ 401 WQC
 ☐ NWP ☐ 3a ☐ 3b ☐ 3c ☐ 13 ☐ 14 ☐ 33 ☐ PCN ☐ no PCN
- ☐ RGP
- ☐ IP
- ☐ CIF (State Form 42946)
- ☐ County Drain
- ☐ Stormwater (CSGP)
- ☐ USACE Section 408
- ☐ USACE Section 10
- ☐ USCG Section 9
- ☐ Mitigation

Project Notes: (include special considerations such as wildlife crossings or protected species)

EWPO Reviewer Signature: _____ **Date:** _____

For EWPO Use Only:

Email to: ☐ PM
 ☐ PD Preparer
 ☐ Storm Water Specialist
 ☐ Team Lead
 ☐ Other _____

Date sent: _____ Update: ☐ Milestones ☐ EWPS ☐ ProjectWise (file PD email)

Chad Kelly

From: INDOT CSGP <CSGP@indot.IN.gov>
Sent: Wednesday, November 8, 2023 1:59 PM
To: April C. Arroyo-Monroe; INDOT CSGP
Cc: Molly Barletta; Virginia Flynn; Chad Kelly
Subject: RE: Permit Determination -- DES 2000152 [21-1065.00]

Categories: Saved to SharePoint by Managed Filing,
<https://kaskaskiaeng.sharepoint.com/sites/21-1065.00/Emails>

Hi April,

It looks like >1 acre of soil will be disturbed, which means that this project will need a CSGP. Let me know if I can do anything else for you.

Best,

Eleanor B. Prescott (She/Her/Hers)

Stormwater Specialist

Indiana Department of Transportation
100 North Senate Ave., N758 — Environmental Services
Indianapolis, IN 46204
[INDOT: Engineering: Stormwater](#)
Email: eprescott@indot.in.gov

From: April C. Arroyo-Monroe <april@kaskaskiaeng.com>
Sent: Wednesday, November 8, 2023 2:26 PM
To: INDOT CSGP <CSGP@indot.IN.gov>
Cc: Molly Barletta <MBarletta@kaskaskiaeng.com>; Virginia Flynn <VFlynn@kaskaskiaeng.com>; Chad Kelly <ckelly@kaskaskiaeng.com>
Subject: FW: Permit Determination -- DES 2000152 [21-1065.00]

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good afternoon,

I am requesting a permit determination for project Des#2000152 per the guidance from EWPO Aidan Geissler (see the below). I have attached the completed permit determination and the Waters of the US report with maps and photos.

Please let me know if you have questions or need more information.

Thank you,
April Arroyo-Monroe

APPENDIX G

Public Involvement

Des. 2000152

Project: U.S. 36 at Raider Road Roundabout

Etica Job No.: 210144.01

Date: 12/16/2021

Page 9 of 48

NOTICE OF SURVEY LETTER

**Corporate Office**

7172 N. Keystone Ave. Ste. G

Indianapolis, IN 46240

317.466.9520

www.eticagroup.com

Certified WBE | DBE

Notice of Survey

12/16/2021

SUBJECT: Des 2000152 U.S.36 at Raider Road – Henry County
Intersection Survey

Dear Property Owner:

Our information indicates that you own or occupy property near the above referenced project. Our employees will be performing a survey of the project area soon. It may be necessary for them to come onto your property to complete this work. This is permitted by law per Indiana Code IC 8-23-7-26. They will show you their identification, if you are available, before coming onto your property. If you have sold this property, or it is occupied by someone else, please let us know the name and address of the new owner or current occupant so we can contact them about the survey.

At this stage, we generally do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, you will be contacted with additional information.

The survey work will include mapping the location of features such as trees, fences, watercourses, bridges, culverts, hardscapes, marked utilities, drives, etc., along with obtaining ground elevations. The survey is needed to perform a topographic survey of the corresponding intersection. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do occur, please contact Nickolas M. Schmitt for questions concerning this project.

Sincerely,

A handwritten signature in black ink that reads "Nickolas M. Schmitt". The signature is written in a cursive, flowing style.

Nickolas M. Schmitt, PE, PS
Project Manager
Etica Group
317.268.1853
Cc: (Dandi V. Prasad, PE)
File: (Etica No.: 210144.01)

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
Henry County																	
Henry County	1902070	Init.	IR 1001	Bridge Inspections	Greenfield	0	STBG	\$337,000.00	Local Funds	PE	\$0.00	\$31,000.00	\$30,000.00	\$1,000.00			
									Local Bridge Program	PE	\$122,000.00	\$0.00	\$118,000.00	\$4,000.00			
Performance Measure Impacted: Bridge Condition																	
Location: Countywide Bridge Inspection and Inventory Program for Cycle Years 2021-2024																	
Indiana Department of Transportation	2001876	Init.	US 36	Pavement Replacement	Greenfield	.39	STBG	\$4,137,000.00	Road Construction	CN	\$3,309,600.00	\$827,400.00		\$0.00		\$4,137,000.00	
Performance Measure Impacted: Pavement Condition																	
Location: 0.66 mi W of SR 3 (WCL Mount Summit) to 0.27 mi W of SR 3 (ECL Mount Summit)																	
Comments:Include DES 2001876, 2001877, 2002304																	
Henry County	2300120	Init.	IR 1007	Bridge Inspections	Greenfield	0	STBG	\$370,000.00	Local Bridge Program	PE	\$292,000.00	\$0.00			\$146,000.00	\$16,000.00	\$130,000.00
									Local Funds	PE	\$0.00	\$72,000.00			\$36,000.00	\$4,000.00	\$32,000.00
Performance Measure Impacted: Bridge Condition																	
Location: Countywide Bridge Inspections and Inventory Program for cycle years 2025-2028																	
Indiana Department of Transportation	39270 / 1593230	Init.	SR 3	Road Reconstruction (3R/4R Standards)	Greenfield	2.329	NHPP	\$17,315,000.00	District Other Construction	CN	\$1,600,000.00	\$400,000.00			\$2,000,000.00		
									Safety Construction	CN	\$4,261,600.00	\$1,065,400.00		\$5,327,000.00			
									Road Construction	CN	\$11,057,600.00	\$2,764,400.00		\$13,822,000.00			
Location: From 3.14 miles N of I-70 to SR 38																	
Comments:Include DES 1593230, 2001875, 2003091																	
Indiana Department of Transportation	42265 / 1702918	Init.	US 36	Small Structure Pipe Lining	Greenfield	0	STBG	\$259,000.00	Bridge Construction	CN	\$101,600.00	\$25,400.00	\$127,000.00				
Performance Measure Impacted: Safety																	
Location: 9.73 miles E of MADISON/HENRY Line																	
Comments:Include DES 1702918																	
Indiana Department of Transportation	42343 / 1900208	Init.	US 35	Small Structure Pipe Lining	Greenfield	0	STBG	\$327,000.00	Bridge Construction	CN	\$125,600.00	\$31,400.00	\$157,000.00				
Performance Measure Impacted: Safety																	
Location: US 35 -0.569 N RANDOLPH/HENRY																	
Comments:Include DES 1900208																	
Indiana Department of Transportation	43507 / 2000152	Init.	US 36	Intersection Improvement, Roundabout	Greenfield	.18	STBG	\$1,617,000.00	Safety Construction	CN	\$952,000.00	\$238,000.00		\$1,190,000.00			

Please note, an administrative modification will be needed due to change in construction costs.

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
Performance Measure Impacted: Safety																	
Location: At Raider Road																	
Comments:Include DES 2000152																	
Indiana Department of Transportation	43556 / 2002277	Init.	SR 38	Small Structure Replacement	Greenfield	0	STBG	\$526,000.00	Bridge Construction	CN	\$224,000.00	\$56,000.00		\$280,000.00			
Performance Measure Impacted: Bridge Condition																	
Location: 2.943 mi. E of Madison/Henry Co. Line																	
Comments:Include DES 2002277																	
Indiana Department of Transportation	43706 / 2101082	Init.	I 70	ITS Communications Systems	Greenfield	16.04	NHPP	\$470,000.00	Statewide Construction	CN	\$333,000.00	\$37,000.00		\$370,000.00			
Performance Measure Impacted: Congestion Mitigation and Air Quality (CMAQ)																	
Location: Connect ITS field devices at each interchange to I-70 Permit Fiber from SR 109 to Wilbur Wright Rd																	
Comments:Include DES 2101082																	
Indiana Department of Transportation	44074 / 2001862	Init.	SR 103	Small Structures & Drains Construction	Greenfield	5.145	STBG	\$430,000.00	Bridge Construction	CN	\$120,000.00	\$30,000.00		\$150,000.00			
Performance Measure Impacted: Safety																	
Location: SR 103, 2.47 miles N of US 40 (39.842696, -85.352951)																	
Comments:Include DES 2001862																	
Henry County	44274 / 2101743	Init.	IR 1125	Signing	Greenfield	242.34	STBG	\$692,000.00	Local Funds	CN	\$0.00	\$64,000.00				\$64,000.00	
									Group IV Program	CN	\$572,000.00	\$0.00				\$572,000.00	
Performance Measure Impacted: Safety																	
Location: Various Roads in Henry County located in the western 4 townships																	
Comments:Include DES 2101743																	
Indiana Department of Transportation	44485 / 2200811	Init.	I 70	HMA Overlay, Preventive Maintenance	Greenfield	14.31	NHPP	\$32,313,000.00	Bridge Construction	CN	\$20,163,600.00	\$2,240,400.00		\$100,000.00		\$22,304,000.00	
									Road Construction	CN	\$22,410,000.00	\$2,490,000.00				\$24,900,000.00	
Performance Measure Impacted: Pavement Condition																	
Location: 0.49 mi W of SR 3 to 0.47 mi W of SR 1																	
Comments:Include DES 1800494, 1800495, 2200762, 2200763, 2200764, 2200765, 2200766, 2200767, 2200768, 2200769, 2200770, 2200771, 2200772, 2200773, 2200774, 2200775, 2200776, 2200777, 2200778, 2200811																	
Henry County	44851 / 2201636	Init.	IR 9541	Bridge Replacement	Greenfield	.04	STBG	\$2,219,000.00	Local Funds	PE	\$0.00	\$80,000.00	\$80,000.00				
									Local Bridge Program	RW	\$84,000.00	\$0.00			\$84,000.00		
									Local Bridge Program	CN	\$1,370,000.00	\$0.00					\$1,370,000.00

APPENDIX I

Additional Information

Engineering Assessment Report

US 36 & Raider Rd, Intersection Improvement: Roundabout
DES No. #####, Greenfield Tracking No. #####

Safety Project
Proposed Fiscal Year: 2025
Score: 91

Greenfield District
Greenfield Sub-District
Henry County, Indiana
11/12/19

Prepared by:
Nathan Sturdevant, P.E.
Greenfield District Traffic Investigations Engineer

Approved by:
Luis Laracuenta, P.E.
District Traffic Engineer

Indiana Department of Transportation

Traffic Engineering

Greenfield District

32 South Broadway Greenfield IN 46140





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Executive Summary

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 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. An alternative other than the preferred alternative may not be selected without consultation with the preparer of this report.

The project is located at the two-way stop controlled intersection of US 36 & Raider Rd., located about 0.05 miles west of reference post 100 in Henry County. This intersection is experiencing elevated crash rates with a pattern of severe left turn and right angle crashes. Several interim measures including enhanced signage and an overhead flasher have failed to reduce crashes.

The preferred alternative is to convert the two-way stop controlled intersection into a single lane roundabout. A roundabout is expected to significantly improve the overall safety of the intersection by reducing the number and severity of conflict points (specifically left turn and right angle) as well as lowering the speed of vehicles travelling through the intersection. Additionally, a single lane roundabout is expected to operate exceptionally well (LOS A) through the design year of 2045. The estimated cost of a single lane roundabout at this location is \$1,431,000.

Project Location

Table 1: Project Location Information

Location Description			
Route	US 36	Latitude	40.004559
City	Middletown	Longitude	-85.528167
County	Henry	Nearest Cross Street	Raider Rd.
District	Greenfield	Distance From	0
Sub District	Greenfield	RP From	99.85
MPO	None	RP To	100.05
NHS Route?	No	Length	0.2
Functional Class	Major Collector	Work Type	Intersection Improvement, Roundabout
Rural or Urban	Rural	Work Category	Intersection Improvement Project
Other Location Info:	Mostly Agricultural Surroundings, School to the NE of intersection.		

See attachments for a map showing the project location and for other pictures of the site.



Purpose and Need

The identified need at this location involves the recurring above average number of injury crashes throughout the limits of the project. Specifically, the pattern of turning and crossing (right angle) type crashes at the intersection.

The purpose of the project is to reduce or eliminate the right angle and turning crashes and therefore reduce the number of injury crashes.

Project History

This intersection was studied in 2017 after several requests by members of the community due to perceived issues with frequent crashes at the intersection. However, the ICC and ICF statistics were 0.85 and 0.57, respectively, at that time indicating low crash cost and frequency. This prompted continued monitoring of the intersection, but no further project development. In February of 2019, several school officials belonging to the Shenandoah Middle and High Schools contacted INDOT with concerns regarding the safety of the intersection. A new safety audit was completed that revealed elevated crash severity and frequency with an ICC of 2.12 and an ICF of 1.77 respectively. Because of the updated crash data that demonstrated a crash severity issue, we studied the intersection for a change in traffic control.

Existing Conditions

Roadway Geometrics and Pavement Information

Table 2: Roadway Geometrics and Pavement Information

Lane Width	12 ft.
Curbed	No
Shoulder Width	5 ft.
Number of lanes in each direction	1
Intersection Traffic Control	Two Way Stop
Speed Limit	55 mph
Pavement Type	Asphalt
Median Type	None

Traffic Data and Capacity Analysis

Table 3: Volume Information and Traffic Forecast

Representative AADT	4,422
AADT Year	2018
% Trucks	15.4
DHV (%)	10.95
% Yearly Traffic Growth	0.18
2018 AADT	4,422



2025 AADT	4,476
2030 AADT	4,515
2035 AADT	4,593
2040 AADT	4,632

The complete traffic forecast as provided by the Traffic Statistics Section in Central Office has been included in the attachments.

Table 4&5: Capacity Analysis

ROAD	AM Peak							
	EB		WB		NB		SB	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Existing	A	2.9	A	0.2	C	15.6	C	21.5
Design Year Existing	A	3.2	A	0.3	C	22.1	F	56.2
Design Year Proposed	A	6.0	A	7.9	A	4.8	A	6.1

ROAD	PM Peak							
	EB		WB		NB		SB	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Existing	A	1.1	A	0.9	B	14.2	B	14.9
Design Year Existing	A	1.2	A	1.0	C	17.7	C	21.7
Design Year Proposed	A	5.5	A	6.2	A	4.5	A	5.2

For more information on the capacity analysis, see attached reports.

1% Growth Rate Assumed CORRECT TO SHOW APPROACH MOVEMENT

Please note, the crash data below in Table 6 within the narrative of the Engineering Assessment Report is incorrect. Accurate ICF, ICC, and crash history data can be found in Appendix I, pages 21 and 23 of this CE document.

Crash Information

Table 6: Crash History

ICC	2.79	Number of Crashes	16
ICF	2.07	Number of Fatal and Incapacitating Crashes	8
First Year of Crash Data	2016	Number of Non-Incapacitation Crashes	4
Last Year of Crash Data	2018	Number of Property Damage Only Crashes	4

Crash data from 2016 to 2018 was analyzed at this intersection. During this time period, there were sixteen crashes, of which, nine were right angle crashes, two left turn crashes, one right turn crash, one opposite direction side swipe crash, one ran off the road crash, one head-on crash, and one other crash. Twelve of these crashes resulted in injury, and of those eight were incapacitating, and four were non-incapacitating. The remaining four crashes resulted in property damage only. The intersection was analyzed via RoadHAT 3, to determine crash statistics such as frequency and severity. This intersection displayed an ICC, or Index of Crash Cost, value of 2.79. This means that the cost of



crashes (severity) at this intersection is extremely high. The intersection also has an ICF, or Index of Crash Frequency, value of 2.07. This indicates that the frequency of crashes at this intersection is also extremely high.

The RoadHAT output, crash statistics summary and a crash diagram have been included in the attachments to this report.

Design Considerations

Deer Creek is located 0.06 miles to the west of the intersection and 0.25 miles south of the intersection. The majority of the parcels south of the intersection are agricultural, while parcels north of the intersection are mostly residential, and Shenandoah Schools are located to the north east of the intersection. If possible, the design should shift the roundabout to the south, then to the east of the existing intersection to avoid and account for these obstacles.

Table 7: Other Design Considerations

Land Survey Location	Section 20 T 18 R 9
Civil Township	Henry
Federal Aid System	Classifies as a Rural On in the Federal Aid System
National Truck Network	No
Urban Area Boundary	Rural
Adjacent Land Use	Mostly Agricultural, School NE of intersection

Community/External Stakeholder Context

There are very few nearby roundabouts relative to this location, so the community may be opposed to the change due to unfamiliarity. However, the community should be in favor of it as a safety improvement, especially with Shenandoah Middle and High Schools within close proximity to this intersection. In fact, the Shenandoah Middle School Principal submitted the initial request for consideration of a roundabout at this intersection. Therefore, it can be assumed that the school district will be in favor of the proposed alternative. The Shenandoah school officials should be involved in the stakeholder meetings for this intersection.

Adjacent INDOT Projects

There is a proposed bridge replacement for the structure over Deer Creek, approximately 0.06 miles west of this intersection. This project is currently being submitted for the 2025 Call for Projects. If both projects are funded, significant coordination will need to be completed to ensure both projects can be adequately delivered.



Analysis and Alternatives

Description of Alternatives

Alternative 1, Single Lane Roundabout – Convert the intersection from a two-way stop to a single lane roundabout. This maintains LOS of A through the design year of 2045. This roundabout will likely have to be located southeast of the existing intersection, as a bridge over Deer Creek to the west and a culvert to the south restrict impacts in those directions. Additionally, properties and a high school to the north and northeast, respectively, would require significant property acquisition. The roundabout is expected to have a standard inscribed diameter and entry angles for the higher speeds along US 36. The roundabout should accommodate heavy bus traffic from the nearby school. It is estimated that the change to a roundabout would reduce crashes by at least 49%, all but eliminating right angle and left turn crashes at the intersection. This alternative will meet the purpose and need of this project.

Estimated cost for the installation of a single lane roundabout at this location is \$ 1,431,000.

Alternative 2, Traffic Signal – Installation of a traffic signal at the intersection. This intersection already has four existing steel strain utility poles for the existing flashers, and the reuse of those utilities would be cost efficient. However, dedicated left turn lanes must be added on all approaches. The volumes at this intersection do not meet any of the traffic signal warrants from the MUTCD of capacity. The installation of an unwarranted signal may lead to an increase in crashes and poor overall operation at the intersection. This alternative would theoretically reduce total crashes by 44%. However, this would also come with an increase in rear end crashes, and the predominant pattern of left turn crashes would still occur. Lastly, the cost difference between alternatives is minimal and a roundabout is superior for safety. This means that this alternative does not adequately meet the purpose and need.

Estimated cost for the additional turn lanes and traffic signal is \$1,308,000.

Alternative 3 – No Build. The No build option was considered for this project. However, there are long term capacity issues with the existing traffic control, and the existing safety problems will persist if no action is taken. The severe right angle and left turn crashes will not be addressed with the no build option. Therefore, this alternative does not meet the purpose and need for this project.



Cost Estimates

Table 8: Cost Estimate Summary

Alternative	Funding Category	Estimated Cost
Alternative 1: Roundabout	CN	\$1,126,000
	PE	\$275,000
	Utility	\$0
	RoW	\$30,000
	Total Cost	\$1,431,000
Alternative 2: Traffic Signal	CN	\$1,078,000
	PE	\$200,000
	Utility	\$0
	RoW	\$30,000
	Total Cost	\$1,308,000
Alternative 3 No Build	CN	\$0
	PE	\$0
	Utility	\$0
	RoW	\$0
	Total Cost	\$0

Complete and detailed cost estimates for all considered alternatives are included in the attachments of this report.

Preliminary Maintenance of Traffic Plan (MOT)

This project is not considered a mobility significant project based on the classification of the facility, AADT and additional factors. Given the proximity of Shenandoah Schools, this project should be completed while school is not in session. Therefore, this project should utilize a full closure of US 36. This will reduce the number of days required to complete construction. An official detour will be required and will likely consist of SR 38 and SR 3. There are several local routes that will likely see significant diversion during the detour due to the length of the official detour.

The above information is preliminary and conceptual in nature. The designer of record for this project shall be responsible for the determination of MOT scheme and the full design of that scheme. The above information can be used to inform the decision making of the designer but it does not absolve him of the responsibility of the design.

The provisions of the Indiana Manual on Uniform Traffic Control Devices, the Indiana Design Manual and the INDOT Standard Drawings concerning the design of an MOT zone shall be adhered



to. A detailed design showing the MOT layout should be included in the final set of plans. The provisions of the Interstate Highway Congestion Policy shall be followed.

Pavement and Roadway Design

Standard single lane roundabout design features should be assumed and incorporated into this project. However, given the proximity of Shenandoah Schools, the circulating roadway width should ensure that bus traffic could easily navigate the intersection without issue.

Right-of-Way and Survey

Based on the proposed layout, the Right-of Way Office estimates that there will be small acquisitions required for all for corners of this intersection. The southern parcels may require additional acquisition if the footprint must be shifted further than expected during design. The estimated cost for this acquisition is \$30,000.

Table 9: Right Of Way Summary

Land Use	Parcel No.	R/W Required	Cost
		Acquisition	\$30,000
		Engineering	\$20,000
Total			\$50,000

Utilities and Railroads

Impacts to utilities and railroad are expected to be minimal. Depending on the final footprint of the roundabout, the utility line that runs along the south side of US 36 may need to be relocated. The utilities are not expected to be reimbursable.

Hydraulic Recommendations

Minor drainage ditch modification may be necessary for this intersection. It should be noted that the bridge over Deer Creek, approximately 0.06 miles west of this intersection is being submitted to the 2025 Call for Projects. Coordination between these two projects will be critical to the successful completion of both projects.

Environmental and Historic Considerations

It is anticipated that this project will require either a Categorical Exclusion(CE) level 1 or 2 depending on the right of way needs of this project(½ acre threshold). Environmental will need to be done 1 year in advance of letting to allow for right of way acquisition, and will take 9-12 months to complete.



If the project extends west to the bridge over Deer Creek located 0.06 miles west of the intersection, a Construction in Floodway (CIF) permit will be needed, and that takes an additional 9-12 months after the Categorical Exclusion is done. This should be avoided if possible.

This project will likely require an environmental document level CE2.

Design Criteria

The design of this project shall adhere to 3R Project, Non-Freeways Rural Collector standards per the Indiana Design Manual.

SEE IDM 40-06.01 FOR MORE INFORMATION.

Recommended Alternative

WHICH IS THE PREFERRED ALTERNATIVE AND WHY. INCLUDE COST AND SCORE.

The preferred alternative is Alternative 1, the single lane roundabout. While this alternative is not the most cost effective, it provides the most benefit to both safety and operations at this intersection. This is the only alternative that addresses both the purpose and need for this project in all regards. While this may cost more than just installing a traffic signal at the intersection, it would reduce critical crash rates by at least 49%, eliminating left turn and right angle crashes almost entirely. Additionally, the roundabout option presents the best case for long-term capacity sustainability, as well as improving side street traffic conditions. A roundabout maintains LOS A well through the design year of 2045, and costs \$1,431,000

Changes to Proposal

Contact the Greenfield District Traffic Engineer if deviation from this document is determined to be necessary during a later phase of project development, including but not limited to scope of work or letting changes. Any desired changes should include justification for the change and the estimated cost.



Concurrence and Approval

This document was prepared by:

NAME Nathan Sturdevant

TITLE Traffic Investigations Engineer

DATE 12/5/2019

This document was approved by:

NAME Luis Laracuente

TITLE District Traffic Engineer

DATE 12/5/2019

ATTACHMENT

1

Traffic Forecast and Volumes

**PROJECT TRAFFIC FORECAST REPORT****DES No.:** P190007

US-36 US 36 at Raider Rd in Henry County

From RP 99+85 to RP 100+5

Henry County

Prepared For

Nathaniel Sturdevant

On

07/01/2019

By

INDOT, Office of Traffic Statistics
Technical Planning Support & Programming Division
Gregory A. Katter, PE, Supervisor
100 N. Senate Ave, N955
Indianapolis, Indiana 46204
INDOTTrafficForecasts@indot.IN.gov

**PROJECT TRAFFIC FORECAST REPORT**

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Project Map

Segment 1 Forecast

Segment 2 Forecast

Segment 3 Forecast

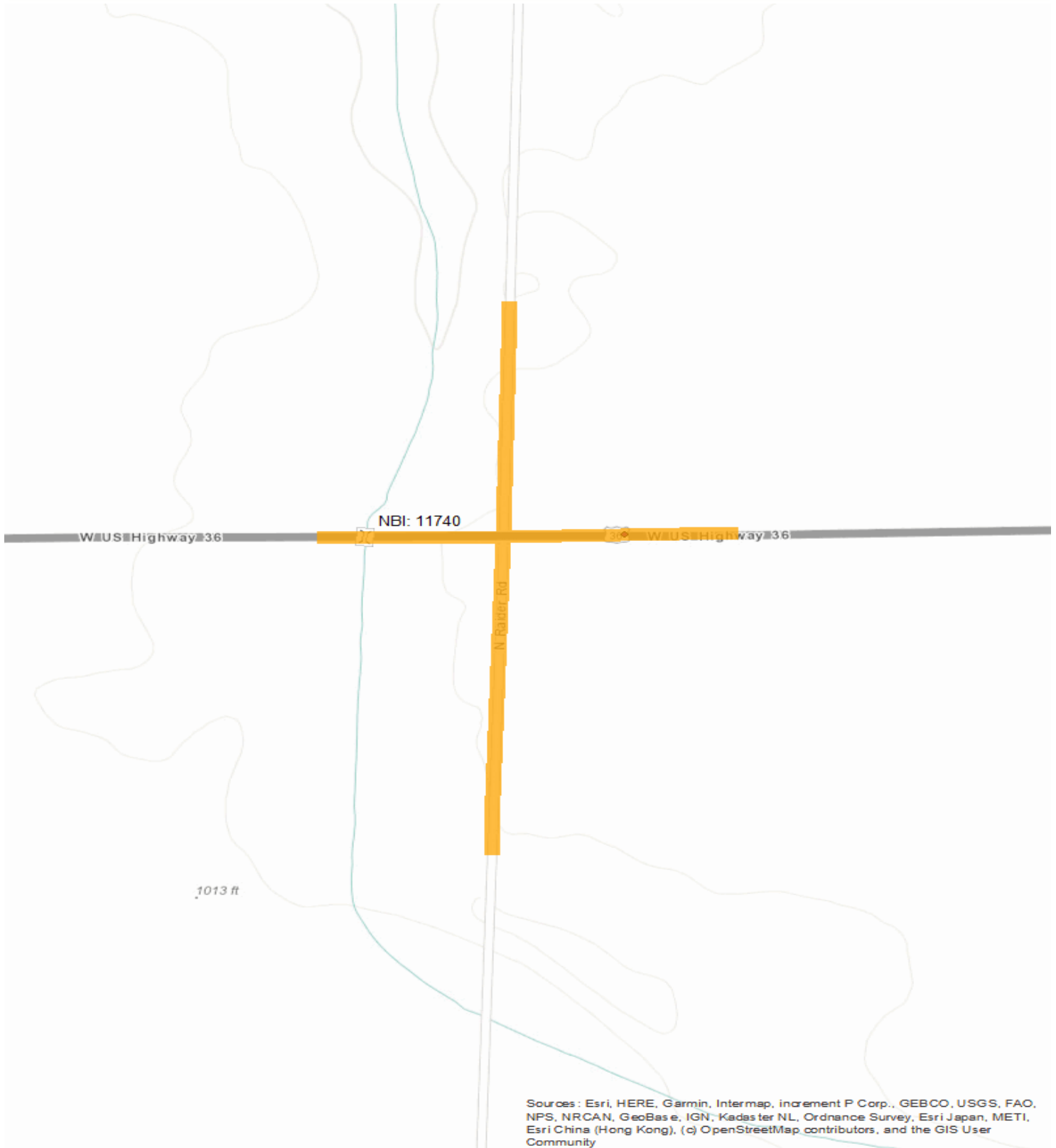
Segment 4 Forecast



INDIANA DEPARTMENT OF TRANSPORTATION

September 30, 2019 11:30 am

PROJECT TRAFFIC FORECAST REPORT





INDIANA DEPARTMENT OF TRANSPORTATION

September 30, 2019 11:30 am

PROJECT TRAFFIC FORECAST REPORT

Segment: 1

Segment Name **US-36**
 Route Name **US-36**
 From Measure **100.210**
 To Measure **100.308**

Forecast Year	Projected Annual Average Daily Traffic	Negative AADT	Positive AADT
2018	4,422	2,238	2,184
2025	4,476	2,266	2,211
2030	4,515	2,285	2,230
2040	4,593	2,325	2,269
2045	4,632	2,344	2,288

Design Hourly Volume (DHV) in Design Year as percentage of AADT

Year	DHV
2045	10.95%

Peak Hour Forecast

AM Peak Hour 07:15
 PM Peak Hour 04:45

Commercial Vehicles (FHWA Scheme F Classes 4 - 13)

15.40% of AADT
 17.15% of DHV

Directional Split

49.39% of AADT Travels in Positive Travel Direction

The per year growth user for this forecast is 0.18% and is applied as a linear growth.

It should be recognized by users of this forecast that the base year AADT has an accuracy of plus or minus 10%. It should also be understood that while this report may include forecasts with up to six apparent significant figures, the accuracy should not be interpreted as being greater than two significant figures. It is the responsibility of designers to exercise professional judgement when using this data to influence decisions.



INDIANA DEPARTMENT OF TRANSPORTATION

September 30, 2019 11:30 am

PROJECT TRAFFIC FORECAST REPORT

Segment: 2

Segment Name US-36
 Route Name US-36
 From Measure 100.120
 To Measure 100.206

Forecast Year	Projected Annual Average Daily Traffic	Negative AADT	Positive AADT
2018	4,202	2,051	2,151
2025	4,360	2,128	2,232
2030	4,473	2,183	2,290
2040	4,698	2,293	2,405
2045	4,811	2,348	2,463

Design Hourly Volume (DHV) in Design Year as percentage of AADT

Year	DHV
2045	10.78%

Peak Hour Forecast

AM Peak Hour 07:00
 PM Peak Hour 04:30

Commercial Vehicles (FHWA Scheme F Classes 4 - 13)

15.83% of AADT
 15.45% of DHV

Directional Split

51.19% of AADT Travels in Positive Travel Direction

The per year growth user for this forecast is 0.54% and is applied as a linear growth.

It should be recognized by users of this forecast that the base year AADT has an accuracy of plus or minus 10%. It should also be understood that while this report may include forecasts with up to six apparent significant figures, the accuracy should not be interpreted as being greater than two significant figures. It is the responsibility of designers to exercise professional judgement when using this data to influence decisions.



INDIANA DEPARTMENT OF TRANSPORTATION

September 30, 2019 11:30 am

PROJECT TRAFFIC FORECAST REPORT

Segment: 3

Segment Name **RAIDER RD**
 Route Name **RAIDER RD**
 From Measure **3.070**
 To Measure **3.190**

Forecast Year	Projected Annual Average Daily Traffic	Negative AADT	Positive AADT
2017	1,894	1,058	836
2025	1,909	1,066	843
2030	1,919	1,072	847
2040	1,938	1,082	855
2045	1,947	1,088	859

Design Hourly Volume (DHV) in Design Year as percentage of AADT

Year	DHV
2045	10.98%

Peak Hour Forecast

AM Peak Hour 07:15
 PM Peak Hour 04:30

Commercial Vehicles (FHWA Scheme F Classes 4 - 13)

20.17% of AADT
 23.56% of DHV

Directional Split

44.14% of AADT Travels in Positive Travel Direction

The per year growth user for this forecast is 0.10% and is applied as a linear growth.

It should be recognized by users of this forecast that the base year AADT has an accuracy of plus or minus 10%. It should also be understood that while this report may include forecasts with up to six apparent significant figures, the accuracy should not be interpreted as being greater than two significant figures. It is the responsibility of designers to exercise professional judgement when using this data to influence decisions.



INDIANA DEPARTMENT OF TRANSPORTATION

September 30, 2019 11:30 am

PROJECT TRAFFIC FORECAST REPORT

Segment: 4

Segment Name **RAIDER RD**
 Route Name **RAIDER RD**
 From Measure **2.890**
 To Measure **3.066**

Forecast Year	Projected Annual Average Daily Traffic	Negative AADT	Positive AADT
2017	589	310	279
2025	589	310	279
2030	589	310	279
2040	589	310	279
2045	589	310	279

Design Hourly Volume (DHV) in Design Year as percentage of AADT

Year	DHV
2045	11.21%

Peak Hour Forecast

AM Peak Hour 09:15
 PM Peak Hour 05:30

Commercial Vehicles (FHWA Scheme F Classes 4 - 13)

12.73% of AADT
 6.06% of DHV

Directional Split

47.37% of AADT Travels in Positive Travel Direction

The per year growth user for this forecast is 0.00% and is applied as a linear growth.

It should be recognized by users of this forecast that the base year AADT has an accuracy of plus or minus 10%. It should also be understood that while this report may include forecasts with up to six apparent significant figures, the accuracy should not be interpreted as being greater than two significant figures. It is the responsibility of designers to exercise professional judgement when using this data to influence decisions.

ATTACHMENT

2

Crash Information and Diagrams



COLLISION DIAGRAM

US 36 & Raider Rd

Study Period: 2016-2018

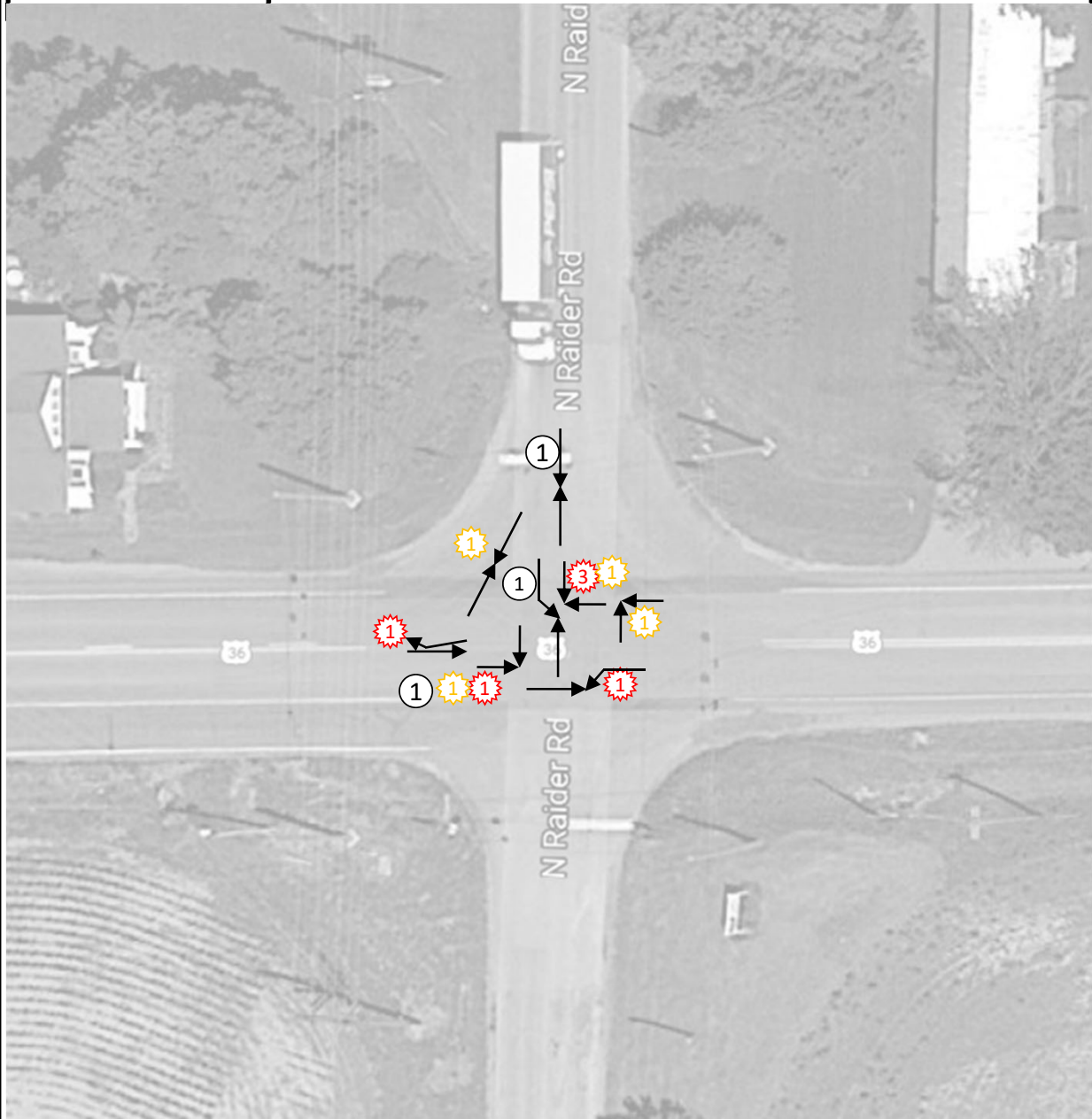
District: Greenfield County: Henry

Analyst: Bonnie Gonzalez Date: 02/20/2019

Location: 40.004546, -85.528138

City/Town: Middletown

DES: Number Letting Year: YYYY



Year	Fatal / Inc	Non-Inc	PDO	Total
2016	2	0	0	2
2017	3	2	0	5
2018	1	2	3	6
Total	6	4	3	13

ICF	1.61
ICC	2.40

Additional Comments

- A school bus with 46 passengers was one vehicle involved in a crash.

Object Symbols

	Moving Vehicle		Animal		Signalized Intersection
	Turning Vehicle		Debris in Roadway		Stop Sign
	Backing Vehicle		Fixed Object (see table for #)		
	Sliding Vehicle		Incapacitating/Fatal		
	Parked Vehicle		Non-Incapacitating		
	Pedestrian		PDO (If > 1)		
	Bicycle				

Collision Symbols

	Rear End
	Head On
	Sideswipe - Same
	Sideswipe - Opposite
	Right Angle
	Right Turn
	Left Turn

Fixed Object Codes

01	Bridge or Overpass
02	Building
03	Culvert or ditch
04	Curb
05	Guardrail or Barrier
06	Embankment
07	Fence
08	Traffic Pole
09	Utility Pole
10	Sign
11	Tree / Shrub
12	Construction Barrier
13	Crash Attenuator
88	Other
99	Unknown

ATTACHMENT

3

RoadHAT Crash Report

Index of Crash Frequency and Cost - Form F1			Page 1/2
Location			
GIS			
Post			
Analyst			
Date			
INPUT			
Road Facility Type		Unsignalized Rural State-State Intersection	
Major Road AADT (veh/day)		4329	
Minor Road AADT (veh/day)		1894	
T-intersection Indicator (1 if present, 0 otherwise)		0	
First Year with Crash Data (yyyy)		2016	
Last Year with Crash Data (yyyy)		2018	
Number of Crashes (crash/period)			
Fatal and Incapacitating Injury Crashes		6	
Non-Incapacitating and Possible Injury Crashes		4	
Property Damage Only Crashes		3	
Route or Road Type		Unsignalized Rural State-State Intersection	
Average Crash Costs (\$)			
Fatal and Incapacitating Injury Crashes		525500	
Non-Incapacitating and Possible Injury Crashes		33100	
Property Damage Only Crashes		5600	
Crash Cost Year (yyyy)		2013	
OUTPUT			
Expected Crash Frequency (crash/year)			
Fatal and Incapacitating Injury Crashes		0.063	
Non-Incapacitating and Possible Injury Crashes		0.33	
Property Damage Only Crashes		1.17	
All Crashes		1.57	
Index of Crash Frequency		1.61	
Index of Crash Cost		2.40	

Index of Crash Frequency and Cost - Form F1			Page 2/2
Location			
GIS			
Post			

ATTACHMENT

4

CMF Information

Category	Countermeasure	Area Type	Facility type	Crash Type	CRF	CMF	States and (reference number)
Intersection geometry	Add a left-turn lane on one major approach to a signalized intersection	Urban	Three-leg intersections	Total	7.0	0.930	IA, IL, LA, MN, NE, NC, OR, VA (18)
			Four-leg intersections	Total	10.0	0.900	
		Rural	Three-leg intersections	Total	15.0	0.850	
			Four-leg intersections	Total	18.0	0.820	
Intersection geometry	Add a left-turn lane on one major approach to an unsignalized intersection	Urban	Three-leg intersections	Total	33.0	0.670	IA, IL, LA, MN, NE, NC, OR, VA (18)
			Four-leg intersections	Total	27.0	0.730	
		Rural	Three-leg intersections	Total	44.0	0.560	
			Four-leg intersections	Total	28.0	0.720	
Intersection geometry	Add a right-turn lane on one major approach to a signalized intersection	Urban	Four-leg intersections	Total	4.0	0.960	IA, IL, LA, MN, NE, NC, OR, VA (18)
Intersection geometry	Add a right-turn lane on one major approach to an unsignalized intersection	Rural	Four-leg intersections	Total	14.0	0.860	IA, IL, LA, MN, NE, NC, OR, VA (18)
Intersection geometry	Convert diamond interchange to diverging diamond interchange (DDI)	Urban	Principal arterial, other freeways and expressways	Total	33	0.67	KY, MO, NY, TN (20)
				Injury	41	0.59	
				Angle	67	0.33	
				Rear-end	36	0.64	
				Sideswipe	-27	1.27	
				Single-vehicle	24	0.76	
Intersection geometry	Convert intersection on low-speed road to a roundabout	Urban and rural	Intersections where all approaches are low-speed (less than 45 mph)	Total	-9.9	1.099	WI (31)
				KABC	52.7	0.473	
Intersection geometry	Convert intersection on high-speed road to a roundabout	Urban and rural	Intersections where at least one approach is high-speed (45 mph or greater)	Total	34.1	0.659	WI (31)
				KABC	49.4	0.506	
Intersection geometry	Convert intersection to a single-lane roundabout	Urban and rural	Intersections with low- and high-speed approaches	Total	36.0	0.640	WI (31)
				KABC	18.2	0.818	
Intersection geometry	Convert intersection to a multilane roundabout	Urban and rural	Intersections with low- and high-speed approaches	Total	-6.2	1.062	WI (31)
				KABC	63.3	0.367	
Intersection geometry	Convert two-way stop-controlled intersection to a roundabout	Urban	Intersections on two- or four-lane roads	Total	27.0	0.73	CA, CO, CT, FL, KS, MD, ME, MI, MO, MS, NV, OR, SC, UT, VT, WA WI (31,33)
				KABC	58.1	0.419	
		Rural	Intersections on two- or four-lane roads	Total	48.2	0.518	
				KABC	61.2	0.388	

ATTACHMENT

5

Cost Estimate



**PROJECT COST
ESTIMATE**

US 36 and Raider Rd.

Study Period: March 2019
 District: Greenfield County: Henry
 Analyst: Mark Muenz Date: 06/10/2019

Location: US 36 and Raider Rd.
 City/Town: New Castle
 DES: NA Letting Year: 2025

Alternative 1 - RAB

Item No.	Description	Quantity	Unit	Bid Price	Extension
1	Excavation Common	1805	CY	\$20.00	\$36,100
2	Pavement	4250	SYS	\$125.00	\$531,250
3	Curb, Island Concrete	1200	SYS	\$100.00	\$120,000
4	Curb, Concrete	4000	LF	\$20.00	\$80,000
5	Lighting	1	LS	\$65,000.00	\$65,000
6	Signage	1	LS	\$10,000.00	\$10,000
7	Pavement Markings	1	LS	\$10,000.00	\$10,000
	Subtotal				\$852,350
A	Maintenance of Traffic (10-20%)	5%	LS	\$42,618	\$42,618
B	Project Estimate Adjustment, Contingency (10-20%)	20%	LS	\$170,470	\$170,470
C	Construction Engineering (2-5%)	2%	LS	\$17,047	\$17,047
D	Mobilization and Demobilization (5-10%)	5%	LS	\$42,618	\$42,618
E	Preliminary Engineering	1	LS	\$275,000	\$275,000
F	Utilities (Varies)	\$0.00	LS	\$0	\$0
H	Right of Way (Varies)	\$30,000.00	LS	\$30,000	\$30,000
	TOTAL				\$1,431,000

ATTACHMENT

6

Project Scoring Sheets



TSAM Team
Safety Project Scoring Sheet

I-29

DES:			Date:	1/13/2020
Analyst:	Mark Muenz		Total Project Cost (today's dollars):	\$1,431,000
District:	Greenfield		City:	Middletown
Route:	US 36		County:	Henry
Location:	Raider Rd.			
Treatment:	Single Lane Roundabout			
LAT, LONG:	40.004557	-85.528174	Final Score:	91
Notes and CRF Source Information:				

Core Safety Factors	Rating (Type Number)	Score Received	Points Possible	Comments
#1 Crash Severity (I_{cc} -based)	2.79	40.00	40	RoadHAT output PDF is required. Enter w/ two decimal places.
#2 Crash Frequency (I_{cf} -based)	2.07	9.04	10	RoadHAT output PDF is required. Enter w/ two decimal places.
#3 Benefit-Cost Ratio (Imported from Factor 3 Tab)	14.51	35.00	35	CRF source must be cited above. Enter Data into Factor 3 Tab.
Core Safety Factors Subtotal:		84	85	Scores are rounded to the nearest integer.

Supplemental Factors	Rating (Choose From Menu)	Score Received	Points Possible	Comments
#4 Mobility Improvement	2 Points: Neutral Effect on Mobility	2	5	See business rules for more information. Must be documented with analysis: inputs and outputs. Design year is 20 years from construction. Growth rate is 1% by default.
#5 Public and Other Interests	3 Points: A Government Official has Shown Concern With Location (Documented)	3	5	Documentation from Elected Officials or Public is required.
#6 Route Continuity and Corridor Completion	2 Points: Neutral Effect on Uniformity	2	5	See business rules for more information.
#7 Earmarks & External Contributions	0 Points: No Earmarks or External Contributions	0	25	See business rules for more information. Must be documented. Benefit/Cost Ratio must still be calculated using total project cost.
Supplemental Factors Subtotal:		7	15	
Final Score:		91	100	Scores greater than 100 will be lowered to 100.

Score Justifications:

Factor #4:	The two-way stop operates acceptably in the design year peak hour under current and proposed conditions. The proposed roundabout does operate better, but both are within acceptable LOS for this facility.
Factor #5:	The customer service requests have come from the principal and vice principal of Shenandoah High School. This location has received much attention in the past as well.
Factor #6:	The proposed roundabout should not adversely affect the corridor and should provide positive safety benefits.
Factor #7:	Type justification for selection here with all necessary background information. If points were received in this category, justification is required.
Other Notes:	Provide other information in this space as needed.



USER INPUT	
Countermeasure: Single Lane Roundabout	
Crashes (Total of 3 years only)	
Location Type	Rural State State Unsignalized Intersection
Fatal and Incapacitating Injury Crashes	8
Non-Incapacitating Injury Crashes	4
PDO Crashes	4
Crash Reduction Factors (% By Severity)	
CRF _{KABC} (Killed and Injury)	61
CRF _{All}	
Enter at least one CRF for either KABC or All Severities:	
Countermeasure 1 CRF _{KABC}	61
Countermeasure 2 CRF _{KABC}	
Countermeasure 3 CRF _{KABC}	
Only enter CRF for "All Severities" if CRF's for KABC were not used:	
Countermeasure 1 CRF _{All Severities}	
Countermeasure 2 CRF _{All Severities}	
Countermeasure 3 CRF _{All Severities}	
Project Information	
Current Year	2018
Project Build Year	2024
Inflation Rate (% Do Not Change)	2
Project Life (Years, Default Value is 20)	20
Traffic Growth (% Default Value is 1.0)	1
Yearly Upkeep Costs (Today's Dollars)	\$1,000
Total Project Cost (Today's Dollars)	\$1,431,000

RESULTS
Initial Annual Crash Costs \$2,015,499
Initial Annual Crash Costs Reduction \$1,223,136
Total Lifetime Crash Costs Reduction \$26,912,247
Build Year Project Cost \$1,611,538
Benefit Cost Ratio 16.70

NOTES
Crash totals by severity should be entered for the most recent consecutive three calendar year time period. No crash data for years prior to 2015 should be used.
Notes on CRF usage should be included on the first page of the worksheet. At least one CRF should be entered for either KABC crashes or all Crashes. If more than one countermeasure is being installed, enter additional CRF values as needed. Most projects will only enter one CRF value. Negative CRF's are permitted.
Traffic growth percent should be based on the TCDS data or on a projection from central office. Do not use a traffic growth factor greater than 1.0% without documentation. Do not enter a traffic growth factor of less than 0.1%.
Upkeep should include Pavement Marking Maintenance, Utility Payments, Amortized Refurbishments, and any other new yearly costs that will now be required. The default yearly upkeep cost is \$1000. Total Project Cost is imported from the first sheet.

ATTACHMENT

7

Alternative Sketch



Drawing of Potential
Roundabout

US 36 @ Raider Rd

Study Period: 2019

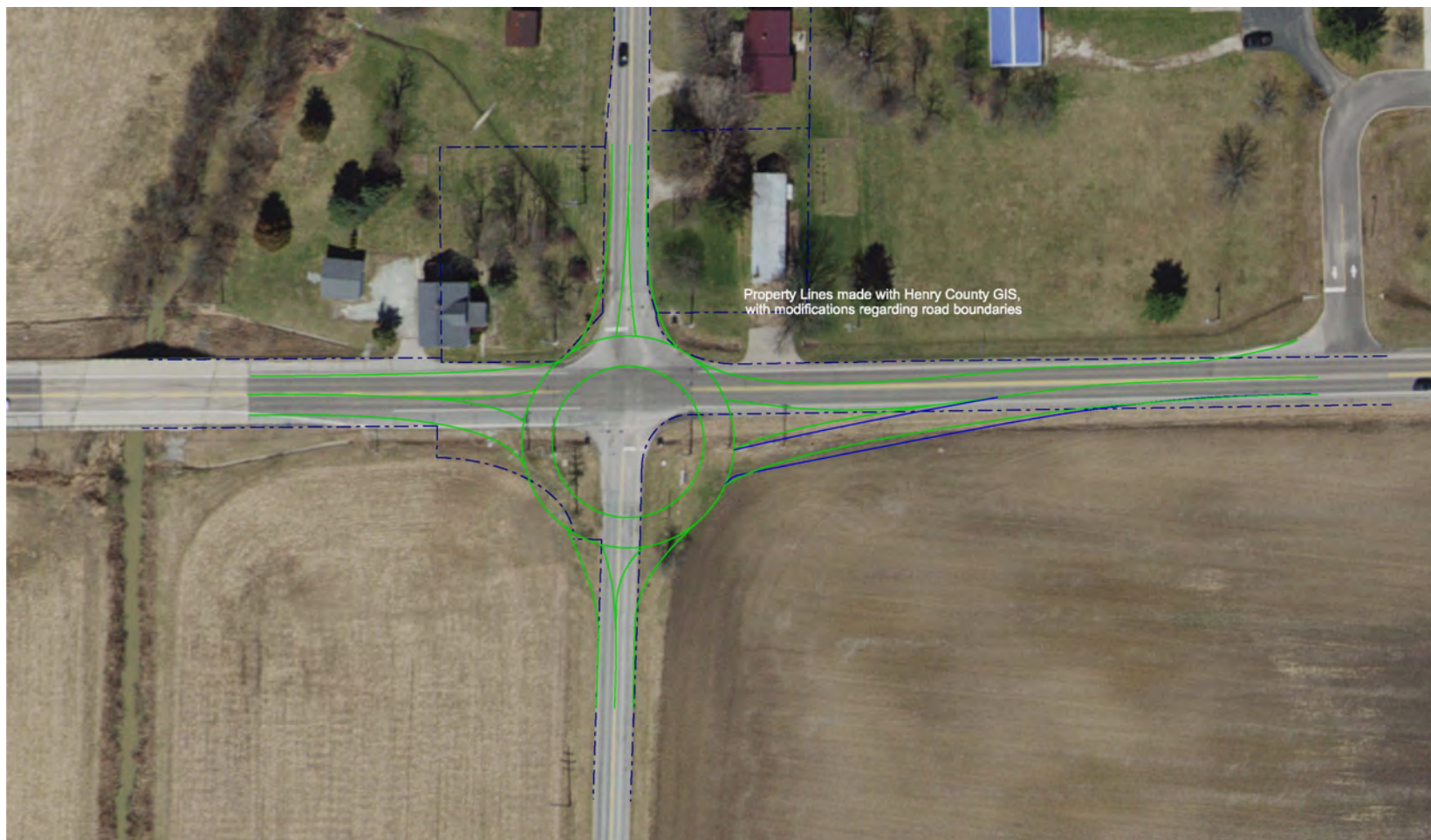
Location: 40.004548, -85.528169

District: Greenfield County: Henry

City/Town: Middletown

Analyst: Nathan Sturdevant Date: 6/13/2019

DES: TBD Letting Year: 2025



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

ProjectNumber	SubProjectCode	County	Property
1800294	1800294	Henry	Sunset Park
1800393	1800393	Henry	Dietrich Memorial 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.

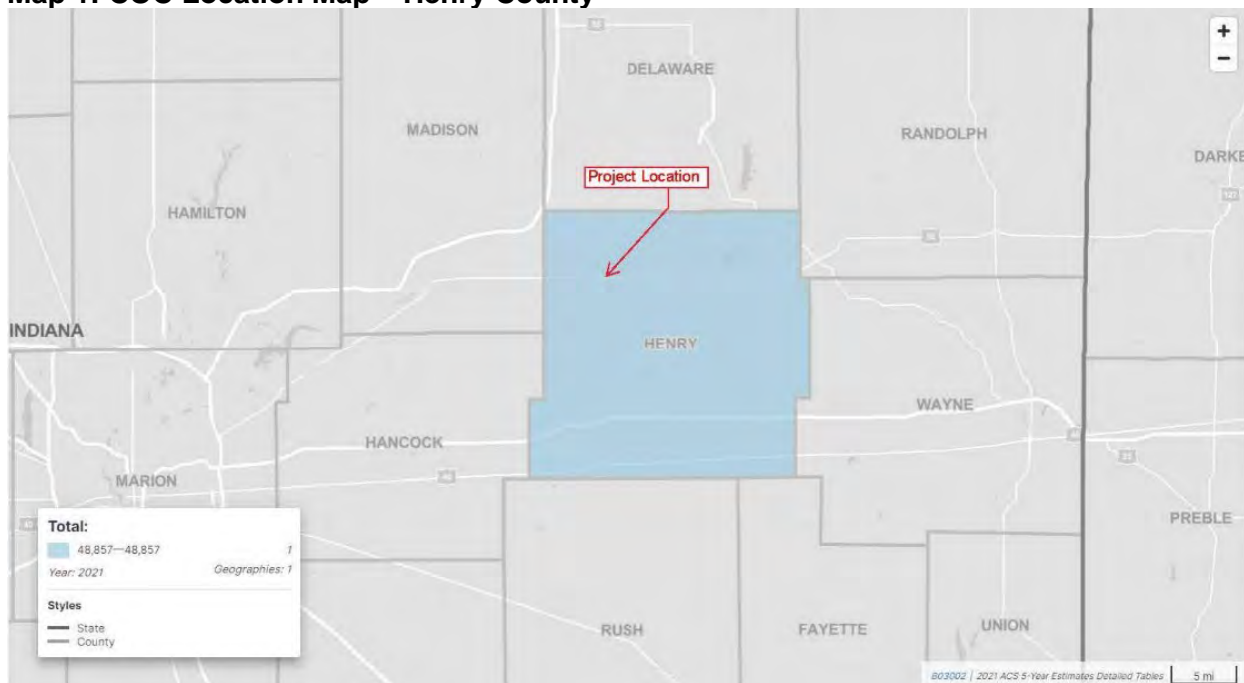
Table: ACSDT5Y2021.B03002

	Henry County, Indiana	Census Tract 9758, Henry County, Indiana
Label	Estimate	Estimate
Total:	48,857	4,719
Not Hispanic or Latino:	47,879	4,610
White alone	45,435	4,467
Black or African American alone	1,156	3
American Indian and Alaska Native alone	69	0
Asian alone	154	38
Native Hawaiian and Other Pacific Islander alone	0	0
Some other race alone	74	6
Two or more races:	991	96
Two races including Some other race	117	17
Two races excluding Some other race, and three or more races	874	79
Hispanic or Latino:	978	109
White alone	471	22
Black or African American alone	42	0
American Indian and Alaska Native alone	46	0
Asian alone	0	0
Native Hawaiian and Other Pacific Islander alone	0	0
Some other race alone	234	69
Two or more races:	185	18
Two races including Some other race	133	9
Two races excluding Some other race, and three or more races	52	9

Table: ACSDT5Y2021.B17001

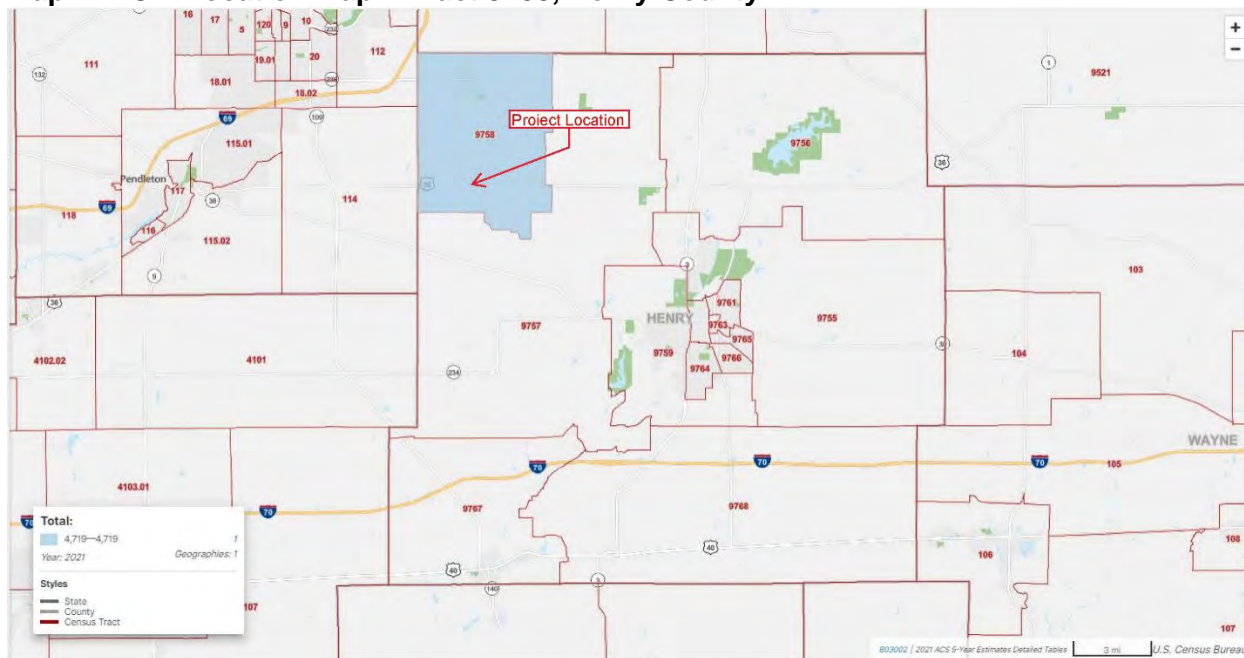
	Henry County, Indiana	Census Tract 9758, Henry County, Indiana
Label	Estimate	Estimate
Total:	45,410	4,646
Income in the past 12 months below poverty level:	6,199	352
Male:	2,836	143
Under 5 years	365	52
5 years	19	0
6 to 11 years	356	16
12 to 14 years	206	9
15 years	43	0
16 and 17 years	86	0
18 to 24 years	260	7
25 to 34 years	207	14
35 to 44 years	440	0
45 to 54 years	383	15
55 to 64 years	266	14
65 to 74 years	125	11
75 years and over	80	5
Female:	3,363	209
Under 5 years	252	20
5 years	93	0
6 to 11 years	318	4
12 to 14 years	230	39
15 years	114	7
16 and 17 years	90	0
18 to 24 years	322	10
25 to 34 years	483	37
35 to 44 years	317	18
45 to 54 years	377	15
55 to 64 years	324	19
65 to 74 years	298	29
75 years and over	145	11
Income in the past 12 months at or above poverty level:	39,211	4,294
Male:	19,811	2,244
Under 5 years	888	92
5 years	251	17
6 to 11 years	1,409	161
12 to 14 years	620	53
15 years	298	41
16 and 17 years	556	67
18 to 24 years	1,801	164
25 to 34 years	2,708	412
35 to 44 years	2,147	232
45 to 54 years	2,657	336
55 to 64 years	2,847	323
65 to 74 years	2,202	204
75 years and over	1,427	142
Female:	19,400	2,050
Under 5 years	911	100
5 years	197	0
6 to 11 years	1,274	152
12 to 14 years	760	31
15 years	245	0
16 and 17 years	461	101
18 to 24 years	1,242	134
25 to 34 years	2,097	290
35 to 44 years	2,296	222
45 to 54 years	2,609	308
55 to 64 years	3,043	306
65 to 74 years	2,387	268
75 years and over	1,878	138

Map 1: COC Location Map – Henry County



Source: US Census Bureau Maps, accessed October 31, 2023

Map 2: AC-1 Location Map – Tract 9758, Henry County



Source: US Census Bureau Maps, accessed October 31, 2023

Census Table	Census Table Line Item	COC	AC-1
		Henry County	Census Tract 9758, Henry County
Low-Income			
B17001	Pop, for whom Poverty Status Determined: Total	45,410	4,646
B17001	Pop, for whom Poverty Status Determined: Income past 12 mos below poverty level	6,199	352
	<i>% Low-Income</i>	14	8
	<i>125 % COC</i>	17	9
	<i>Potential Low-Income EJ Impact?</i>		No
			No
Minority			
B03002	Total Population: Total	48,857	4,719
B03002	Total Population - Not Hispanic or Latino: White Alone	45,435	4,467
	<i>Number Non-White/Minority</i>	3,422	252
	<i>% Non-White/Minority</i>	7	5
	<i>125 % COC</i>	9	7
	<i>Potential Minority EJ Impact?</i>		No
			No