

Indiana Department of Transportation

County Elkhart

Route C.R. 40

Des. No. 1702848

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

Road No./County:

County Road (C.R.) 40 / Elkhart County

Designation Number:

1702848

Project Description/Termini:

Road Reconstruction on C.R. 40 from State Road (S.R.) 19 to C.R. 7

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

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

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

Approval

ESM Signature

Date

ES Signature

Date

FHWA Signature

Date

Release for Public Involvement

N/A

ESM Initials

Date

REB

ES Initials

11-30-2020

Date

Certification of Public Involvement

Office of Public Involvement

Date

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

INDOT ES/District Env.

Reviewer Signature: _____

Date: _____

Name and Organization of CE/EA Preparer: Christopher J. Jeter, PE – Lawson-Fisher Associates P.C.

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Project name:

C.R. 40 Road Reconstruction

Date:

November 30, 2020

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Part I - PUBLIC INVOLVEMENT

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

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

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

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

Remarks:

Notice of Entry letters were mailed to potentially affected property owners near the project area on December 21, 2018 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page 1.

At project inception, Elkhart County received letters from the Old Order Horse and Buggy Community of Wakarusa, Indiana (dated January 4, 2018), the Town of Wakarusa (dated January 5, 2018), and the Wakarusa Chamber of Commerce (dated January 8, 2018) providing favorable recommendations for the construction of horse and buggy lanes along C.R. 40 between S.R. 19 and C.R. 7. All three (3) entities expressed a desire for the project to balance the use of the corridor between motorized and non-motorized vehicles. Copies of the letters are included in Appendix G, page 2 to Appendix G, page 4.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Public Involvement Manual* which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, 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

Will the project involve substantial controversy concerning community and/or natural resource impacts?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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Remarks:

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

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

Sponsor of the Project: Elkhart County, Indiana INDOT District: Fort Wayne
Local Name of the Facility: C.R. 40

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

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

PURPOSE AND NEED:

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

Need

The primary need for this project is to reduce crashes resulting from the relative speed differences between motorized vehicles and non-motorized modes of transportation (primarily Amish community horse and buggy and bicyclists) using the corridor. The project is also being driven by the need to provide adequate intersection site distance for a passenger car or a single-unit truck making a left-turn movement from C.R. 7 onto C.R. 40 or a crossing/right-turn movement from C.R. 7 (existing intersection sight distance is approximately 400 ft for a passenger car and a single-unit truck).

Crash data was provided and analyzed across four years for the date range of January 2015 through December 2018. During this time, there were 21 crashes involving 34 vehicles within the project limits. These crashes consisted of rear end, right angle, head on, run off road, and same direction sideswipe type crashes. There were four (4) injuries and no fatalities. Of the 21 crashes, three (3) accidents were caused by avoidance of horse and buggy or bicyclists. Most crashes occurred at the intersection of C.R. 7 and C.R. 40 and were caused by intersection sight distance issues for vehicles traveling westbound on C.R. 40. Other accidents were caused by distracted driving or weather related.

Purpose

The project purpose is to provide a safer roadway corridor for all users (motorized and non-motorized modes of transportation) by improving the roadway section width with increased shoulder widths to provide adequate separation of motorized and nonmotorized traffic for reducing the crash rate. The project will also make improvements and provide adequate intersection site distance for a passenger car or a single-unit truck making a left-turn movement from C.R. 7 onto C.R. 40 (730 ft for a passenger car and 890 ft for a single-unit truck) or a crossing/right-turn movement from C.R. 7 (530 ft for a passenger car and 890 ft for a single-unit truck). This improvement shall in turn also reduce the crash rate at the C.R. 40 and C.R. 7 intersection.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Elkhart Municipality: Elkhart County, Indiana

Limits of Proposed Work: C.R. 40 from east approach of S.R. 19 to C.R. 7

Total Work Length: 0.884 Mile(s) Total Work Area: 7.96 Acre(s)

This is page 3 of 28 Project name: C.R. 40 Road Reconstruction Date: November 30, 2020

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

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

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

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

The project is located in Sections 29, 30, 31, and 32, Township 36 North, Range 5 East, Harrison Township, Elkhart County, Indiana. See the USGS and aerial Project Location Maps (Appendix B, page 1 and Appendix B, page 2).

Existing Conditions

The C.R. 40 project area is located between S.R. 19 and C.R. 7 in Elkhart County, Indiana with the approximate latitude/longitude coordinates of 41°32'10" N and 85°59'30" W, respectively. C.R. 40 serves Elkhart County residents and is a connecting route from S.R. 19 (Wakarusa, Indiana) to S.R. 15 (Waterford Mills, Indiana and Goshen, Indiana) and the surrounding area. C.R. 40 is not part of the National Highway System nor is it part of the National Truck Network. C.R. 40 has a functional classification of a Rural Local Agency Collector.

The land surrounding the project consists largely of rural farmland with some commercial, industrial, and residential properties.

The C.R. 40 project will occur between the east approach of S.R. 19 and C.R. 7. The project will also occur on C.R. 7 from 85 ft north of C.R. 40 to 110 ft south of C.R. 40. See the attached USGS and aerial Project Location Maps (Appendix B, page 1 and Appendix B, page 2). Within the project limits, C.R. 40 is a two-lane rural local agency collector with no paved shoulders (1 ft usable shoulder width). The existing total asphalt pavement width, within the proposed project area, for C.R. 40 is 22 ft, with each travel lane being 11 ft wide. C.R. 40 at C.R. 7 is a 2-way stop intersection with C.R. 7 as the secondary road requiring vehicles to stop. Each leg has a single approach lane.

The Annual Average Daily Traffic (AADT) along C.R. 40 is 3,794 Vehicles Per Day (VPD) (2018). The AADT along C.R. 40 for the design year (2042) is 5,251 VPD with 14.6% commercial truck traffic. The posted speed limit on C.R. 40 is 35 miles per hour (mph) within the town limits of Wakarusa and 55 mph outside the Wakarusa town limits.

The C.R. 40 corridor is utilized by motorized and non-motorized modes of transportation. Due to the relative speed differences between these varying modes of transportation, crashes have occurred along the C.R. 40 corridor and at the C.R. 40/C.R. 7 intersection that have resulted in injuries to the corridor users. See the Purpose and Need section for further detail related to crash data along the C.R. 40 corridor.

Preferred Alternative

The detailed plans for the preferred alternative are attached in Appendix B, page 13 to Appendix B, page 44.

The improvements are proposed along C.R. 40 from the east approach to S.R. 19 to C.R. 7 for a distance of approximately 0.884 mile. Within the project limits, the typical section includes one (1) 12 ft wide travel lane in each direction with 8 ft wide paved shoulders (10 ft wide usable). The typical section for C.R. 7 includes one (1) 11 ft wide travel lane in each direction with 2 ft wide paved shoulders.

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The existing C.R. 40 roadway centerline will be shifted 9 ft to the south and the total pavement width will be widened from 22 ft to 40 ft. This additional pavement width, accomplished via shoulder widening, will provide non-motorized vehicles a riding surface separate from the through lanes occupied by the motoring public. The pavement section for the relocated eastbound travel lane will consist of 7.5 inches of Hot Mix Asphalt (HMA) pavement (1.5 inches of HMA Surface on 3 inches of HMA Intermediate on 3 inches of HMA Base). The pavement section for the relocated westbound travel lane will consist of 7.5 inches of HMA pavement (1.5 inches of HMA Surface on 3 inches of HMA Intermediate on 3 inches of HMA Base) over a width of 5 ft and will consist of a pavement section of 4.5 inches of HMA pavement (1.5 inches of HMA Surface on 3 inches of HMA Intermediate) for the remaining travel lane width. The centerline offset is to allow the proposed north side paved shoulder edge to line up with the existing pavement edge. This eliminates the need of relocating the utility along the north side of C.R. 40. This alternative would improve safety by providing a riding surface for non-motorized modes of transportation separate from the through lanes occupied by motorized vehicles and will minimize impacts to utilities along the corridor.

Outside of the detour that will be required to replace select crossing culverts beneath C.R. 40 (see the Design Criteria for Bridges section), the roadway improvements are anticipated to be constructed in phases with one (1) C.R. 40 travel lane in one (1) direction remaining open at all times and the opposing travel lane being detoured. The detour will require eastbound C.R. 40 traffic to utilize S.R. 19, C.R. 38, and C.R. 9. The detour will require westbound C.R. 40 traffic to utilize C.R. 9, C.R. 38, and S.R. 19. See the Maintenance of Traffic (MOT) During Construction section for additional information. Access to all local residences and properties shall be maintained at all times.

The preferred alternative will impact a jurisdictional stream and a jurisdictional palustrine emergent wetland. See the Streams and Wetlands sections for additional information related to the efforts undertaken to minimize impacts to these jurisdictional resources. A Rule 5 Erosion Control Plan is anticipated.

The project, under the preferred alternative, is expected to require approximately 4.23 acres of additional permanent right-of-way, 0.19 acre of temporary right-of-way, and 5.14 acres of reacquired right-of-way.

The C.R. 40 corridor contains electric overhead facilities and the following underground facilities: water, gas, fiber optic, and storm and sanitary sewer. The overhead electric poles and underground utilities on the north side are expected to remain in place. There are underground communication lines, overhead telephone lines with poles, and pedestals on the south side that will need to be relocated.

This alternative meets the intended purpose and need by addressing the conflict between motorized and non-motorized modes of transportation along the corridor and addressing the intersection site distance requirements at the C.R. 40 / C.R. 7 intersection. The preferred alternative is consistent with available resources. This project has independent utility since it meets the purpose and need of the project without being connected to any other actions in the area and has logical termini because the limits are confined to those required to meet the geometric requirements for the proposed roadway widening.

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OTHER ALTERNATIVES CONSIDERED:

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

The following alternatives were also considered:

Alternative 1: Widen Pavement on Both Sides of C.R. 40 Corridor – This alternative would widen the C.R. 40 pavement width from 22 ft to 40 ft and be centered on the current roadway centerline. Most utilities through this corridor are located on the north side of C.R. 40 and would be impacted with the roadway widening to the north. This alternative meets the purpose and need, but was not selected as it would result in additional utility relocations and right-of-way acquisition.

Alternative 2: Do Nothing – The No-Build alternative was considered. The alternative was not considered feasible, prudent, or practicable as it would not address the safety issues for all roadway users nor improve the intersection sight distance issues at C.R. 7. This alternative does not meet the need nor achieve the purpose of the project and therefore was not selected.

The Do Nothing Alternative is not feasible, prudent or practicable because (Mark all that apply):

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe)

X
X

ROADWAY CHARACTER:

Functional Classification: C.R. 40 - Local Agency Collector
 Current ADT: 3,794 VPD (2018) Design Year ADT: 5,251 VPD (2042)
 Design Hour Volume (DHV): 554 Truck Percentage (%) 14.6
 Designed Speed (mph): 35 and 55 Legal Speed (mph): 35 and 55

Existing

Proposed

Number of Lanes:	2		2	
Type of Lanes:	Travel		Travel	
Pavement Width:	11	ft.	12	ft.
Shoulder Width:	1 (usable) 0 (paved)	ft.	10 (usable) 8 (paved)	ft.
Median Width:	0	ft.	0	ft.
Sidewalk Width:	0	ft.	0	ft.

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

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

Remarks:

Outside of the detour that will be required to replace select crossing culverts beneath C.R. 40, the MOT for the project will require one (1) C.R. 40 lane maintained in one (1) direction and the other C.R. 40 lane detoured. Eastbound traffic shall be detoured utilizing S.R. 19, C.R. 38, and C.R. 9 (approximately 2.0 miles of additional length; totaling 4.0 miles in length). Westbound traffic shall be detoured utilizing C.R. 9, C.R. 38, and C.R. 9 (approximately 2.0 miles of additional length; totaling 4.0 miles in length).

The following traffic maintenance procedure will be implemented during construction.

Advance Phase

Construction shall include identified drainage structure installation along the C.R. 40 corridor. Traffic shall be detoured from C.R. 40 utilizing C.R. 9, C.R. 38, and S.R. 19.

Phase I

Construction activities shall include roadway reconstruction of the eastbound travel lane and shoulder, ditch grading, and placement of seeding. Eastbound traffic shall be detoured.

Phase II

Construction activities shall include mill and overlay of the existing westbound travel lane and shoulder, full depth shoulder patching, and placement of seeding. Westbound traffic shall be detoured.

Outside of the detour that will be required to replace select C.R. 40 crossing culverts, C.R. 40 shall remain open at all times with one (1) lane maintained in one (1) direction and the other lane detoured. Emergency vehicles and postal access to local residences shall be maintained at all times except during private access drive reconstruction. Property owners shall be notified in writing at least two days prior to beginning driveway work. Contractor shall notify local fire department, police, ambulance services, and schools of the work schedule and temporary traffic layouts.

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

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ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 400,560.00 (2019) Right-of-Way: \$ 86,145.00 (2021) Construction: \$ 1,501,810.00 (2023)

Anticipated Start Date of Construction: Spring 2023

Date project incorporated into STIP July 2, 2019

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

If yes,

Name of MPO Michiana Area Council of Governments (MACOG)

Location of Project in TIP 2020-2024 MACOG TIP, Page 38 (Appendix H, page 2)

Date of incorporation by reference into the STIP June 27, 2019

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.26	0.10
Commercial	-	-
Agricultural	3.79	0.02
Forest	-	-
Wetlands	-	-
Other: Industrial	0.14	0.07
Other: Church	0.04	-
TOTAL	4.23	0.19

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

Remarks:

The apparent existing full right-of-way (ROW) width along C.R. 40 is 40 ft and is 30 ft along C.R. 7. The proposed full ROW width along C.R. 40 is 75 ft and is 50 ft along C.R. 7.

The project requires approximately 4.23 acres of permanent right-of-way (ROW). Approximately 0.26 acre, 3.79 acres, 0.14 acre, and 0.04 acre of permanent ROW will be acquired from residential, agricultural, industrial, and church properties, respectively. Permanent ROW is being acquired from two (2) residential parcels, nine (9) agricultural parcels, two (2) industrial parcels, and one (1) church parcel. The two (2) residential parcels are located along the south side of the C.R. 40 corridor, with one (1) parcel located approximately 700 ft east of the S.R. 19 / C.R. 40 intersection and one (1) parcel located approximately 1,300 ft west of the C.R. 7 / C.R. 40 intersection. Eight (8) of the nine (9) agricultural parcels are located along the south side of the C.R. 40 corridor with the ninth agricultural parcel located on the north side of the C.R. 40 corridor approximately 1,900 ft west of the C.R. 7 / C.R. 40 intersection. The two (2) industrial parcels are located towards western limits of the project on both the north and south sides of the C.R. 40 corridor. The church parcel is located in the northeast quadrant of the C.R. 7 / C.R. 40 intersection. The project also

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requires approximately 0.19 acre of temporary ROW from one (1) industrial parcel, one (1) residential parcel, and one (1) agricultural parcel (all parcels located on the south side of the C.R. 40 corridor).

The project requires the reacquisition of approximately 5.14 acres of ROW from four (4) residential parcels, ten (10) agricultural parcels, five (5) industrial parcels, and one (1) church parcel. The parcels are located along the entire C.R. 40 corridor.

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

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

SECTION A – ECOLOGICAL RESOURCES

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

Remarks:

Based on a desktop review, a site visit on August 20, 2019 by Lawson-Fisher Associates P.C. (LFA), the aerial map of the project area (Appendix B, page 2), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page 9), there are four (4) rivers and streams segments located within the 0.5 mile search radius. Per the approved RFI, there are no streams, rivers, watercourses, or jurisdictional ditches present within or adjacent to the project area. During the site visit conducted by Metric Environmental, LLC (Metric) on September 12, 2019, one (1) jurisdictional stream was identified within the project limits. Approximately 16.8 linear feet of the existing jurisdictional stream (Unnamed Tributary (UNT) to Anglemyer Loucke Ditch) will be permanently impacted by the proposed construction activities. The total impact length is based on the placement of Class I riprap downstream of the proposed 42 inch diameter small structure. Approximately 6 linear feet of UNT to Anglemyer Loucke Ditch will be temporarily impacted by the placement of a cofferdam downstream of the proposed small structure. Impacts are not expected to require mitigation but will be determined during permitting. A Section 401/404 Regional General Permit (RGP) is anticipated to be required.

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

Waters Report
 A *Waters of the U.S. Determination / Wetland Delineation Report* was completed for the project on December 18, 2019. Please refer to Appendix F, page 2 to Appendix F, page 51 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that one (1) jurisdictional stream, UNT to Anglemyer Loucke Ditch, was within the project study limits during the field reconnaissance. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Early Coordination
 Early coordination letters were sent on July 3, 2019 to Indiana Department of Natural Resources (IDNR) – Division of Fish and Wildlife (DFW), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), and Elkhart County Surveyor’s Office Drainage Technician (Appendix C, page 1 to Appendix C, page 2). IDNR-DFW, USFWS, and Elkhart County Surveyor’s Office Drainage Technician responded to the early coordination letter.

IDNR-DFW responded on August 7, 2019 and provided recommendations for avoiding and minimizing impacts to fish, wildlife, and botanical resources to the greatest extent possible (Appendix C, page 10 to Appendix C, page 11). All applicable IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

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USFWS responded on July 9, 2019 and indicated that because the proposed project will have minor impacts on natural resources, and no Federally endangered species are known to be present, the USFWS will not be providing a comment letter (Appendix C, page 20).

Elkhart County Surveyor's Office Drainage Technician responded on July 10, 2019 and indicated that no County Regulated Drains will be impacted by the project but several private tiles cross C.R. 40 (Appendix C, page 21). Further coordination has occurred with the Elkhart County Surveyor's Office Drainage Technician to ensure that all known private tiles are located within the project limits.

Other Surface Waters	<u>Presence</u>	<u>Impacts</u>	
		<u>Yes</u>	<u>No</u>
Reservoirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lakes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Farm Ponds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detention Basins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Management Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Remarks: Based on a desktop review, a site visit on August 20, 2019 by LFA, the aerial map of the project area (Appendix B, page 2), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page 9), there are eight (8) lakes located within the 0.5 mile search radius. There are no lakes present within or adjacent to the project area. Therefore, no impacts are expected.

Waters Report
A Waters of the U.S. Determination / Wetland Delineation Report was completed for the project on December 18, 2019. Please refer to Appendix F, page 2 to Appendix F, page 51 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no reservoirs, lakes, farm ponds, detention basins, or storm water management facilities were within the project study limits during the field reconnaissance. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Early Coordination
 Early coordination letters were sent on July 3, 2019 to IDNR – DFW, USACE, USFWS, and Elkhart County Surveyor's Office Drainage Technician (Appendix C, page 1 to Appendix C, page 2). IDNR-DFW, USFWS, and Elkhart County Surveyor's Office Drainage Technician responded to the early coordination letter.

IDNR-DFW responded on August 7, 2019 and provided recommendations for avoiding and minimizing impacts to fish, wildlife, and botanical resources to the greatest extent possible (Appendix C, page 10 to Appendix C, page 11). All applicable IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

USFWS responded on July 9, 2019 and indicated that because the proposed project will have minor impacts on natural resources, and no Federally endangered species are known to be present, the USFWS will not be providing a comment letter (Appendix C, page 20).

Elkhart County Surveyor's Office Drainage Technician responded on July 10, 2019 and indicated that no County Regulated Drains will be impacted by the project but several private tiles cross C.R. 40 (Appendix C, page 21). Further coordination has occurred with the Elkhart County Surveyor's Office Drainage Technician to ensure that all known private tiles are located within the project limits.

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Presence **Impacts**

Yes **No**

Wetlands X X

Total wetland area: 0.053 acre(s) Total wetland area impacted: 0.039 acre(s)

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

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments
A	Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A)	0.053	0.039	Total size of wetland is from Wetland and Waters Report Study Area. Wetland impact area is within proposed construction limits.

	<u>Documentation</u>	<u>ES Approval Dates</u>
Wetlands (Mark all that apply)		
Wetland Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/> N/A
Wetland Delineation	<input checked="" type="checkbox"/>	<input type="checkbox"/> N/A
USACE Isolated Waters Determination	<input type="checkbox"/>	<input type="checkbox"/>
Mitigation Plan	<input type="checkbox"/>	<input type="checkbox"/>

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.

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

Remarks: Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on August 20, 2019 by LFA, the USGS topographic map (Appendix B, page 1), and the RFI report (Appendix E, page 9), there are fifteen (15) National Wetland Inventory (NWI) – Wetlands located within the 0.5 mile search radius. Per the approved RFI, there are no wetlands present within or adjacent to the project area. During the site visit conducted by Metric on September 12, 2019, one (1) jurisdictional wetland was identified within the project limits. Wetland A, totaling 0.053 acre within the project study limits, is located south of C.R. 40 within an agricultural drainage ditch. This wetland was classified as Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A). Approximately 0.039 acre of permanent impact to Wetland A will be necessary due to grading activities associated with the 4 ft wide bottom roadside drainage ditch and the replacement of an existing 36 inch diameter crossing culvert with a 42 inch diameter crossing culvert. Approximately 0.0007 acre of Wetland A will be temporarily impacted by the placement of a cofferdam and sump hole for temporary bypass pumping. Avoidance of Wetland A is not practicable due to the location of the existing small structure adjacent to the wetland and the need to perpetuate roadside drainage. Mitigation is not anticipated and will be determined during permitting. A Section 401/404 Regional General Permit (RGP) is anticipated to be required.

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Waters Report (if applicable)

A *Waters of the U.S. Determination / Wetland Delineation Report* was completed for the project on December 18, 2019. Please refer to Appendix F, page 2 to Appendix F, page 51 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that one (1) jurisdictional wetland was within the project study limits during the field reconnaissance. The USACE makes all final determinations regarding jurisdiction.

Early Coordination

Early coordination letters were sent to on July 3, 2019 to USACE and USFWS (Appendix C, page 1 to Appendix C, page 2). USACE did not respond to the early coordination letter.

USFWS responded on July 9, 2019 and indicated that because the proposed project will have minor impacts on natural resources and no Federally endangered species are known to be present, the USFWS will not be providing a comment letter (Appendix C, page 20).

	Presence	Impacts	
Terrestrial Habitat		Yes	No
Unique or High Quality Habitat	X	X	

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

Remarks: Based on a desktop review, a site visit on August 20, 2019 by LFA, and the aerial map of the project area (Appendix B, page 2), there are agricultural crop fields, pasture fields, residential lawns, and commercial lawns adjacent to the C.R. 40 corridor. Tree removal is anticipated in select areas along the C.R. 40 corridor. Approximately 0.63 acre of trees are proposed for removal along the corridor. Approximately 1.1 acres of terrestrial habitat (grass and brush) impact will occur along the corridor. All tree removal shall occur between October 1 and March 31. Avoiding impacts to the trees is not feasible as this would result in the project not meeting the purpose and need. No mitigation for removal of the trees is anticipated. The remaining trees adjacent to the C.R. 40 corridor will not be trimmed or removed.

Early Coordination

Early coordination letters were sent on July 3, 2019 to IDNR – DFW and USFWS (Appendix C, page 1 to Appendix C, page 2).

IDNR-DFW responded on August 7, 2019 with recommendations regarding revegetating disturbed areas upon completion of the project and dates when tree clearing should occur (Appendix C, page 10 to Appendix C, page 11). All applicable IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

USFWS responded on July 9, 2019 and indicated that because the proposed project will have minor impacts on natural resources and no Federally endangered species are known to be present, the USFWS will not be providing a comment letter (Appendix C, page 20).

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

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?
 Are karst features located within or adjacent to the footprint of the proposed project?
 If yes, will the project impact any of these karst features?

	Yes	No
		X
		X

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

Remarks: Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page 1) and the RFI report (Appendix E, page 7), there are no karst features identified within or adjacent to the project area. In the early coordination response, the Indiana Geological Survey (IGS) did not indicate that karst features exist in the project area (Appendix C, page 7 to Appendix C, page 9). As outlined in the IGS response, there are no active or abandoned mineral resources extraction sites documented in the area and the surrounding area has a low potential as a sand and gravel resource and a moderate potential as a resource for bedrock. IGS also indicated there is a moderate potential for liquefaction (saturated or partially saturated soil losing strength in response to load; material behaves like a liquid instead of a solid) of the soils in the area in response to an applied stress. Response from IGS has been communicated with the designer on October 28, 2020. No impacts are expected.

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

Is Section 7 formal consultation required for this action?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
--	-------------------------------------	------------------------------------

Remarks: Based on a desktop review and the RFI report (Appendix E, page 5) completed by Lawson-Fisher Associates P.C. (LFA) on June 26, 2019, the IDNR Elkhart County Endangered, Threatened and Rare (ETR) Species List has been checked and is included in Appendix E, page 11 to Appendix E, page 14. The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated August 7, 2019 (Appendix C, page 10 to Appendix C, page 11), 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.

Bats, Programmatic Informal Consultation – Not Likely to Adversely Affect

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, page 22 to Appendix C, page 27). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on July 30, 2020, and based on the responses provided, the project was found to "may affect, but is not likely to adversely affect (NLAA)" the Indiana bat and/or the NLEB. INDOT reviewed and verified the effect finding on July 31, 2020 and requested USFWS's review of the finding (Appendix C, page 28 to Appendix C, page 42). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

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

SECTION B – OTHER RESOURCES

Drinking Water Resources

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

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

If a SSA is present, answer the following:

	Yes	No
Is the Project in the St. Joseph Aquifer System?	<input type="checkbox"/>	<input type="checkbox"/>
Is the FHWA/EPA SSA MOU Applicable?	<input type="checkbox"/>	<input type="checkbox"/>
Initial Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>
Detailed Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>

Remarks:

Sole Source Aquifer

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

Wellhead Protection Area and Source Water

The Indiana Department of Environmental Management’s Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on September 23, 2020 by LFA. This project is not located within a Wellhead Protection Area or Source Water Area. In an early coordination letter dated July 9, 2019, IDEM stated the project is not located within a wellhead area (Appendix C, page 19). No impacts are expected.

Water Wells

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on September 21, 2020 by LFA. The nearest well is located south west of the C.R. 40/C.R. 7 intersection. The feature will not be affected because it is located outside of the project limits and the proposed right-of-way limits. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

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Urban Area Boundary

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by LFA on July 2, 2019 and the RFI report, this project is located in an Urban Area Boundary (UAB) location. An early coordination letter was sent on July 2, 2019 to the Elkhart County MS4 Coordinator. The MS4 coordinator did not respond within the 30-day time frame.

Public Water System

Based on a desktop review, a site visit on August 20, 2019 by LFA, and the aerial map of the project area (Appendix B, page 2), this project is located where there is a public water system (Town of Wakarusa). The public water system will not be affected because the Town of Wakarusa water main is located outside of the construction limits. An early coordination letter was sent on February 6, 2019, to the Town of Wakarusa. A copy of the general layout of the Town’s utility system along C.R. 40 east of S.R. 19 was provided on February 8, 2019 (Appendix C, page 43 to Appendix, page 44). Personnel from the Town of Wakarusa will be contacted should any issues arise that could potentially impact water quality during the course of the project, which is included as a firm commitment in the *Environmental Commitments* section of this CE document.

Flood Plains

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

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

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

Remarks:

Based on the RFI Report (Appendix E, page 9), there are eleven (11) Floodplain – Digital Flood Insurance Rate Map (DFIRM) segments located within the 0.5 mile search radius. The nearest, Zone AE DFIRM, is located 0.10 mile southwest of the C.R. 40 and S.R. 19 intersection. The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmaps.dnr.in.gov/appsphp/fdms/>) was accessed on August 25, 2020 by LFA. This project is not located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 1). Therefore, it does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. No impacts are expected.

Farmland

- Agricultural Lands
- Prime Farmland (per NRCS)

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

Total Points (from Section VII of CPA-106/AD-1006* 164
**If 160 or greater, see CE Manual for guidance.*

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

Remarks:

Based on a desktop review, a site visit on August 20, 2019 by LFA, and the aerial map of the project area (Appendix B, page 2), the project will convert 7.76 acres of farmland as defined by the Farmland Protection Policy Act. Approximately 3.79 acres, 3.94 acres, and 0.03 acre of farmland will be impacted by permanent R/W acquisition, R/W reacquisition, and temporary R/W acquisition, respectively. An early coordination letter was sent on July 3, 2019 to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 164 on the *NRCS-CPA-106 Form* (Appendix C, page 5). NRCS’s threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this

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project score is more than the threshold, a significant loss of prime, unique, statewide, or local important farmland will result from this project. NRCS has responded indicating that they understand the need to have the project in its current location and they do not approve or disapprove of the specific project details or impacts (Appendix C, page 3). The features will be affected because of the corridor's proximity to the adjacent prime farmland and the project's need to reduce conflict resulting from the relative speed differences between motorized and non-motorized modes of transportation using the corridor. Avoidance alternatives would not be practicable as the preferred alternative allows for the project to address the safety issues for all roadway users.

SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance	A	4	October 2, 2019	
		9		
	B	3		
		9		

**Eligible and/or Listed
Resource Present**

Results of Research

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

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

**Documentation
Prepared**

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report	<input type="checkbox"/>		
Historic Property Report	<input type="checkbox"/>		
Archaeological Records Check/ Review	<input type="checkbox"/>		
Archaeological Phase Ia Survey Report	X	October 2, 2019	N/A
Archaeological Phase Ic Survey Report	<input type="checkbox"/>		
Archaeological Phase II Investigation Report	<input type="checkbox"/>		
Archaeological Phase III Data Recovery	<input type="checkbox"/>		
APE, Eligibility and Effect Determination	<input type="checkbox"/>		
800.11 Documentation	<input type="checkbox"/>		

Memorandum of Agreement (MOA)

MOA Signature Dates (List all signatories)

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

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Remarks:

Minor Project PA Category A and B projects

On October 2, 2019 the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category A, Type 4 and 9 and Category B, Type 3 and 9 under the Minor Projects Programmatic Agreement, (Appendix D, page 1 to Appendix D, page 4). The MPPA description of the type of work covered by each category is as follows:

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

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

Category B-3: Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the highlighted conditions listed on Appendix D, page 3.

Category B-9: Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the highlighted conditions listed on Appendix D, page 3 to Appendix D, page 4.

Metric prepared an Indiana Short Report, Phase I Archaeological Survey on September 23, 2019 (Appendix D, page 5 through Appendix D, page 8). The records check identified no previously recorded sites within or adjacent to the project area and determined that the project area had not been previously surveyed. No archaeological sites were identified by the field reconnaissance. The Old German Church Cemetery was noted as being 193.6 ft northeast of the C.R. 40/C.R. 7 intersection project area. While the project takes place on the German Church Property, the cemetery will not be impacted. Since the cemetery is more than 100 ft from the project, no Cemetery Development Plan is required. INDOT Cultural Resources personnel, who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed and concurred with the evaluations and recommendations made in the report. Therefore, there are no archaeological concerns.

No further consultation is required. This completes the Section 106 process and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

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

Parks & Other Recreational Land

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

Presence

Use

Yes	No

Evaluations Prepared

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

FHWA Approval date

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Wildlife & Waterfowl Refuges

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

Presence

Use

Yes	No

Evaluations

Prepared

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

FHWA
Approval date

--

Historic Properties

Sites eligible and/or listed on the NRHP

Presence

--

Use

Yes	No

Evaluations

Prepared

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

FHWA
Approval date

--

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

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

Remarks:

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, a site visit on August 20, 2019 by LFA, the aerial map of the project area (Appendix B, page 2), and the RFI report site map (Appendix E, page 8), there are no 4(f) resources located within the 0.5 mile search radius. There are no Section 4(f) resources within or adjacent to the project area. Therefore, no use is expected.

Section 6(f) Involvement

Presence

--

Use

Yes	No

Section 6(f) Property

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

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

A review of 6(f) properties on the INDOT Environmental Policy website at <https://www.in.gov/indot/2523.htm> revealed a total of twenty (20) properties in Elkhart County (Appendix I, page 1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

	Yes	No
Is the project in an air quality non-attainment or maintenance area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, then:		
Is the project in the most current MPO TIP?	<input type="checkbox"/>	<input type="checkbox"/>
Is the project exempt from conformity?	<input type="checkbox"/>	<input type="checkbox"/>
If the project is NOT exempt from conformity, then:		
Is the project in the Transportation Plan (TP)?	<input type="checkbox"/>	<input type="checkbox"/>
Is a hot spot analysis required (CO/PM)?	<input type="checkbox"/>	<input type="checkbox"/>

Level of MSAT Analysis required?

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

Remarks: This project is included in the Fiscal Year (FY) 2020-2024 Michiana Area Council of Governments (MACOG) Transportation Improvement Program (TIP) and the 2020-2024 Statewide Transportation Improvement Program (STIP) (Appendix H, page 1 through Appendix H, page 2).

This project is located in Elkhart County, which is currently in attainment for all criteria pollutants according to the IDEM Current Nonattainment Areas Figure (https://www.in.gov/idem/airquality/files/nonattainment_areas_map.pdf). Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

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

SECTION F - NOISE

Noise **Yes** **No**

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

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	No	Yes/ Date
ES Review of Noise Analysis	X	

Remarks: This project is a Type III project. In accordance with 23 CFR 772 and the current *Indiana Department of Transportation Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

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

Yes	No
X	
	X
	X
	X
X	
X	

Remarks: Access to all properties within the project limits will be available at all times. The project will not substantially impact the local economy or local tax base, property values, public facilities, community centers, or other resources important to the community. This project will create a safer local transportation facility.

This project is not expected to have any substantial community cohesion impacts. Based on a review of the Indiana Festivals website (<https://www.indianafestivals.org/>) by LFA on September 18, 2020, the Wakarusa Maple Syrup Festival is scheduled to occur annually in April in Wakarusa. This community event should not be substantially impacted by this project.

Elkhart County has an American with Disabilities Act Transition Plan (dated 2012). The project does not include pedestrian facilities within the right-of-way (curb ramps, sidewalks, shared-use path, etc.). The project will comply with the Transition Plan in that the proposed project will not include any physical obstacles limiting the accessibility of facilities to individuals with disabilities.

Indirect and Cumulative Impacts

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

Yes	No
	X

Remarks: Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

The proposed project will provide a safer roadway corridor for all users (motorized and non-motorized modes of transportation) by reducing the crash rate. The project will also provide adequate intersection site distance for passenger cars and single-unit trucks making left-turn movements, right-turn movements, and crossing movements from C.R. 7 onto or across C.R. 40. The proposed action will not result in substantial indirect or cumulative impacts. This project will not add capacity to the roadway, nor is it intended to change the surrounding properties. The project is not expected to increase development of the surrounding

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agricultural land. Inconveniences associated with construction such as increased travel time, construction noise, and fugitive dust should be expected. These impacts will be temporary and cease upon completion of the project. No substantial economic impacts are anticipated. Temporary impacts to traffic and travel may occur.

Public Facilities & Services

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

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

Remarks:

Based on a desktop review, a site visit on August 20, 2019 by LFA, the aerial map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 8), there is one (1) Religious Facility located within 0.5 mile of the project. The German Baptist Church is adjacent to the project area. Permanent right-of-way will be acquired from the German Baptist Church property. Access to this property will be maintained during construction.

Early coordination letters were sent to on July 3, 2019 to Elkhart County Highway Department, Council, Board of Commissioners, and Sheriff; Wakarusa Town Council, Engineer, and Manager (Appendix C, page 1 to Appendix C, page 2). None of the agencies responded to the early coordination letter.

Utility Coordination has been initiated for the project. Should utilities be identified that will need to relocate their facilities, work plans regarding the relocations will be developed as utility coordination proceeds.

The project will not substantially impact the local economy or local tax base, property values, public facilities, community centers, or other resources important to the community. The project will create a safer local transportation facility.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

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

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

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

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

Remarks:

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require 4.23 acres of additional permanent right-of-way. 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 concerns 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 Harrison Township, Elkhart, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 13, Elkhart County, Indiana. 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 United States Census Bureau was obtained from the US Census Bureau Website <https://data.census.gov/> on August 19, 2020 by LFA. The data collected for minority and low-income populations within the AC are summarized in the below table.

Indiana Department of Transportation

County Elkhart

Route C.R. 40

Des. No. 1702848

Table: Minority and Low-Income Data U.S. Census Bureau 2018		
	COC – Harrison Township, Elkhart, Indiana	AC – Census Tract 13, Elkhart County, Indiana
Percent Minority	10.34%	8.46%
125% of COC	12.93%	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	11.56%	8.99%
125% of COC	14.46%	AC < 125% COC
EJ Population of Concern		No

AC, Census Tract 13, Elkhart County, Indiana has a percent minority of 8.46% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC, Census Tract 13, Elkhart County, Indiana has a percent low-income of 8.99% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain low-income populations of EJ concern.

Conclusion
The census data sheets, map, and calculations can be found in Appendix I. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

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

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

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: N/A

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

Remarks:

Utility relocation coordination has been initiated with Comcast North (cable television), Frontier Communications (telephone), Intercarrier Networks (Fiber Optic), New Paris Telephone, Inc. (telephone and fiber optic), NIPSCO (electric and gas), and Town of Wakarusa (water and sewer). Should any of these utilities need to relocate their facilities, work plans regarding the relocations will be developed as utility coordination proceeds.

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

Indiana Department of Transportation

County Elkhart

Route C.R. 40

Des. No. 1702848

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation

Phase I Environmental Site Assessment (Phase I ESA)

Phase II Environmental Site Assessment (Phase II ESA)

Design/Specifications for Remediation required?

Documentation

X

No Yes/ Date

ES Review of Investigations		9/4/2019
------------------------------------	--	----------

Include a summary of findings for each investigation.

Remarks:

Presence, with impact or potential impact

Based on a review of GIS and available public records, a RFI was completed on June 26, 2019 by LFA (Appendix E, Page 1 to Appendix E, page 14). Two (2) Underground Storage Tank (UST) sites, two (2) Voluntary Remediation Program (VRP) sites, five (5) Leaking Underground Storage (LUST) sites, seven (7) Institutional Controls sites, and two (2) National Pollution Discharge Elimination Systems (NPDES) Facilities are located within 0.5 mile of the project area, and one (1) VRP site and one (1) LUST site could affect the project area.

Voluntary Remediation Program (VRP) Site:

- Utilimaster Corporation; Virtual File Cabinet (VFC): Spartan Motors USA Incorporated (Agency ID 12158, 65906 S.R. 19, Wakarusa, Indiana 46573), is located 0.07 mile north of the C.R. 40 and S.R. 19 intersection project area. According to IDEM's VFC, via a letter dated December 3, 2013, Forest River Housing, Inc. (formerly Utilimaster Corporation) created an Environmental Restrictive Covenant (ERC) on the property on November 26, 2013. The ERC states that Utilimaster Corporation (previous owner) entered into Indiana's VRP to address releases of hazardous substances and/or petroleum ("contaminants of concern") related to the Real Estate. In a letter dated May 5, 2014 from IDEM, Utilimaster's Voluntary Remediation Completion Report was approved. Coordination with IDEM will occur.

Leaking Underground Storage (LUST) Site:

- GIS: El Roy Service; VFC: National Oil & Gas Incorporated (Agency ID 33627, 66009 S.R. 19, Wakarusa, Indiana 46573), is located 0.02 mile west of the C.R. 40 and S.R. 19 intersection project area. Petroleum impacts appear to extend into and beneath SR 19 toward the project area. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)

Nationwide Permit (NWP)

Regional General Permit (RGP)

Pre-Construction Notification (PCN)

Other

Wetland Mitigation required

Stream Mitigation required

X

This is page 25 of 28 Project name: C.R. 40 Road Reconstruction

Date: November 30, 2020

Indiana Department of Transportation

County Elkhart Route C.R. 40 Des. No. 1702848

IDEM

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

IDNR

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

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the remarks box below)

Remarks:

Permits
 As proposed, this project will require permits for work impacting a jurisdictional stream and a jurisdictional wetland. Since impacts will be less than 300 ft and 0.1 acre to the stream and wetland, respectively, a Regional General Permit Notification will be submitted to both IDEM (Section 401) and the Army Corps of Engineers (Section 404) for their approval.

The area of land disturbance will exceed 1 acre. Thus, a Rule 5 Erosion Control Permit will be required from IDEM.

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

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

SECTION J- ENVIRONMENTAL COMMITMENTS

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

Remarks:

- Firm:**
1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
 2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
 3. 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)
 4. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
 5. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)

Indiana Department of Transportation

County Elkhart Route C.R. 40 Des. No. 1702848

6. Tree Removal AMM 2: Apply time of year restrictions for tree removal (April 1 through September 30) 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 ft 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)
7. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
8. Tree Removal AMM 4: Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 mile of roosts, or **documented** foraging habitat any time of year. (USFWS)
9. Personnel from the Town of Wakarusa (James Emans; emanseng@mchsi.com; (574) 546-4685) will be contacted should any issues arise that could potentially impact water quality during the course of the project. (Town of Wakarusa, Indiana)
10. Property owners shall be notified in writing at least two days prior to beginning driveway work. (INDOT ESD and INDOT District)
11. Contractor shall notify local fire department, police, ambulance services, and schools of the work schedule and temporary traffic layouts. (INDOT ESD and INDOT District)
12. Utilimaster Corporation; Virtual File Cabinet (VFC): Spartan Motors USA Incorporated (Agency ID 12158, 65906 S.R. 19, Wakarusa, Indiana 46573), is located 0.07 mile north of the C.R. 40 and S.R. 19 intersection project area. According to IDEM's VFC, via a letter dated December 3, 2013, Forest River Housing, Inc. (formerly Utilimaster Corporation) created an Environmental Restrictive Covenant (ERC) on the property on November 26, 2013. The ERC states that Utilimaster Corporation (previous owner) entered into Indiana's VRP to address releases of hazardous substances and/or petroleum ("contaminants of concern") related to the Real Estate. In a letter dated May 5, 2014 from IDEM, Utilimaster's Voluntary Remediation Completion Report was approved. Coordination with IDEM will occur. (INDOT Site Assessment and Management)
13. GIS: El Roy Service; VFC: National Oil & Gas Incorporated (Agency ID 33627, 66009 S.R. 19, Wakarusa, Indiana 46573), is located 0.02 mile west of the C.R. 40 and S.R. 19 intersection project area. Petroleum impacts appear to extend into and beneath SR 19 toward the project area. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary. (INDOT Site Assessment and Management)

Indiana Department of Transportation

County Elkhart

Route C.R. 40

Des. No. 1702848

SECTION K- EARLY COORDINATION

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

Remarks: Early Coordination packages were sent to the agencies listed below and the agency response letters are included in Appendix C, page 3 to Appendix C, page 21.

Agency	Response Date
Federal, State, and Local Agencies – Sent July 3, 2019	
Natural Resources Conservation Service (NRCS)	July 18, 2019
Indiana Geological Survey	October 28, 2020
National Park Service	No Response
Federal Highway Administration	No Response
Indiana Department of Natural Resources (IDNR)	August 7, 2019
U.S. Department of Housing and Urban Development	No Response
Indiana Department of Environmental Management (IDEM)	August 26, 2020
IDEM Drinking Water Branch/Ground Water Section	July 9, 2019
INDOT Ft. Wayne District	No Response
Michiana Council of Governments	No Response
United States Fish and Wildlife Service (USFWS)	July 9, 2019
Elkhart County Surveyor	No Response
Elkhart County Drainage Technician	July 10, 2019
Elkhart County Highway Department	No Response
INDOT – Manager, Public Hearings	No Response
Elkhart County Council	No Response
Elkhart County Board of Commissioners	No Response
Elkhart County Sheriff	No Response
Wakarusa Town Council	No Response
Wakarusa Town Engineer	No Response
Wakarusa Town Manager	No Response
Elkhart County MS4 Coordinator	No Response

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APPENDIX A
INDOT SUPPORTING DOCUMENTATION

Categorical Exclusion Level Thresholds

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

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

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

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

⁴AMMs = Avoidance and Mitigation Measures.

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

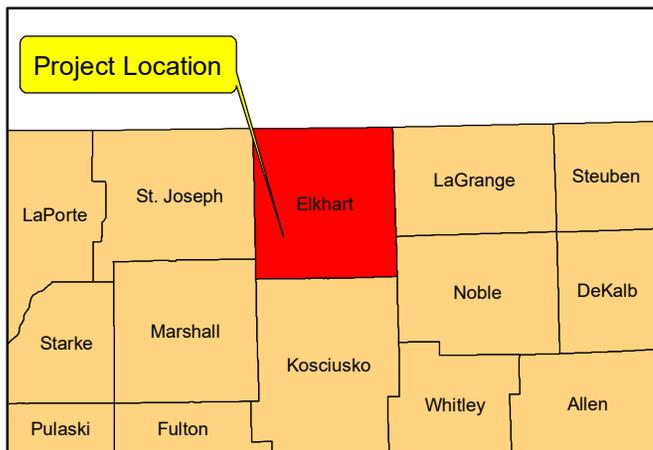
⁶Potential for causing a disproportionately high and adverse impact.

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

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



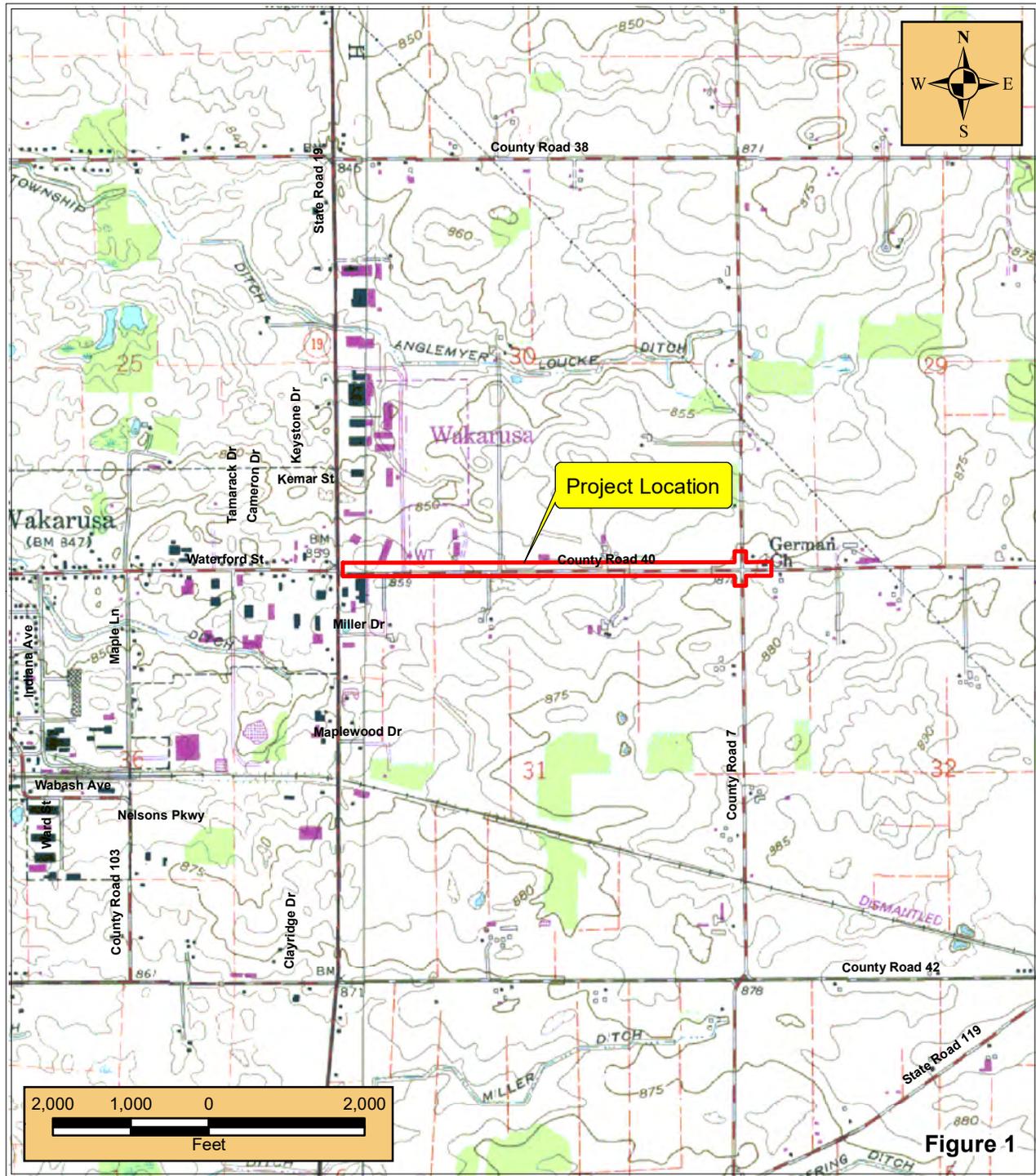
APPENDIX B
GRAPHICS

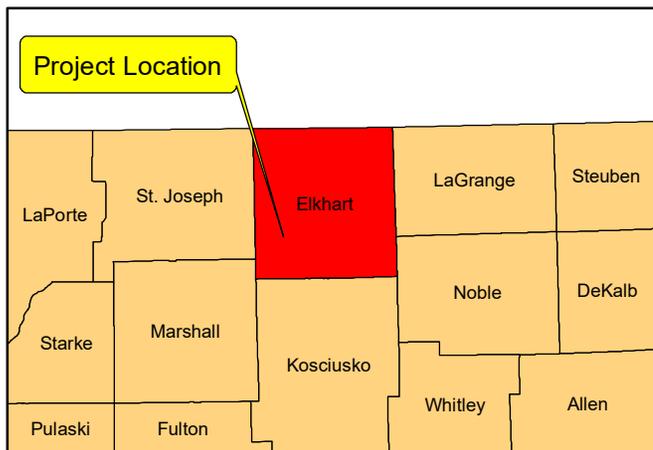


Elkhart County Highway Department
C.R. 40 From S.R. 19 to C.R. 7
Road Reconstruction and
Buggy Lane Additions Project
Elkhart County, Indiana

US Census Bureau - Counties

LFA
LAWSON-FISHER ASSOCIATES P.C.
525 W WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167





Elkhart County Highway Department
C.R. 40 From S.R. 19 to C.R. 7
Road Reconstruction and
Buggy Lane Additions Project
Elkhart County, Indiana

US Census Bureau - Counties

LFA
LAWSON-FISHER ASSOCIATES P.C.
525 W WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167





 Photo Designation

Figure 3

LFA
LAWSON-FISHER ASSOCIATES P.C.
525 W WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167

Elkhart County Highway Department
County Rd. 40 Road Reconstruction and
Buggy Lane Additions Project
Des. No. 1702848
Elkhart County, Indiana
Photo Orientation Map



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 1: Looking North on State Road (S.R.) 19 towards the County Road (C.R.) 40 and S.R. 19 intersection.



Photograph 2: Looking East on C.R. 40.



**ELKHART COUNTY HIGHWAY DEPARTMENT
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C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 3: Looking East on C.R. 40.



Photograph 4: Looking East on C.R. 40.



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 5: Looking East on C.R. 40.



Photograph 6: Looking East on C.R. 40.



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 7: Looking East on C.R. 40.



Photograph 8: Looking South, Eastbound on C.R. 40 at Culvert Structure.



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 9: Looking North, Eastbound on C.R. 40 at Culvert Structure.



Photograph 10: Looking East on C.R. 40.



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 11: Looking East on C.R. 40 towards the C.R. 40 and C.R. 7 Intersection.



Photograph 12: Looking East on C.R. 40 east of the C.R. 40 and C.R. 7 Intersection.



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 13: Looking North on C.R. 7 towards the C.R. 40 and C.R. 7 Intersection.



Photograph 14: Looking North on C.R. 7 at the C.R. 40 and C.R. 7 Intersection.



**ELKHART COUNTY HIGHWAY DEPARTMENT
DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 15: Looking North on C.R. 7 north of the C.R. 40 and C.R. 7 Intersection.



Photograph 16: Looking West on C.R. 40 towards the C.R. 40 and C.R. 7 Intersection.



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DES. NO.: 1702848
C.R. 40 ROAD RECONSTRUCTION AND ADDED BUGGY LANES PROJECT
PHOTOGRAPHS – DATED JANUARY 16, 2019**



Photograph 17: Looking West on C.R. 40.



Photograph 18: Looking West on C.R. 40 at the C.R. 40 and S.R. 19 Intersection (Northern Portion).

PROJECT	DESIGNATION
1702848	1702848
CONTRACT	
R-41142	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

ROUTE: C.R. 40

PROJECT NO. 1702848 P.E.
 1702848 R/W
 1702848 CONST.

TRAFFIC DATA		
A.A.D.T.	(2022)	4,037 V.P.D.
A.A.D.T.	(2042)	5,251 V.P.D.
D.H.V.	(2042)	554 V.P.H.
DIRECTIONAL DISTRIBUTION		50 %
TRUCKS		14.6 % A.A.D.T. D.H.V.

DESIGN DATA	
DESIGN SPEED	*35 and 55 MPH
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	LOCAL AGENCY COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

* 35 mph within Town of Wakarusa

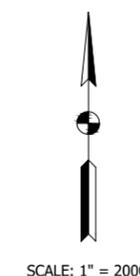


PROJECT LOCATION SHOWN BY
ELKHART COUNTY

LATITUDE: 41°32'10"N LONGITUDE: 85°59'30"W

GROSS LENGTH: 0.884 MI.
 NET LENGTH: 0.884 MI.
 MAX. GRADE: 1.60 %

HYDROLOGIC UNIT CODE (S): 04050001230010 & 04050001230030



SCALE: 1" = 2000'

STAGE 2 PLANS
JULY 13, 2020

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS

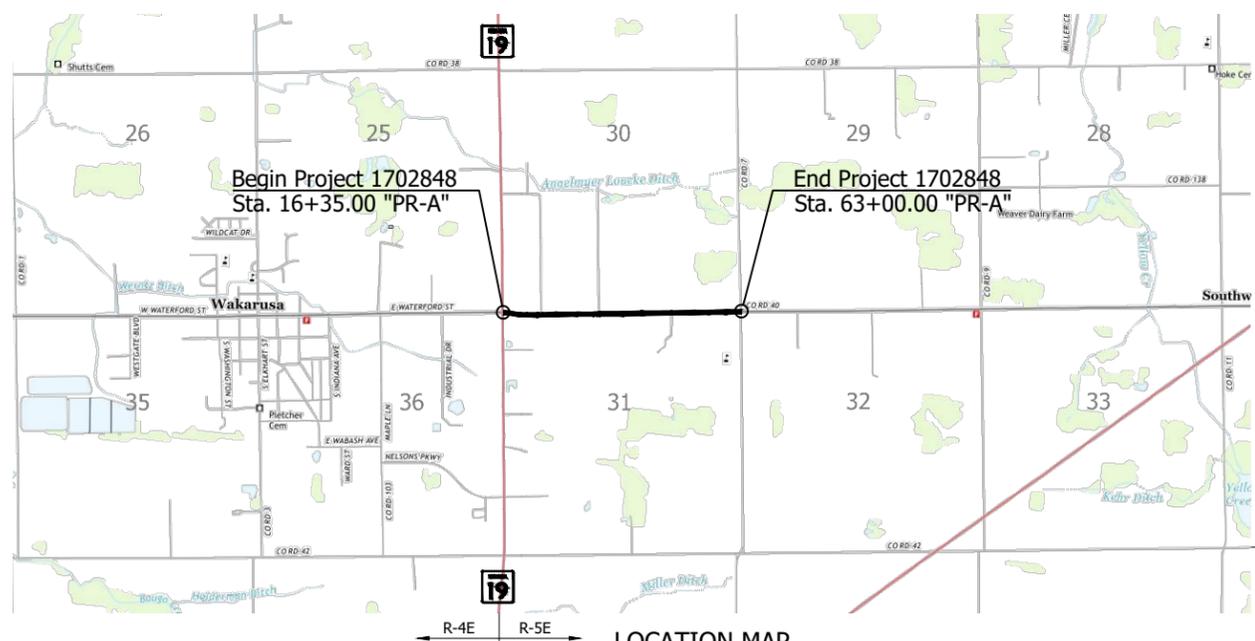
BOARD OF COMMISSIONERS OF ELKHART COUNTY

MIKE YODER PRESIDENT
 FRANK LUCCHESI VICE PRESIDENT
 SUZANNE WEIRICK MEMBER

ELKHART COUNTY ENGINEER

TIMOTHY JACKSON, P.E. EMPLOYEE OF RESPONSIBLE CHARGE

Road Reconstruction on C.R. 40 from S.R. 19 to C.R. 7
in Sections 29, 30, 31, and 32, T-36-N, R-5-E, Harrison Township, Elkhart County, Indiana



LOCATION MAP
ELKHART COUNTY

JDD - 7/13/2020 8:49 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\1884401R_CS.dwg

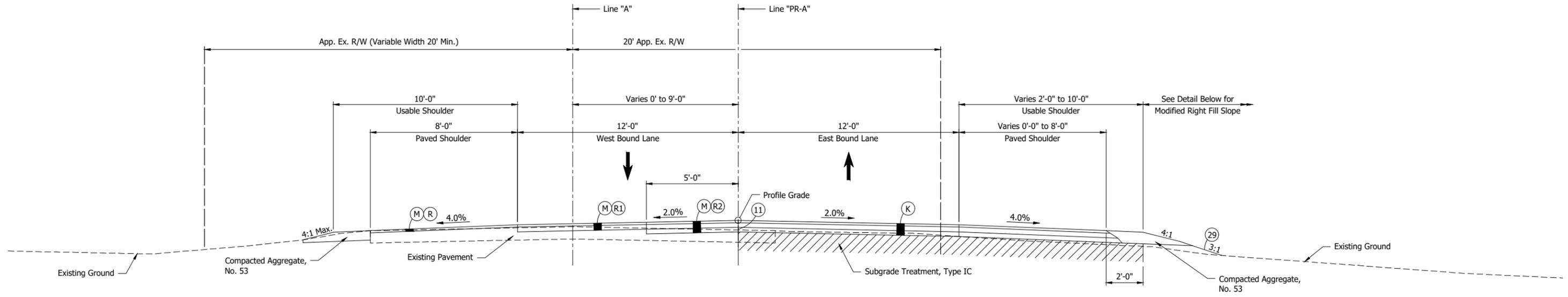


NOT FOR CONSTRUCTION

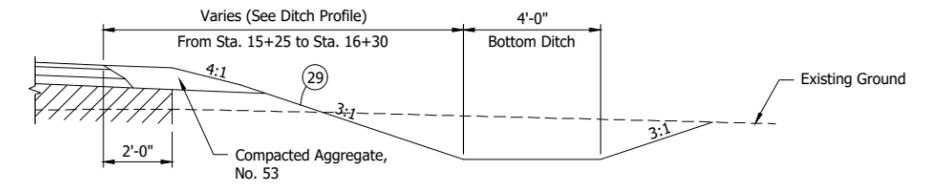
PLANS PREPARED BY: LAWSON-FISHER ASSOC. P.C. 574-234-3167
 PHONE NUMBER
 CERTIFIED BY: _____ DATE
 APPROVED FOR LETTING: _____ DATE
 INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNATION	
1702848	
SURVEY BOOK	SHEETS
1	of 84
CONTRACT	
PROJECT	
R-41142	
1702848	

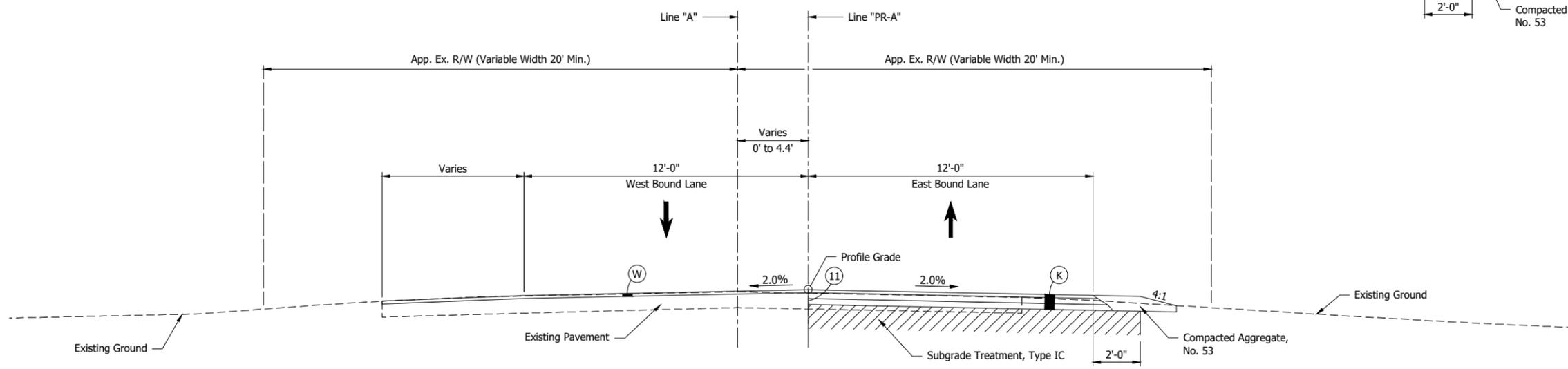
DTC - 7/13/2020 8:49 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\186440TR_TS01.dwg (TYP. SEC)



TYPICAL SECTION - INCIDENTAL CONSTRUCTION
LINE "PR-A"
 Sta. 13+25.00 to Sta. 16+35.00
 Scale: 3/8" = 1'-0"



FILL SLOPE RIGHT
 Scale: 3/8" = 1'-0"



TYPICAL SECTION - INCIDENTAL CONSTRUCTION
LINE "PR-A"
 Sta. 12+30.91 to Sta. 13+25.00
 Scale: 3/8" = 1'-0"

LEGEND:

- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
- (M) Milling, Profile
- (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm
- (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
- (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
- (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
Transition Milling
- (11) Saw Cut
- (29) Mulched Seeding R

NOT FOR CONSTRUCTION

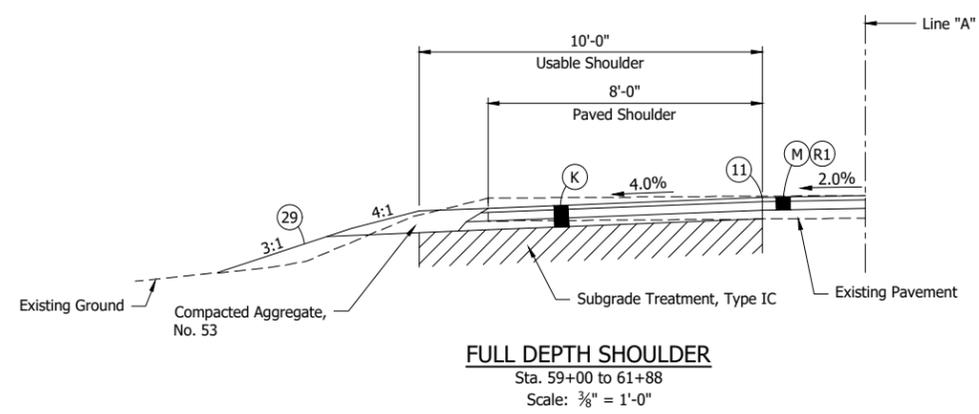
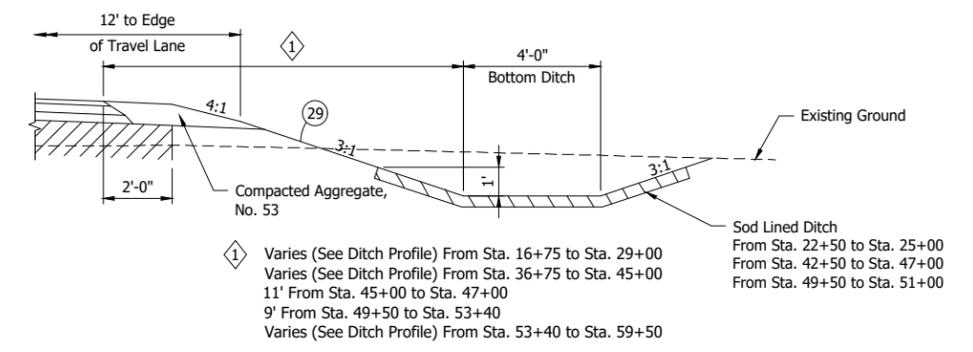
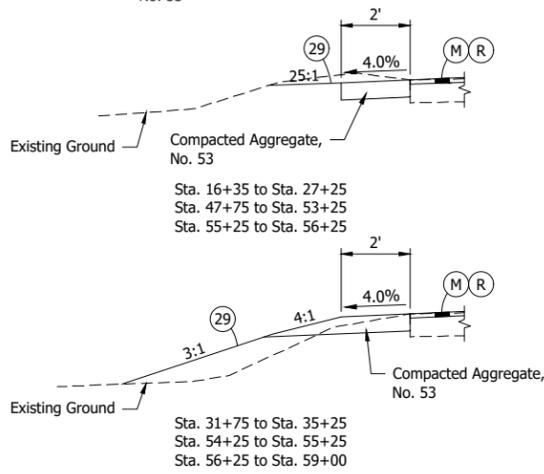
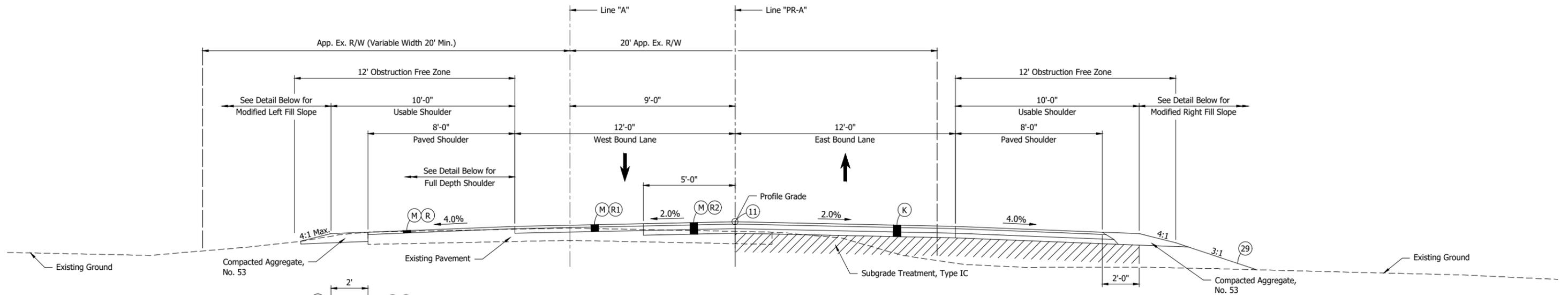
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: JDD	DRAWN: BJS		
CHECKED: MJG	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS LINE "PR-A"

SCALE AS SHOWN	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 3 of 84
CONTRACT R-41142	PROJECT 1702848

JDD - 7/13/2020 8:50 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\186440TR_TSD3.dwg (TYP SEC)



- LEGEND:**
- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (M) Milling, Profile
 - (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm
 - (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
 - (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
Transition Milling
 - (11) Saw Cut
 - (29) Mulched Seeding R

NOT FOR CONSTRUCTION

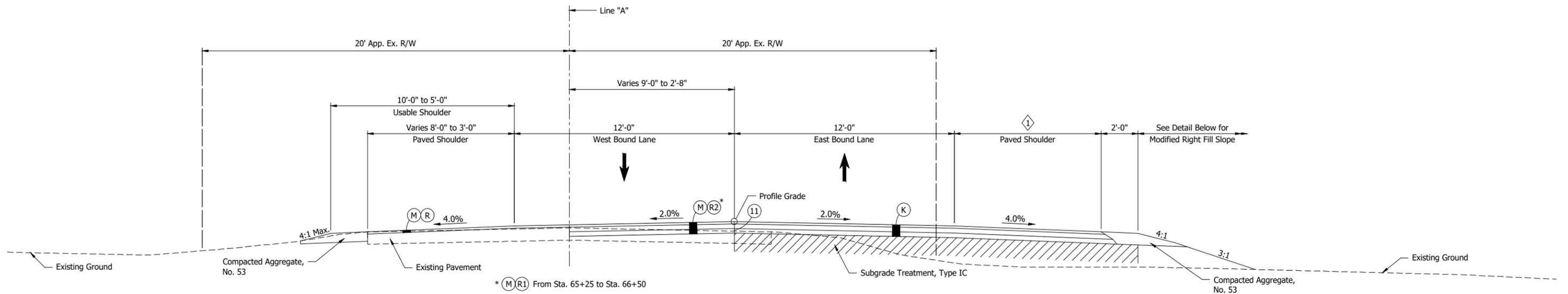
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS LINE "PR-A"

SCALE AS SHOWN	BRIDGE FILE
	DESIGNATION
	1702848
SURVEY BOOK	SHEETS
	4 of 84
CONTRACT R-41142	PROJECT
	1702848

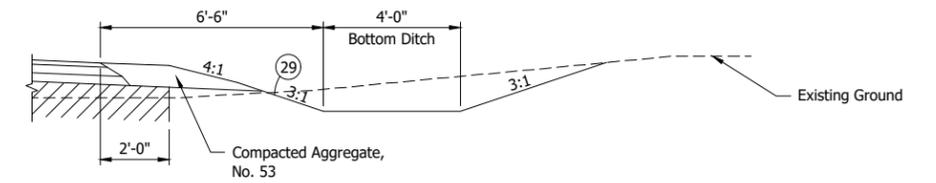
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TYPICAL SECTION - INCIDENTAL CONSTRUCTION

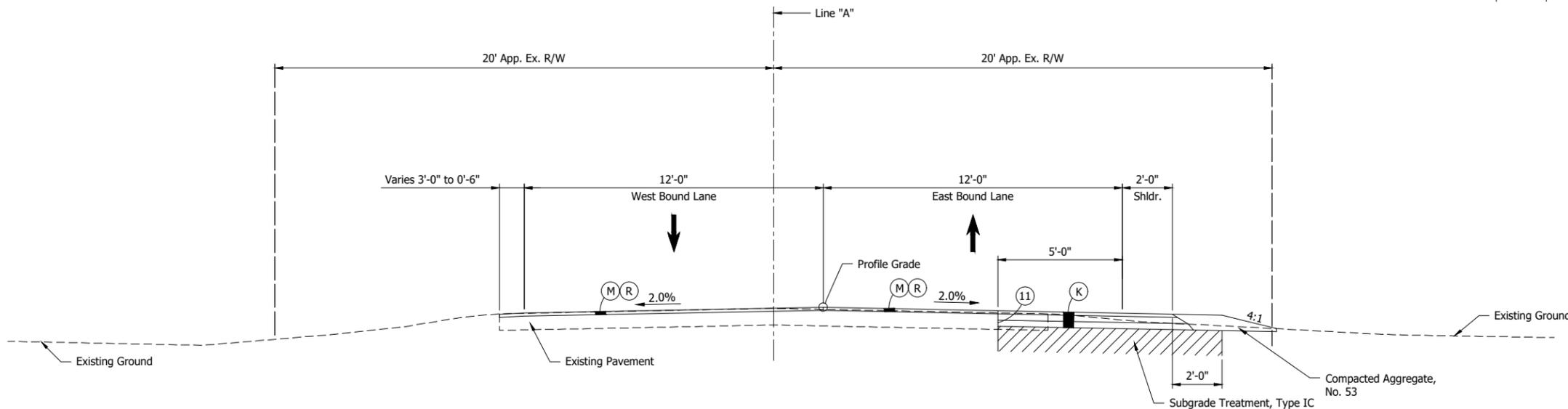
LINE "A"
Sta. 63+00.00 to Sta. 66+50.00
Scale: 3/8" = 1'-0"

① Varies 8' to 2' From Sta. 63+00 to Sta. 64+00
2' From Sta. 64+00 to Sta. 66+50



FILL SLOPE RIGHT

Sta. 64+25 to 66+50
Scale: 3/8" = 1'-0"



TYPICAL SECTION - INCIDENTAL CONSTRUCTION

LINE "A"
Sta. 66+50.00 to Sta. 67+95.00
Scale: 3/8" = 1'-0"

LEGEND:

- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
- (M) Milling, Profile
- (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm
- (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
- (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
- (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
Transition Milling
- (11) Saw Cut
- (29) Mulched Seeding R

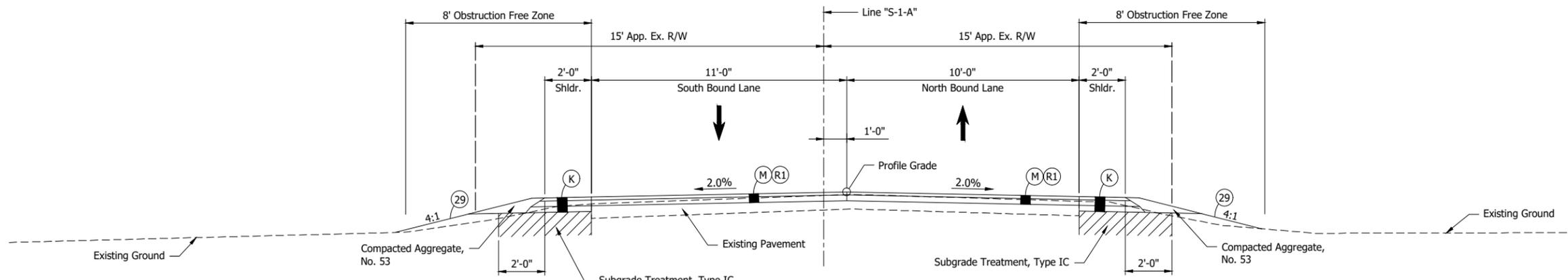
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: JDD	DRAWN: BJS		
CHECKED: MJG	CHECKED: JDD		

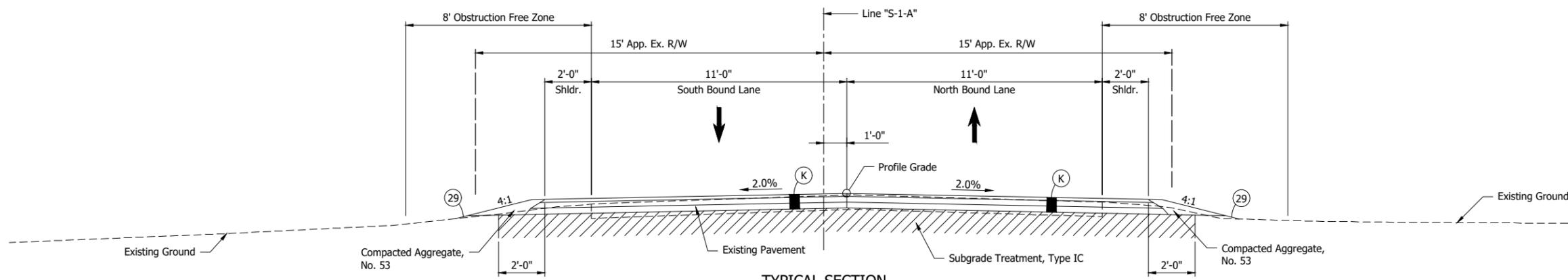
INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL SECTIONS LINE "A"	

SCALE AS SHOWN	BRIDGE FILE DESIGNATION 1702848
SURVEY BOOK	SHEETS 5 of 84
CONTRACT R-41142	PROJECT 1702848

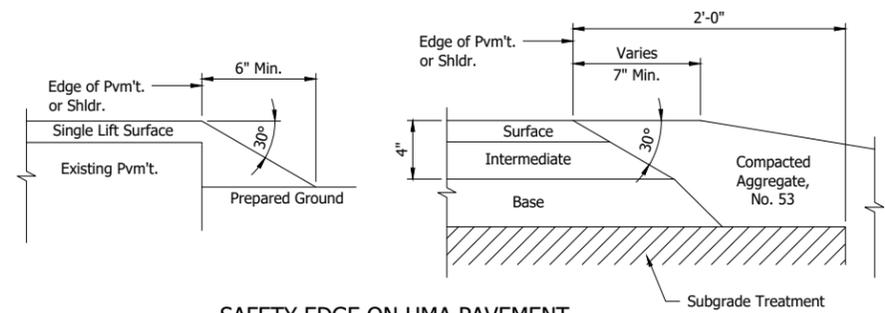
JDD - 7/13/2020 8:50 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\186440TR_TS02.dwg (TYP SEC)



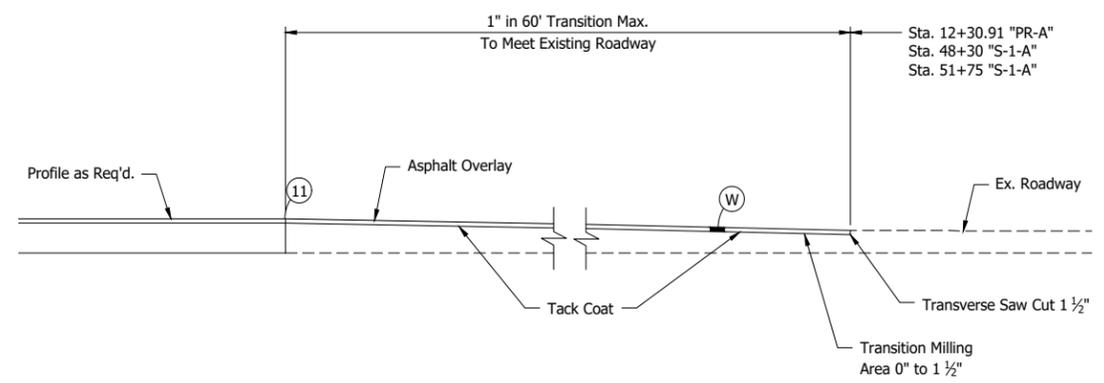
**TYPICAL SECTION
LINE "S-1-A"**
Sta. 50+11.00 to Sta. 50+85.00
Scale: 3/8" = 1'-0"



**TYPICAL SECTION
LINE "S-1-A"**
Sta. 48+90.00 to Sta. 49+80.00
Scale: 3/8" = 1'-0"



SAFETY EDGE ON HMA PAVEMENT
Not to Scale



INCIDENTAL CONSTRUCTION PROFILE SECTION
Not to Scale

LEGEND:

- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
- (M) Milling, Profile
- (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm
- (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on Transition Milling
- (11) Saw Cut
- (29) Mulched Seeding R

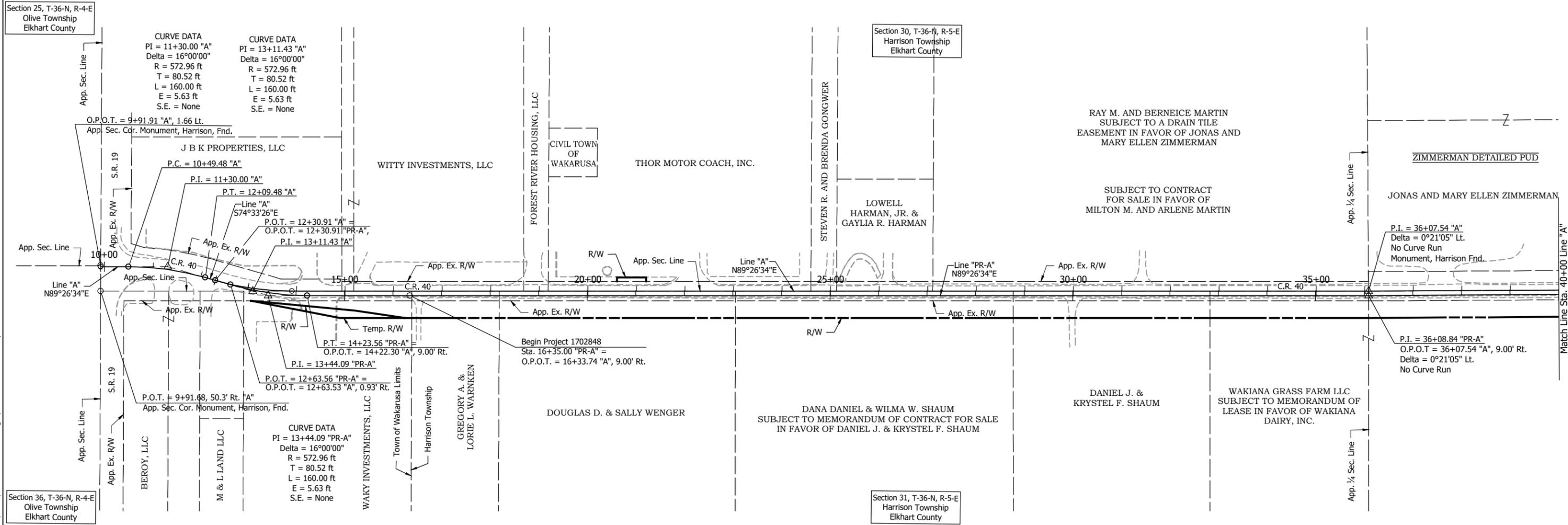
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION	
CROSS SECTIONS LINE "S-1-A"	

SCALE AS SHOWN	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 6 of 84
CONTRACT R-41142	PROJECT 1702848

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NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: MJG	DRAWN: JAJ	
CHECKED: JDD	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

SCALE 1" = 100'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 7 of 84
CONTRACT R-41142	PROJECT 1702848

ADVANCE PHASE

1. Construction activities shall include installation of structures no. 12, 13, 14, and 16.
2. Traffic shall be detoured along C.R. 9, C.R. 38, and S.R. 19.

PHASE I:

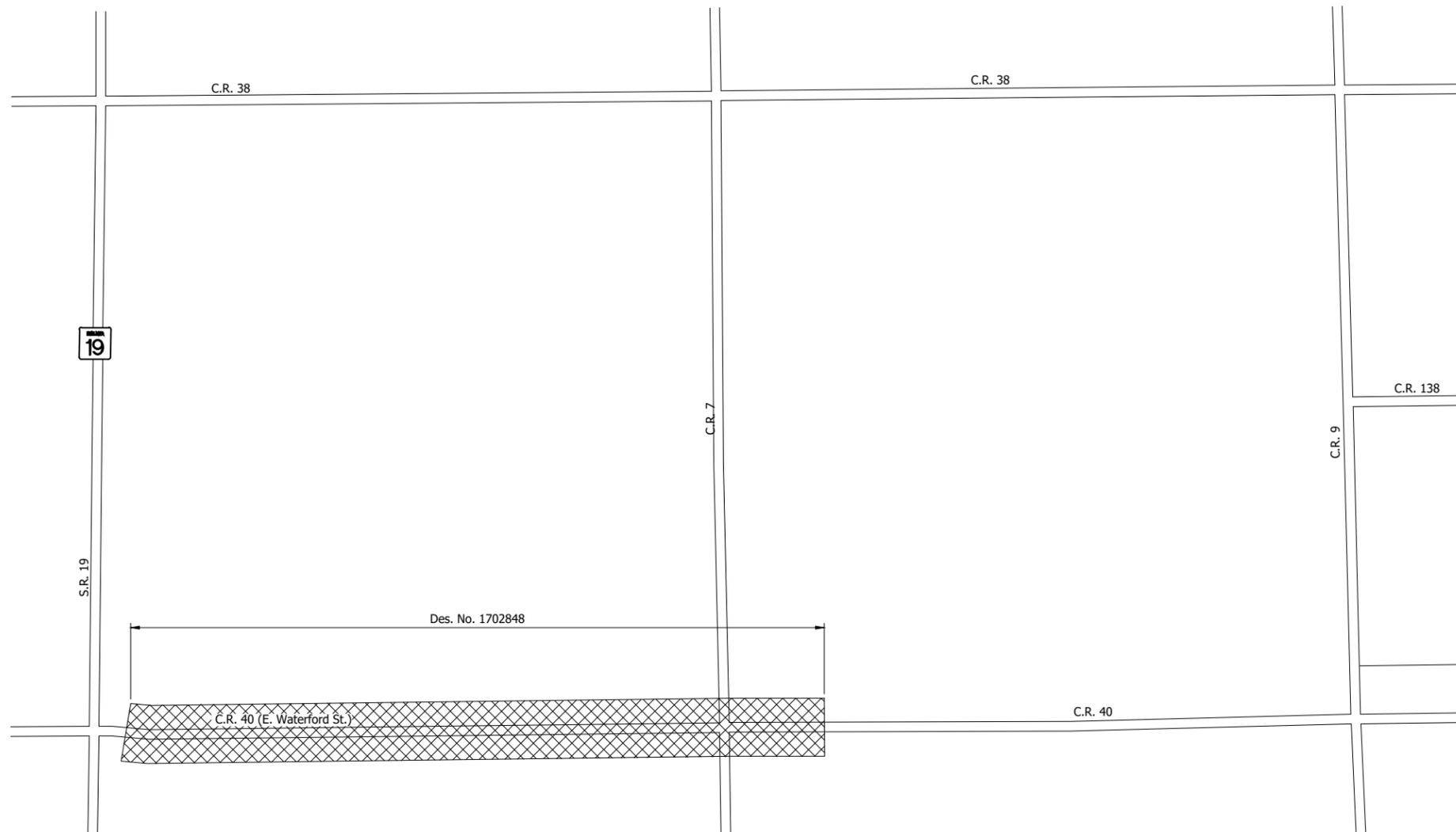
1. Construction activities shall include road reconstruction of the eastbound travel lane and shoulder, ditch grading, and seeding.
2. Eastbound traffic shall be detoured along S.R. 19, C.R. 38, and C.R. 9.

PHASE II:

1. Construction activities shall include mill and overlay of the existing westbound travel lane and shoulder, full depth shoulder patching, and seeding.
2. Westbound traffic shall be detoured along C.R. 9, C.R. 38, and S.R. 19.

GENERAL NOTES:

1. Install construction signs as shown on plans and as directed.
2. C.R. 40 shall remain open at all times and maintain one lane in one direction with the other direction detoured.
3. The construction zone speed limit for C.R. 40 is 45 mph.
4. Emergency vehicles and postal access to local residences shall be maintained at all times except during drive reconstruction. Property owners shall be notified in writing at least two days prior to beginning driveway work.
5. All type 'A' construction signs to have low intensity flashing yellow light, type 'A'.
6. All materials, procedures, signs, markings, and miscellaneous items shall conform to the requirements of the INDOT standard specifications and the Indiana Manual on Uniform Traffic Control Devices, and revisions there to.
7. Contractor shall notify local fire department, police, ambulance services, and schools of the work schedule and temporary traffic layouts.
8. Construction drum spacing: 50 ft on tangent, 25 ft on taper.



PROJECT LIMITS
Scale: 1" = 300'

LEGEND:

 Construction Area

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NOT FOR CONSTRUCTION

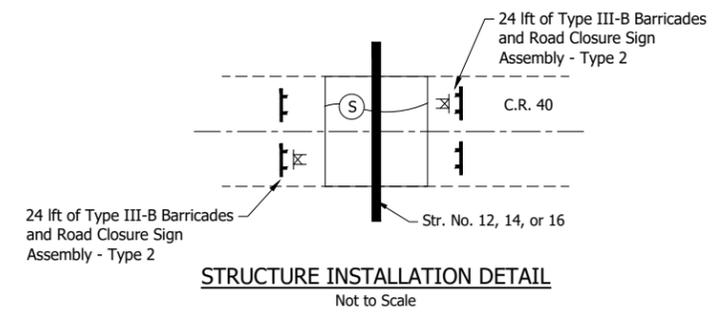
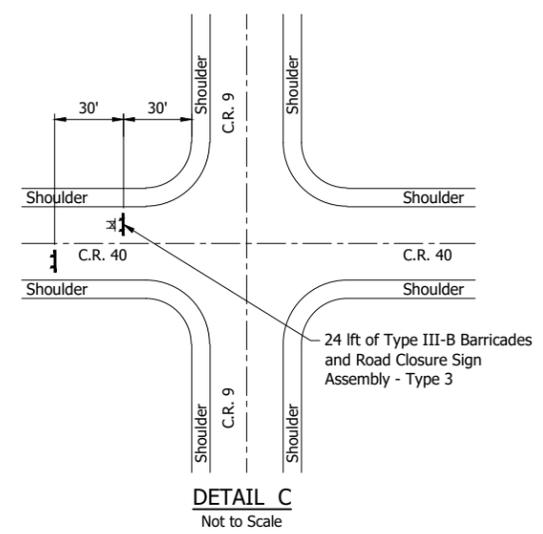
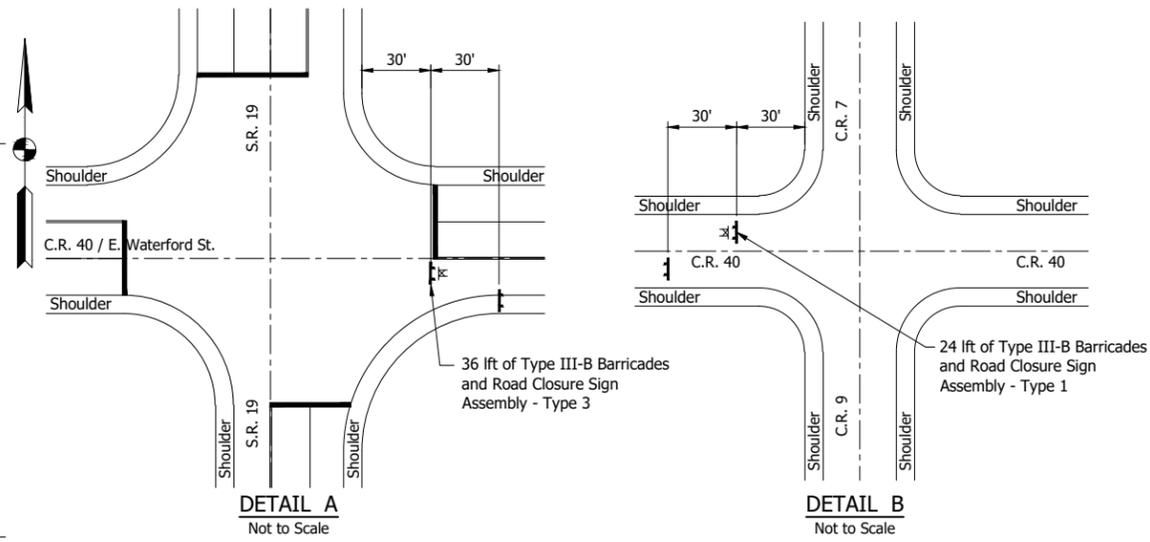
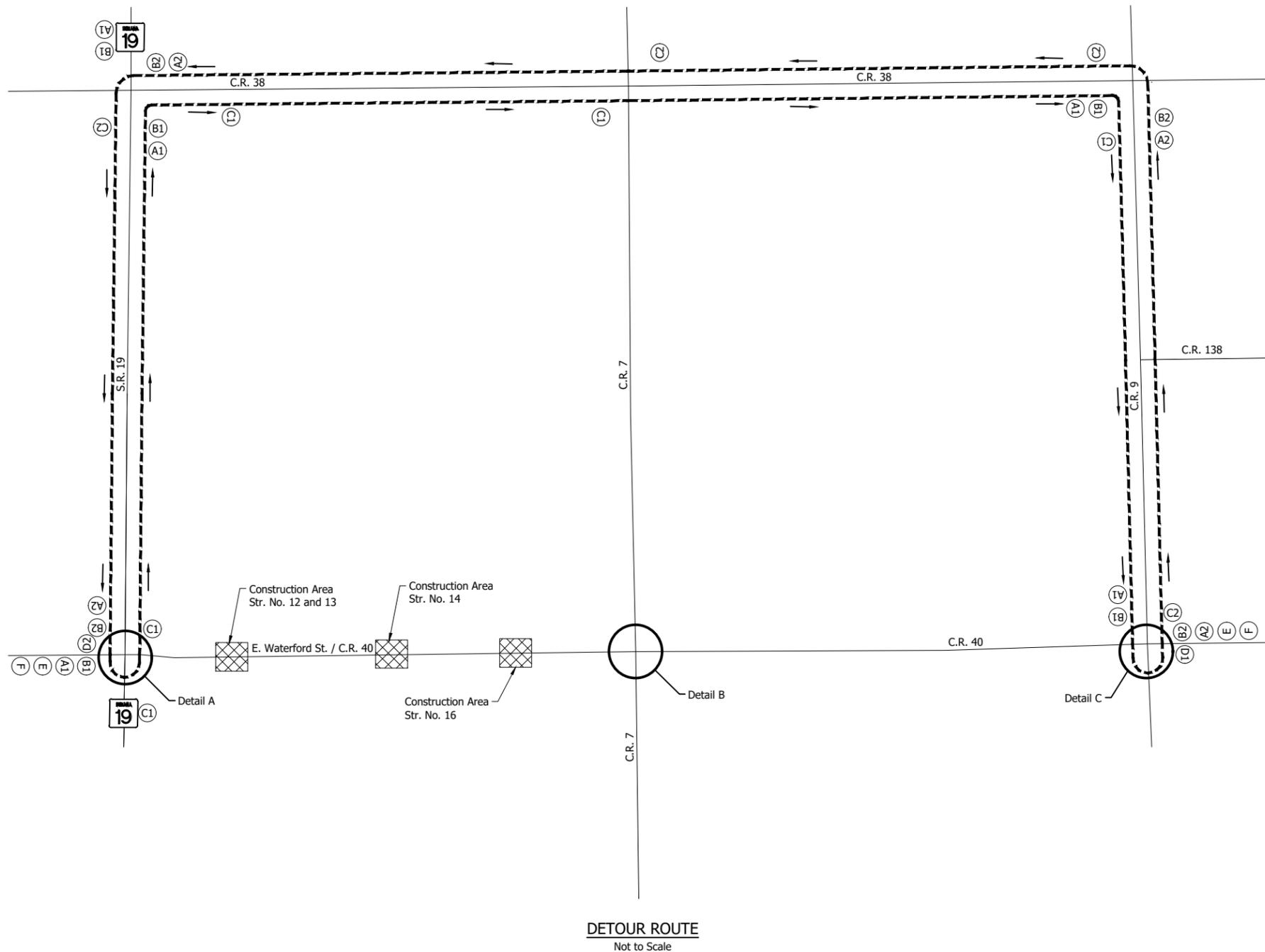
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
GENERAL NOTES AND DETAILS

SCALE AS NOTED	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 9 of 84
CONTRACT R-41142	PROJECT 1702848

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NOTE:
Local access shall be maintained in between Str. No. 12, 13, 14, and 16. Open cuts for these structures shall not occur at the same time.

DETOUR ROUTE MARKER ASSEMBLY:

- (A1) 5 Each (A2) 4 Each
- (B1) 5 Each (B2) 4 Each
- (C1) 5 Each (C2) 4 Each
- (D1) 1 Each (D2) 1 Each

LEGEND:

- ← Direction of Traffic
- (A#) Advance Turn Detour Route Marker Assembly
- (B#) Directional Detour Route Marker Assembly
- (C#) Conforming Detour Route Marker Assembly
- (D#) End Detour Route Marker Assembly
- (S) HMA for Structure Installation, Type B
165 #/sys HMA Surface, Type B on
275 #/sys HMA Intermediate, Type B on
660 #/sys HMA Base, Type B on
6" Compacted Aggregate, No. 53 on
Subgrade Treatment, Type II

ESTIMATE OF QUANTITIES - ADVANCE		
ITEM	QUANTITY	UNIT
Maintaining Traffic	1	Lump Sum
Construction Sign Type A (Includes 2 Undistributed)	6	Each
Barricade Type III-B	132	LFT
Detour Route Sign Assemblies	29	Each
Road Closure Sign Assemblies	5	Each

NOT FOR CONSTRUCTION

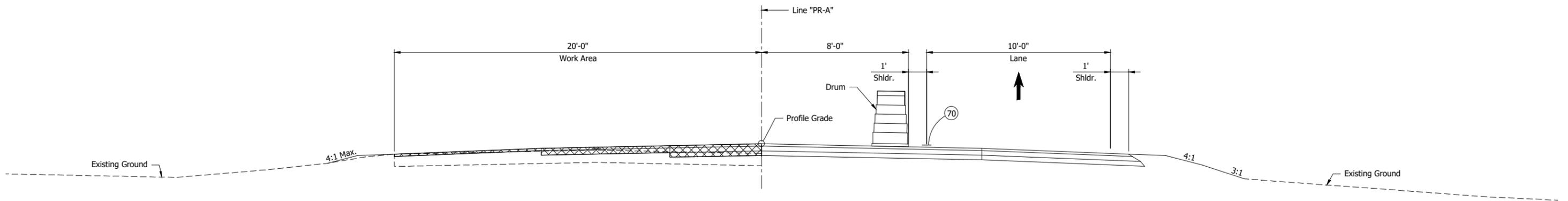
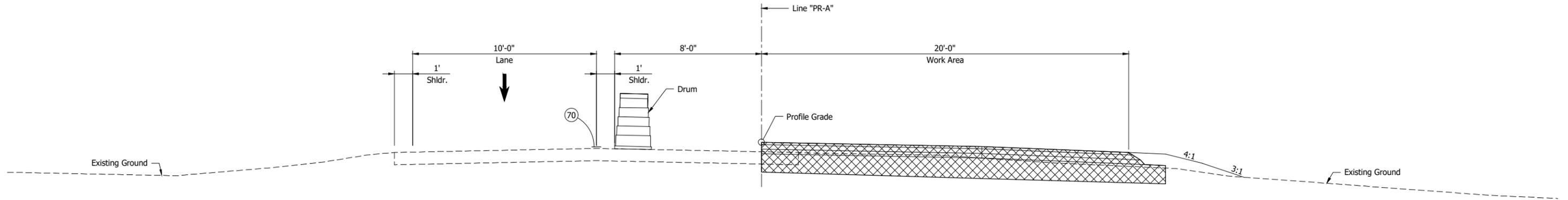
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: RHK	
CHECKED: ?	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

**MAINTENANCE OF TRAFFIC
DETOUR ROUTE - ADVANCE PHASE**

SCALE AS NOTED	BRIDGE FILE
	DESIGNATION
	1702848
SURVEY BOOK	SHEETS
	10 of 84
CONTRACT R-41142	PROJECT
	1702848

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LEGEND:

- 70 Temporary Pavement Marking, Removable, Solid, Yellow, 4"
- Indicates Limits of Construction

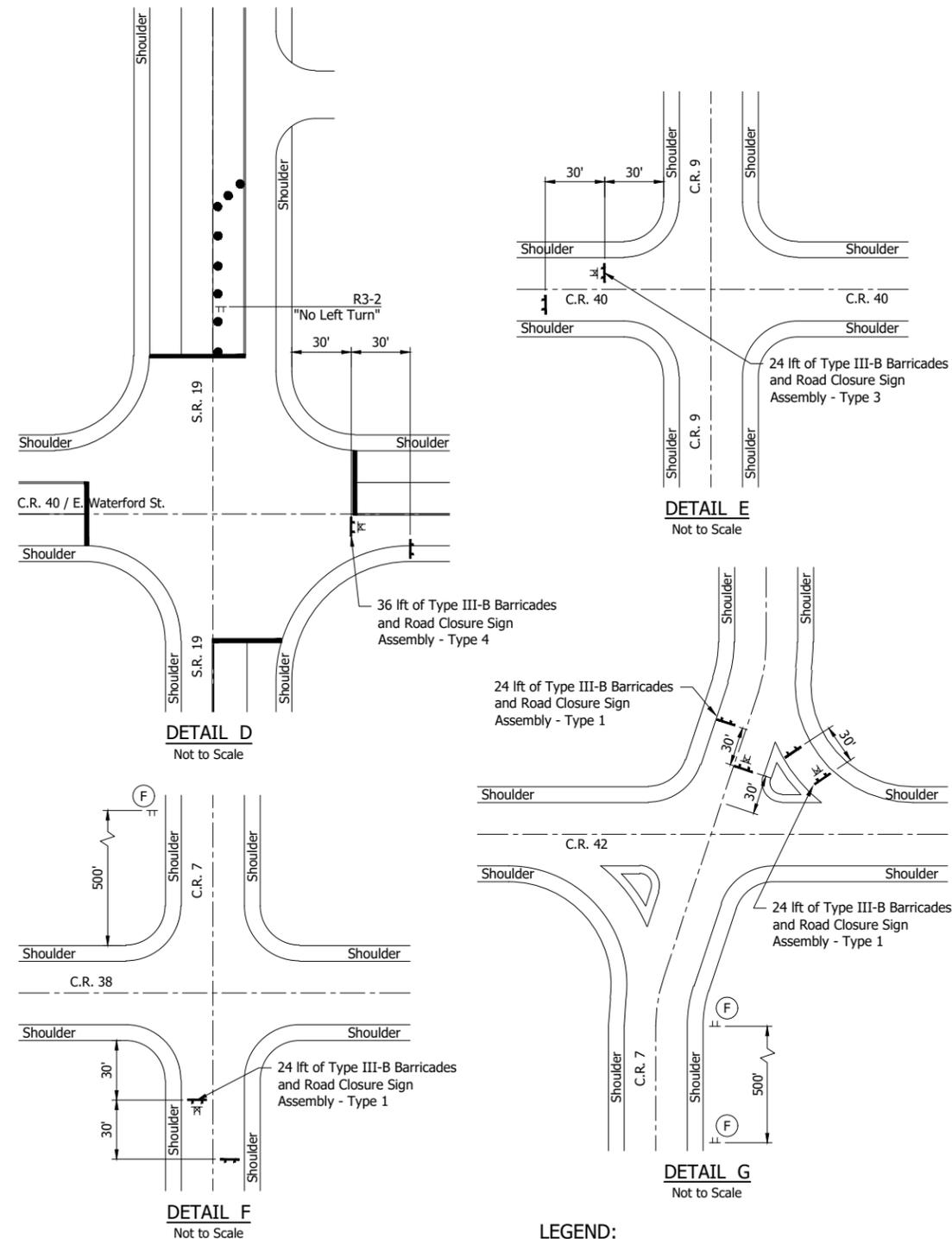
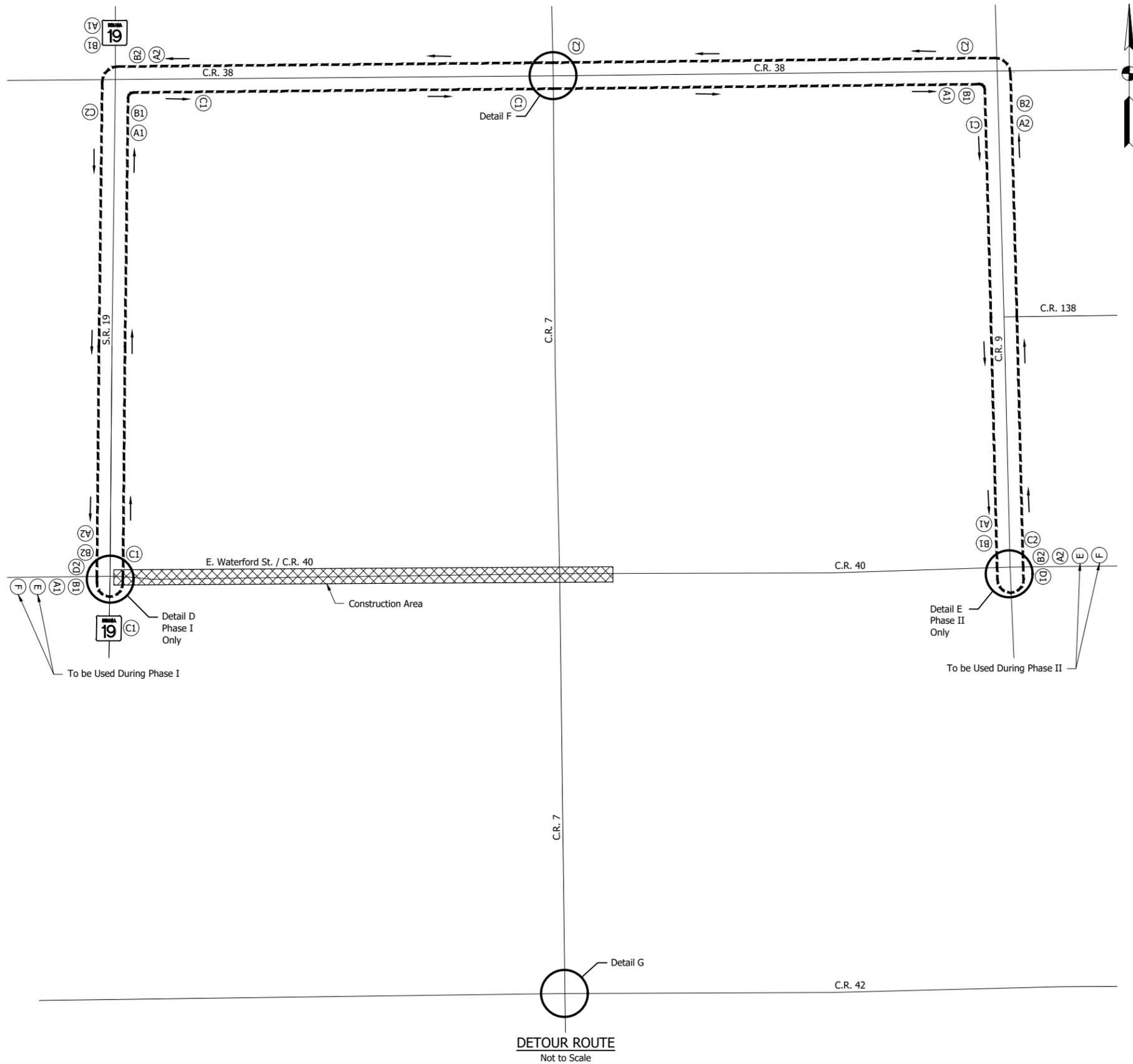
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - LINE "PR-A"	

SCALE 3/8" = 1'-0"	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 11 of 84
CONTRACT R-41142	PROJECT 1702848

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NOTE:
 Eastbound Detour Route Assembly shall be used during Phase I.
 Westbound Detour Route Assembly shall be used during Phase II.

DETOUR ROUTE MARKER ASSEMBLY:

(A1) 5 Each	(A2) 4 Each
(B1) 5 Each	(B2) 4 Each
(C1) 5 Each	(C2) 4 Each
(D1) 1 Each	(D2) 1 Each

LEGEND:

- ← Direction of Traffic
- (A#) Advance Turn Detour Route Marker Assembly
- (B#) Directional Detour Route Marker Assembly
- (C#) Conforming Detour Route Marker Assembly
- (D#) End Detour Route Marker Assembly
- Drum

Detail G
DETOUR ROUTE
 Not to Scale

NOT FOR CONSTRUCTION

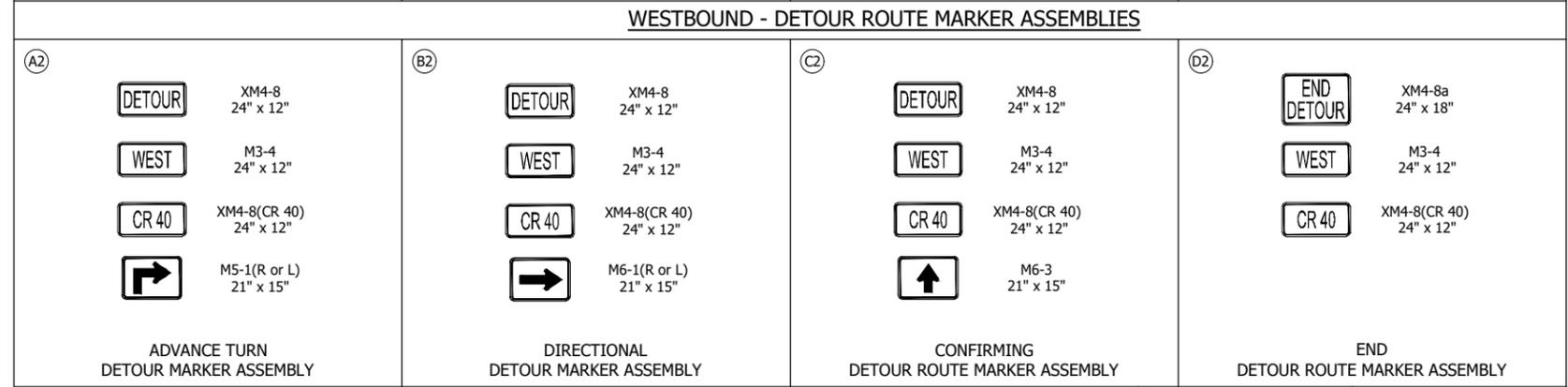
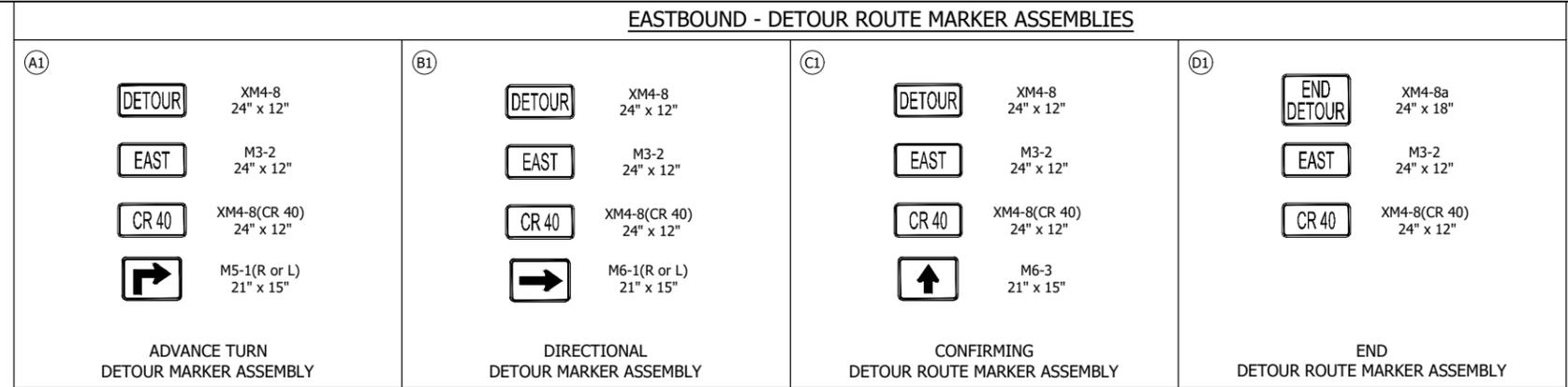
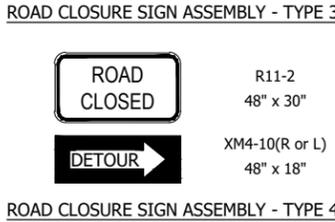
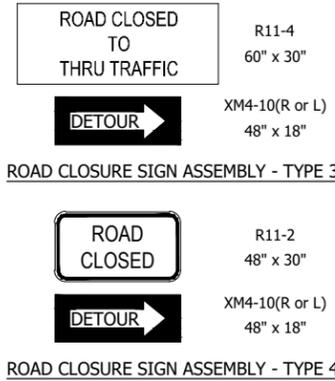
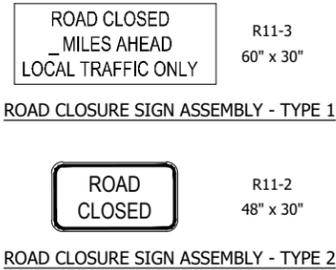
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ	
CHECKED: JMB	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

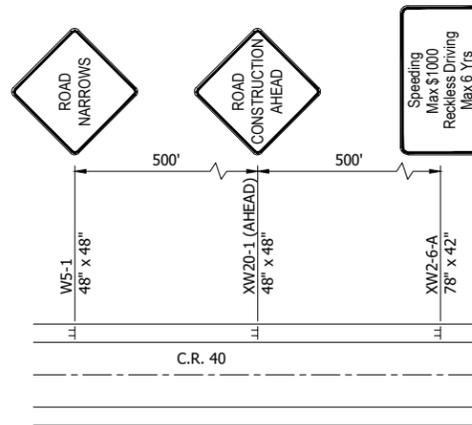
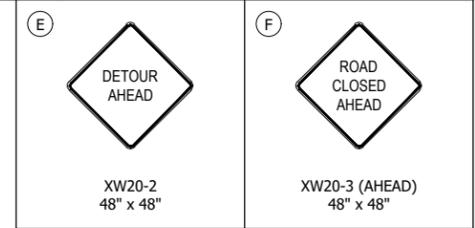
**MAINTENANCE OF TRAFFIC
 DETOUR ROUTE - PHASES I AND II**

SCALE AS NOTED	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 12 of 84
CONTRACT R-41142	PROJECT 1702848

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"X" Prefix is orange background w/ black legend.



ADVANCE SIGNING DETAIL
Not to Scale

ESTIMATE OF QUANTITIES - CONTROLLING		
ITEM	QUANTITY	UNIT
Maintaining Traffic	1	Lump Sum
Construction Sign Type A (Includes 2 Undistributed)	14	Each
Barricade Type III-B	264	LFT
Detour Route Sign Assemblies	29	Each
Road Closure Sign Assemblies	7	Each
Temporary Pavement Marking, Removable, 4"	11612	LFT

- LEGEND:**
- Drum
 - TT Construction Sign and Supports
 - TT Road Closure Assembly
 - TT Type III-B Barricade
 - PCMS Portable Changeable Message Sign
 - Construction Area

NOT FOR CONSTRUCTION

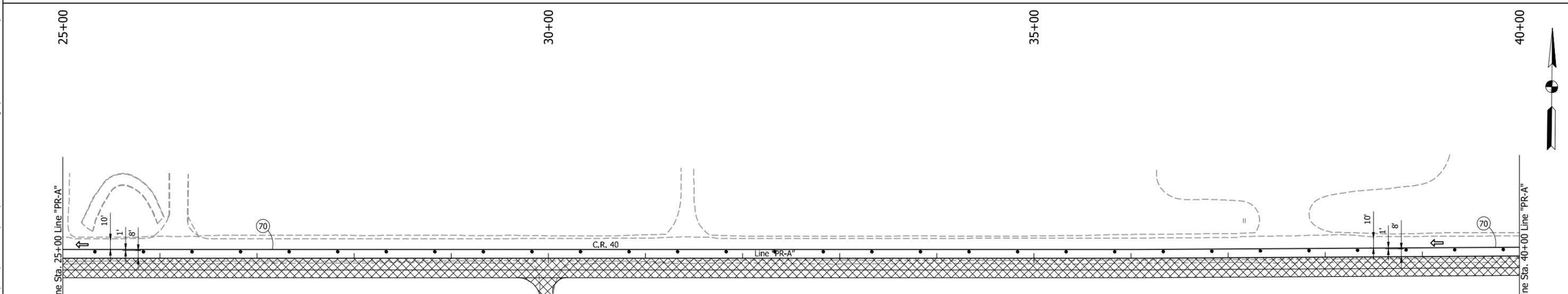
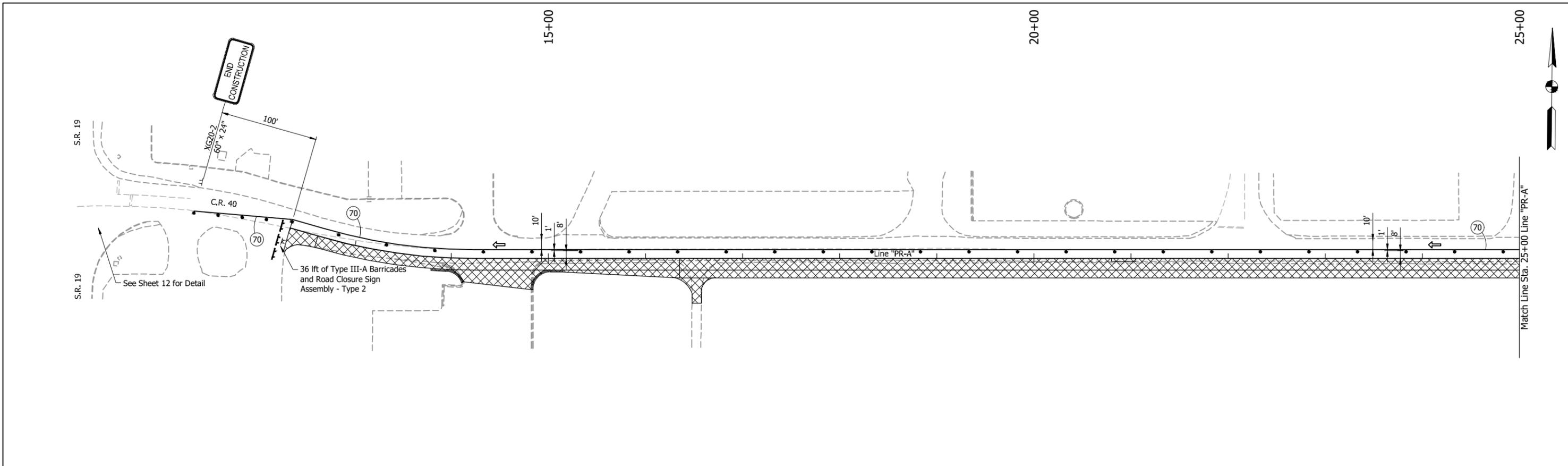
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ	
CHECKED: JDD	CHECKED: JDD	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC
SIGN LEGEND AND DETAILS**

SCALE	BRIDGE FILE
NO SCALE	
	DESIGNATION
	1702848
SURVEY BOOK	SHEETS
	13 of 84
CONTRACT	PROJECT
R-41142	1702848

DTC - 7/13/2020 8:51 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440MT_PL1_01.dwg (NOT PHASE I - 01)



ESTIMATE OF QUANTITIES - PHASE I		
ITEM	QUANTITY	UNIT
Maintaining Traffic	1	Lump Sum
Construction Sign Type A (Includes 2 Undistributed)	14	Each
Barricade Type III-B	264	LFT
Road Closure Sign Assemblies	7	Each
Temporary Pavement Marking, Removable, Yellow, 4"	5719	LFT
Detour Route Marker Assemblies	29	Each

- LEGEND:**
- Temporary Pavement Marking, Removable, Solid, Yellow, 4"
 - Drum
 - Construction Sign and Supports
 - Temporary Direction of Traffic
 - Line, Remove
 - Construction Area

NOTE:
Drum Spacing: 50 ft on Tangent, 25 ft on Taper.

NOT FOR CONSTRUCTION

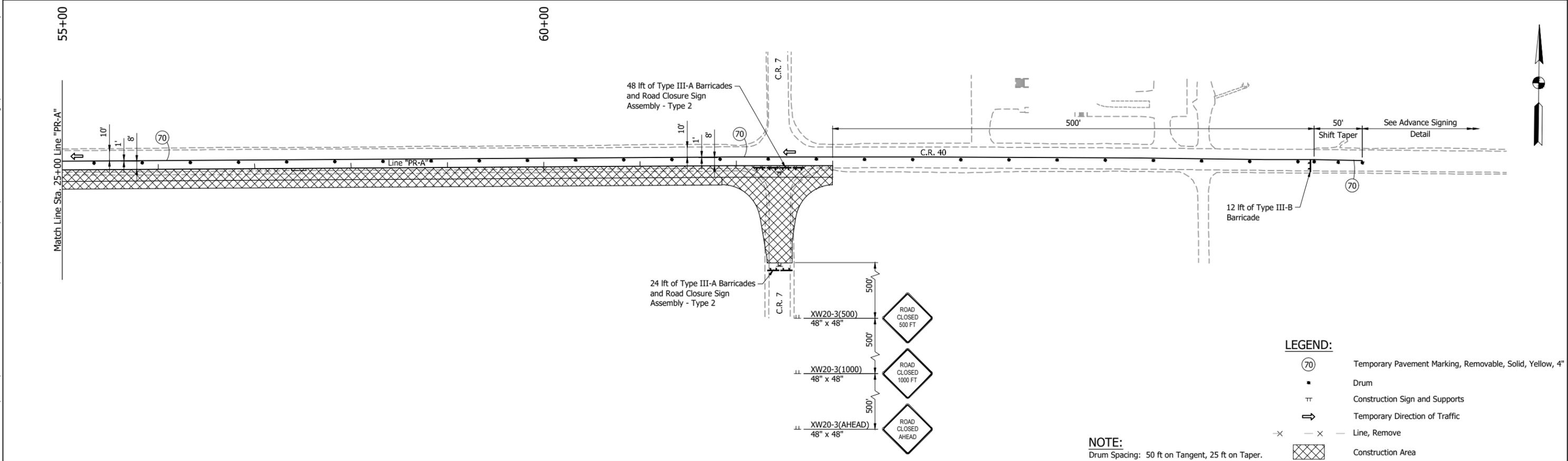
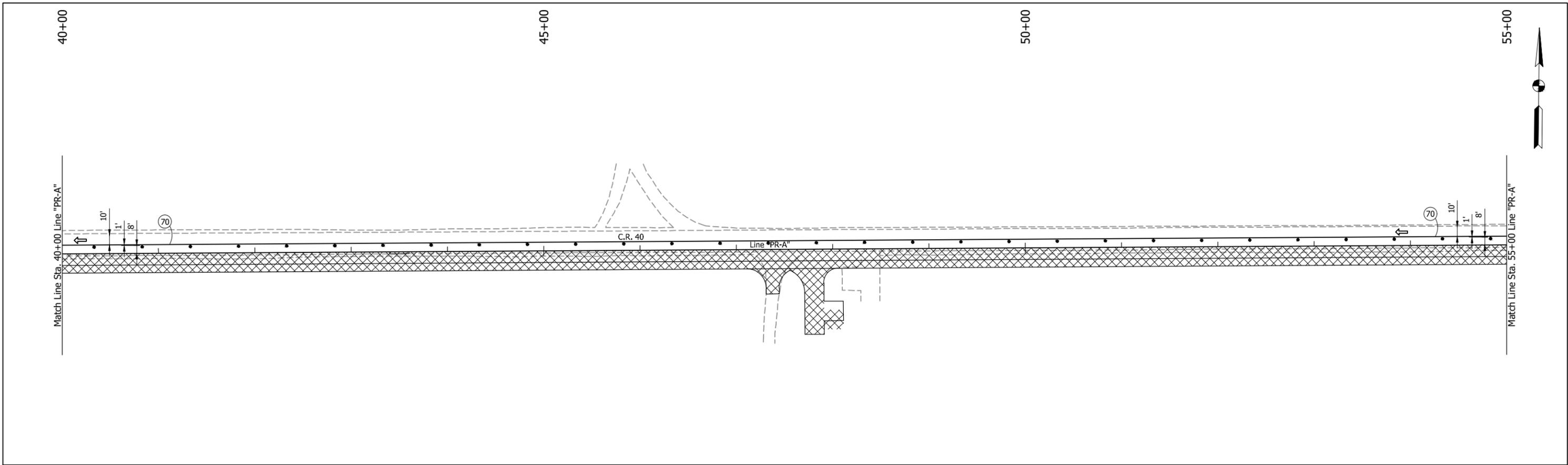
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ	
CHECKED: JDD	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE I

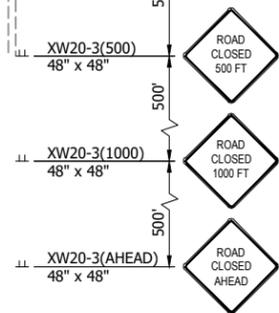
SCALE 1" = 50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 14 of 84
CONTRACT R-41142	PROJECT 1702848

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48 ft of Type III-A Barricades and Road Closure Sign Assembly - Type 2

24 ft of Type III-A Barricades and Road Closure Sign Assembly - Type 2



- LEGEND:**
- (70) Temporary Pavement Marking, Removable, Solid, Yellow, 4"
 - Drum
 - TT Construction Sign and Supports
 - ⇨ Temporary Direction of Traffic
 - x -x- Line, Remove
 - ▨ Construction Area

NOTE:
Drum Spacing: 50 ft on Tangent, 25 ft on Taper.

NOT FOR CONSTRUCTION

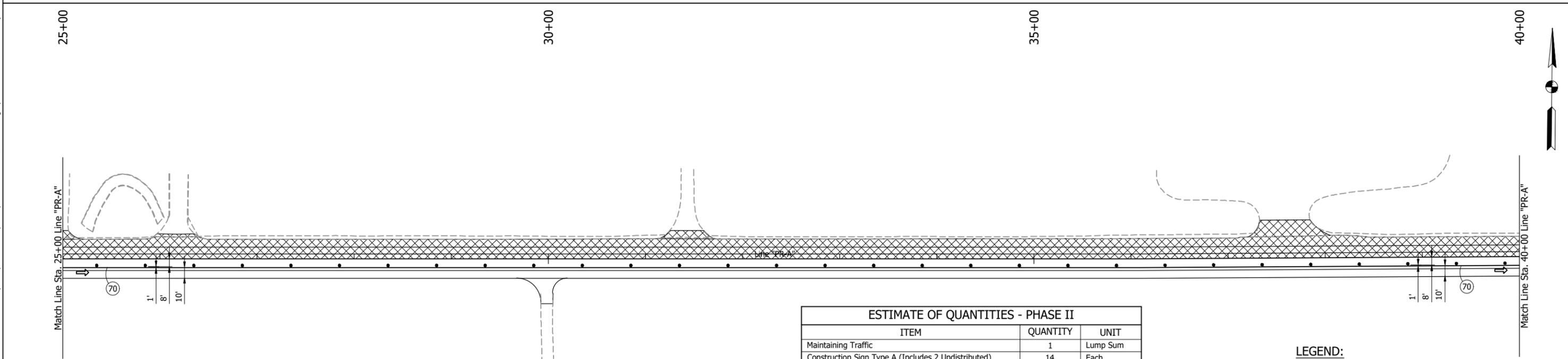
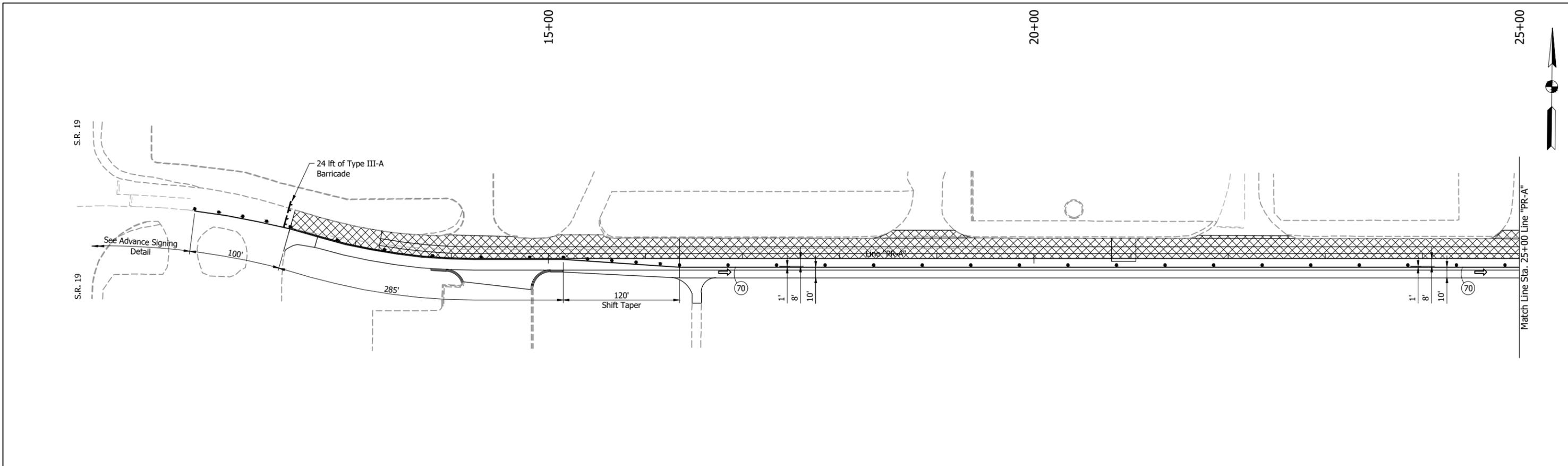
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE I

SCALE 1" = 50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 15 of 84
CONTRACT R-41142	PROJECT 1702848

DTC - 7/13/2020 8:51 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440MT_PL2_01.dwg (NOT PHASE II - 01)



ESTIMATE OF QUANTITIES - PHASE II		
ITEM	QUANTITY	UNIT
Maintaining Traffic	1	Lump Sum
Construction Sign Type A (Includes 2 Undistributed)	14	Each
Barricade Type III-B	252	LFT
Road Closure Sign Assemblies	7	Each
Temporary Pavement Marking, Removable, Yellow, 4"	5665	LFT
Detour Route Marker Assemblies	29	Each

- LEGEND:**
- Temporary Pavement Marking, Removable, Solid, Yellow, 4"
 - Drum
 - Construction Sign and Supports
 - Temporary Direction of Traffic
 - Line, Remove
 - Construction Area

NOTE:
Drum Spacing: 50 ft on Tangent, 25 ft on Taper.

NOT FOR CONSTRUCTION

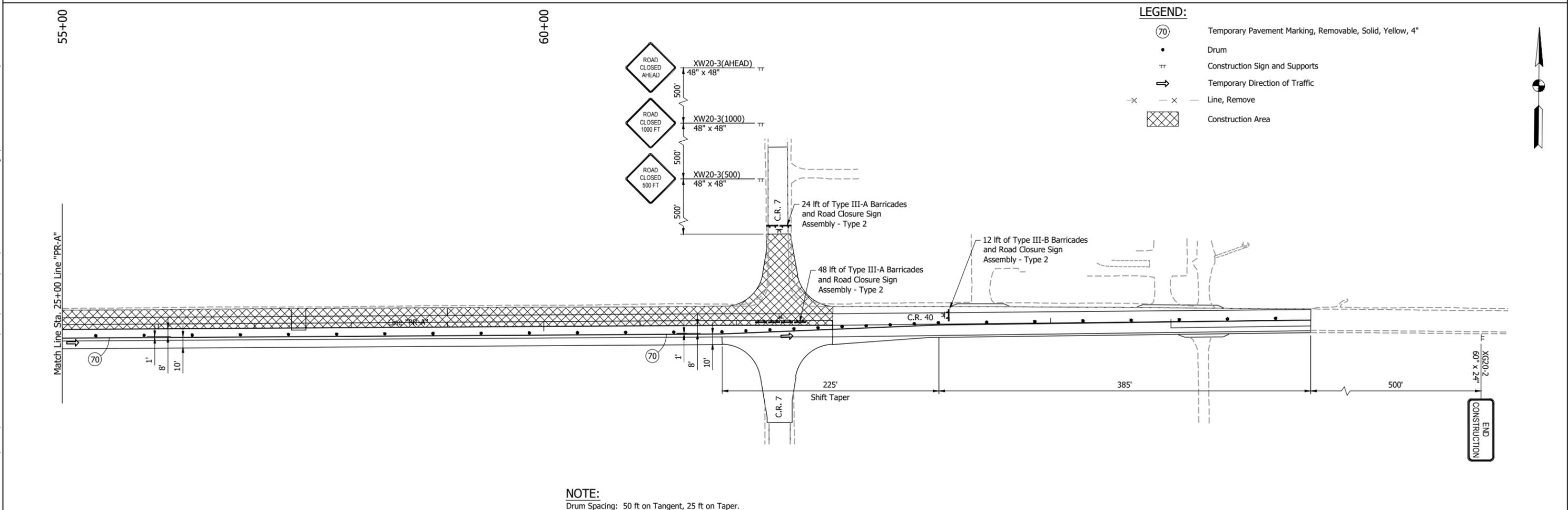
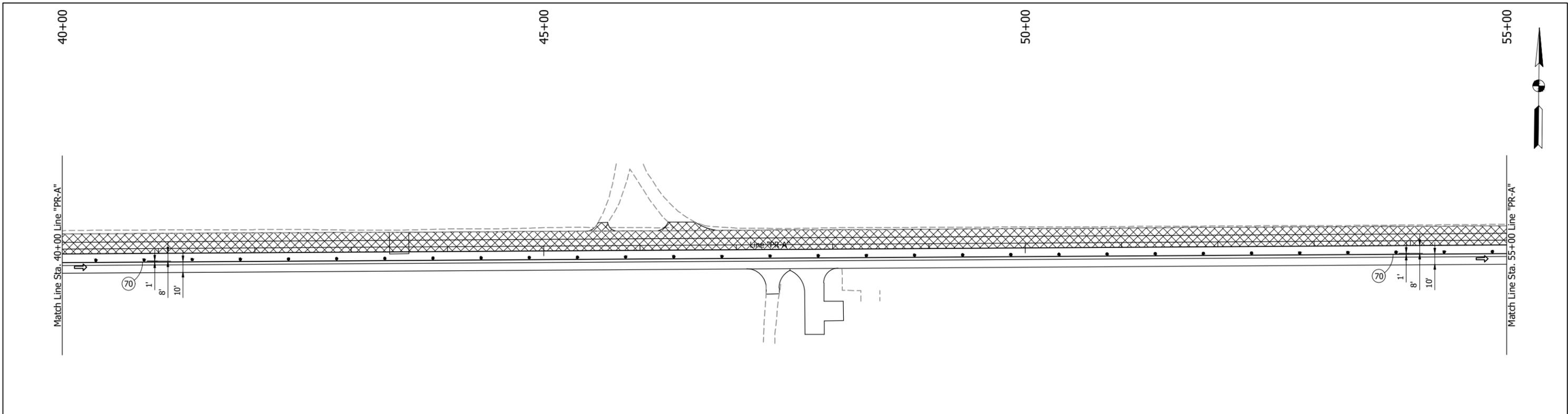
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ	
CHECKED: JDD	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC PHASE II

SCALE 1" = 50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 16 of 84
CONTRACT R-41142	PROJECT 1702848

DTC - 7/13/2020 8:51 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440MT_PL2_01.dwg (NOT PHASE II - 02)



LEGEND:

(70)	Temporary Pavement Marking, Removable, Solid, Yellow, 4"
•	Drum
TT	Construction Sign and Supports
→	Temporary Direction of Traffic
-x -x -	Line, Remove
XXXX	Construction Area

NOTE:
Drum Spacing: 50 ft on Tangent, 25 ft on Taper.

NOT FOR CONSTRUCTION

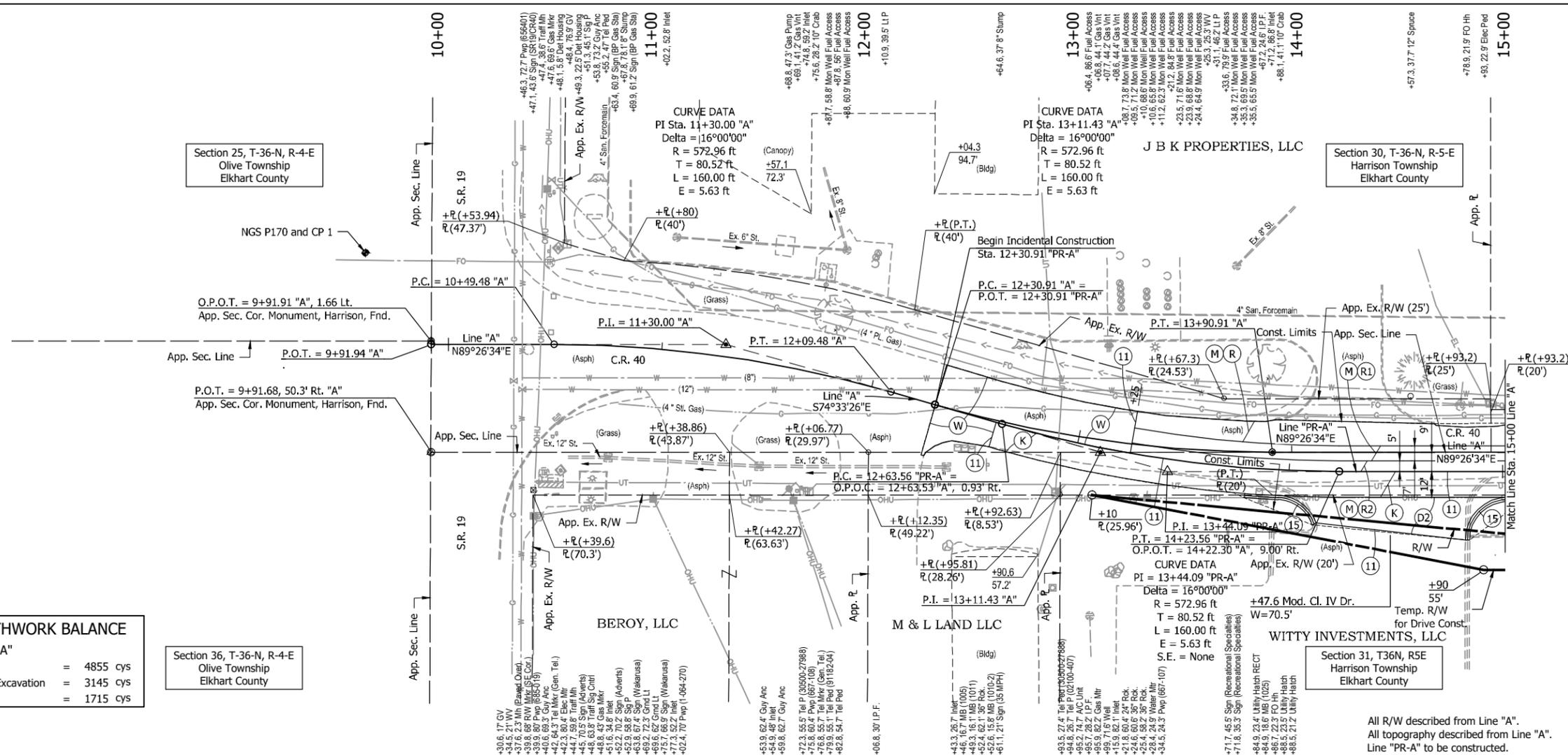
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: CJN	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC PHASE II	

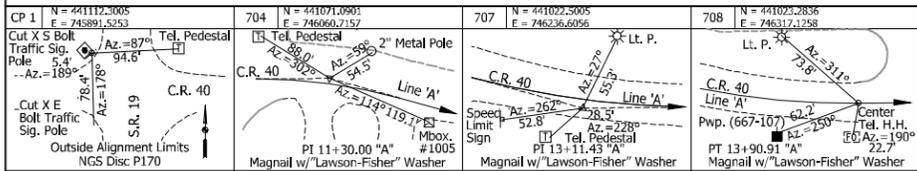
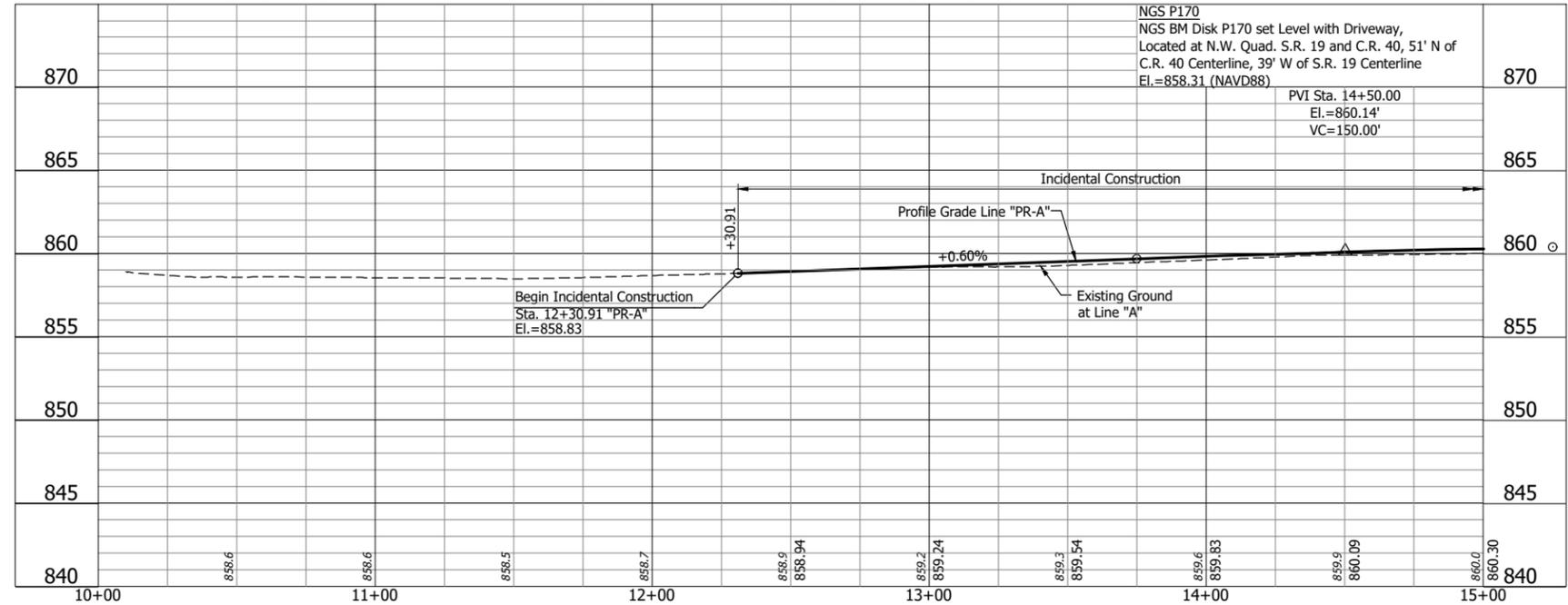
SCALE 1" = 50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 17 of 84
CONTRACT R-41142	PROJECT 1702848

EARTHWORK BALANCE	
Line "PR-A"	
Fill +25%	= 4855 cys
Common Excavation	= 3145 cys
Borrow	= 1715 cys

Section 36, T-36-N, R-4-E
Olive Township
Elkhart County



- LEGEND:**
- (D2) HMA for Approaches
165 #/sys HMA Surface, Type B on
275 #/sys HMA Intermediate, Type B on
660 #/sys HMA Base, Type B on
Subgrade Treatment Type II on
Geogrid, Type 1B
 - (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on
Subgrade Treatment, Type 1C
 - (M) Milling, Profile
 - (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
 - (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
 - (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (W) 165 #/sys QC/QA-HMA, 3, 70, Surface, 9.5 mm on
Transition Milling
 - (11) Sawcut
 - (15) Combined Concrete Curb and Gutter, Type B Modified



NOT FOR CONSTRUCTION

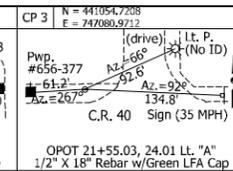
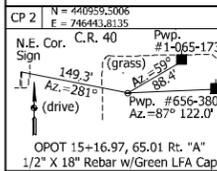
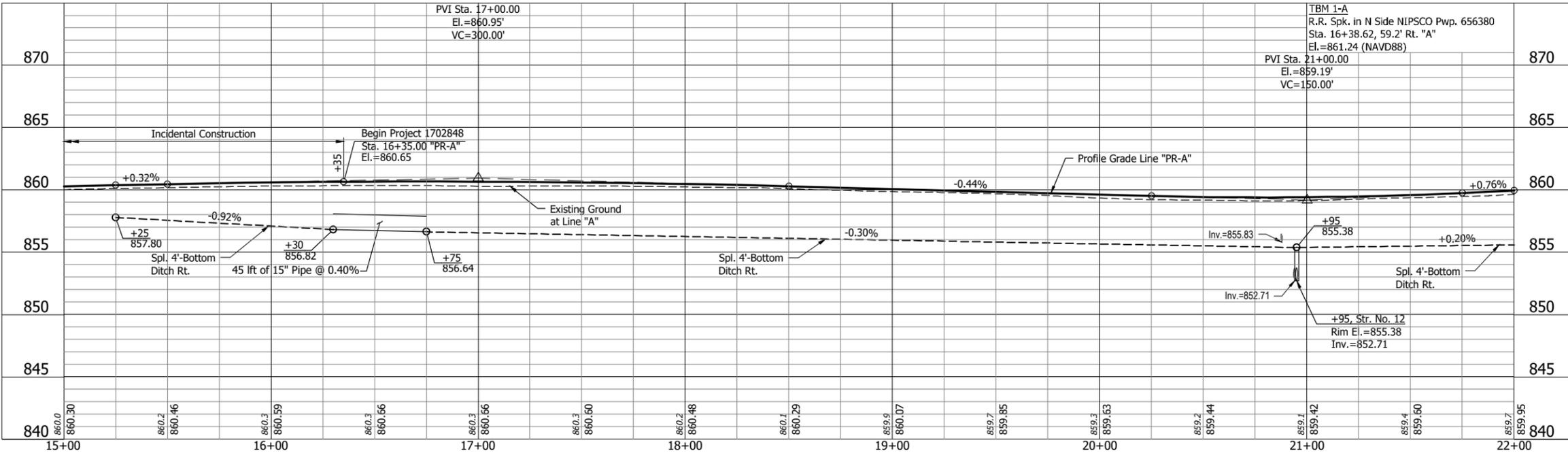
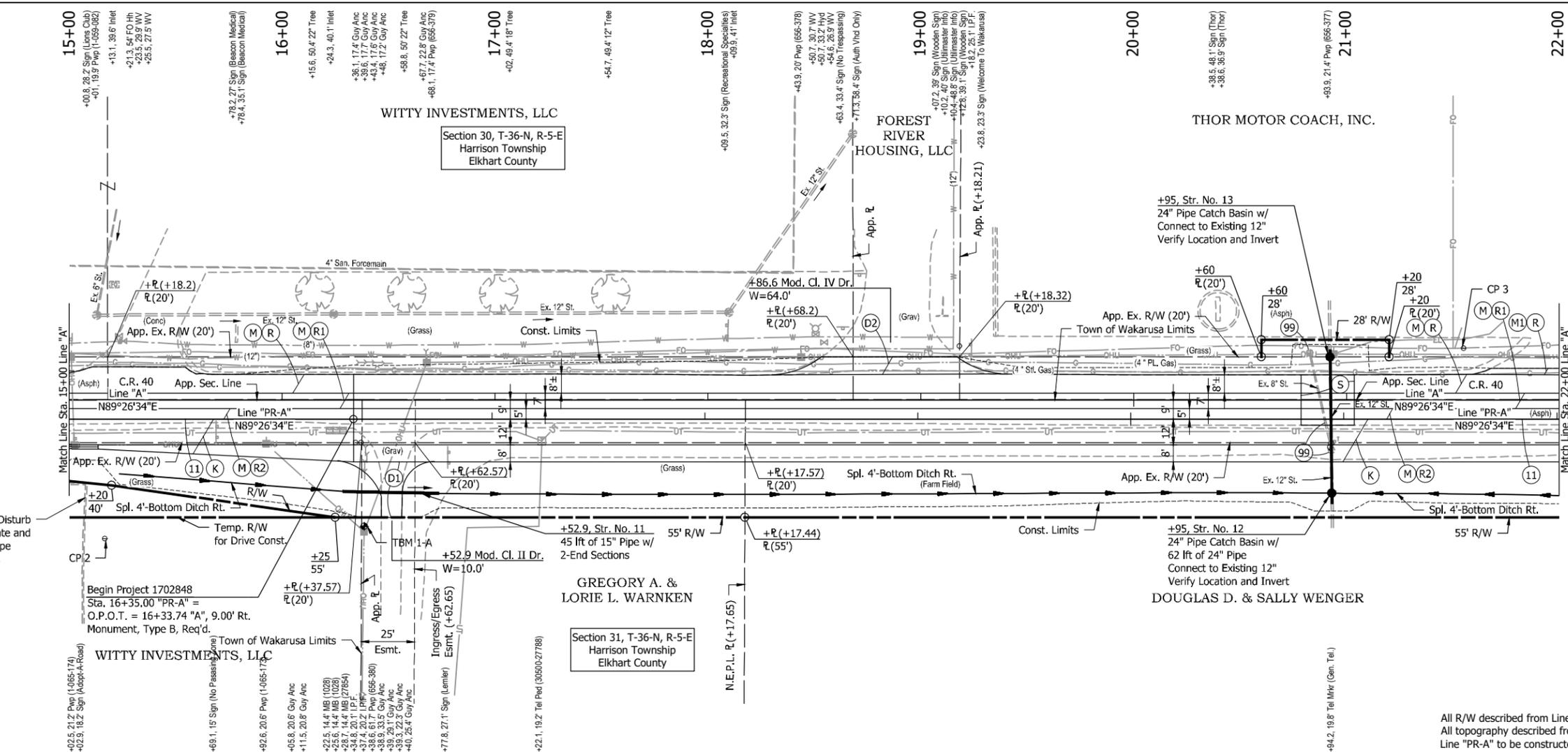
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 10+00 TO STA. 15+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	18 of 84
CONTRACT	PROJECT
R-41142	1702848

JDD - 7/13/2020 8:51 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440TR_PP02.dwg (PLAN & PROFILE)



NOT FOR CONSTRUCTION

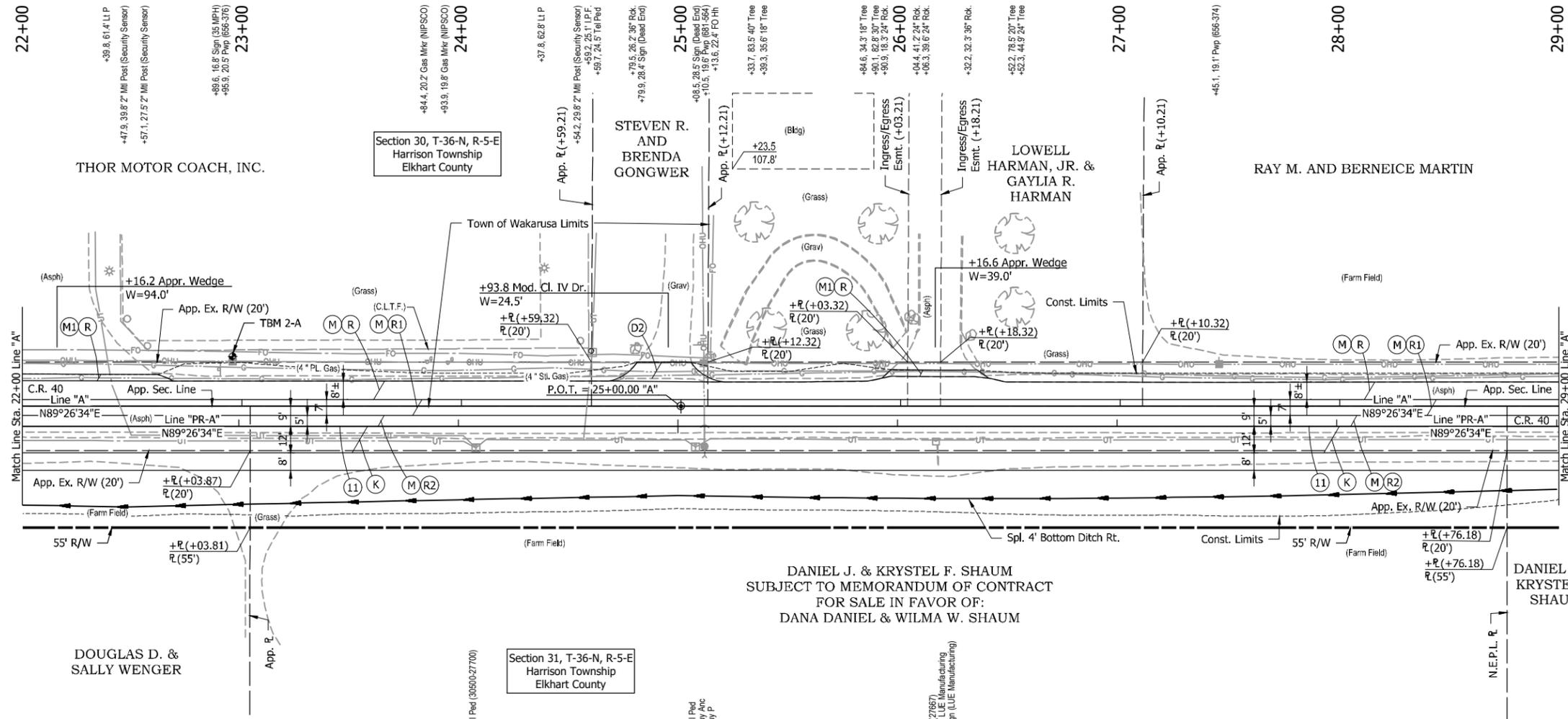
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

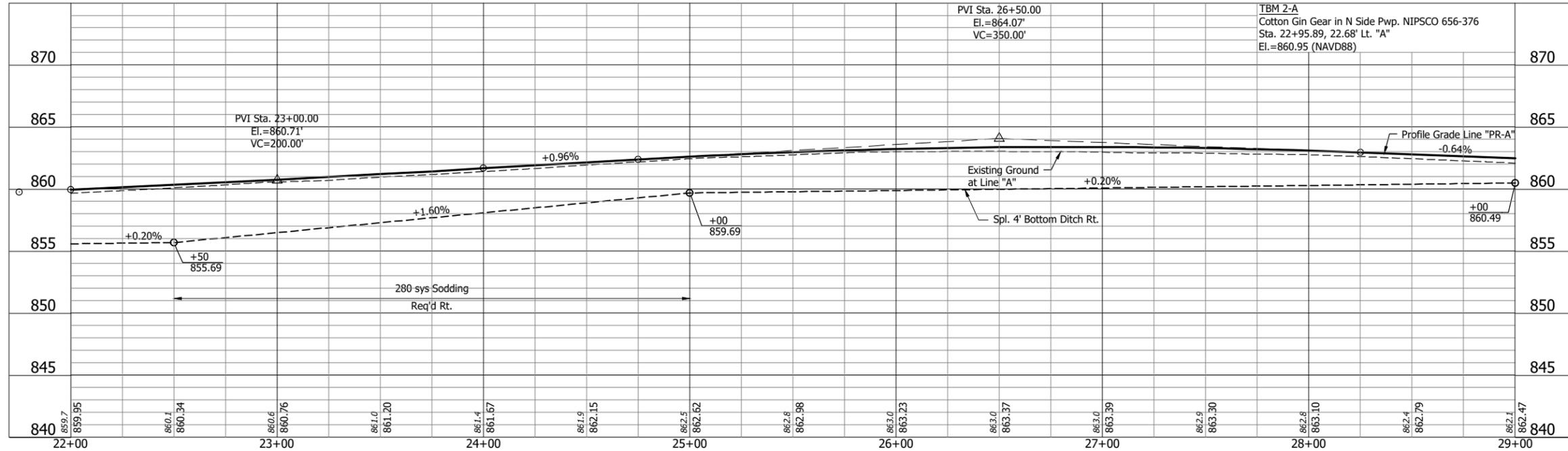
PLAN AND PROFILE - LINE "A"
STA. 15+00 TO STA. 22+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
R-41142	19 of 84
	PROJECT
	1702848

JDD - 7/13/2020 8:52 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440TR_PFO3.dwg (PLAN & PROFILE)



All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.



NOT FOR CONSTRUCTION

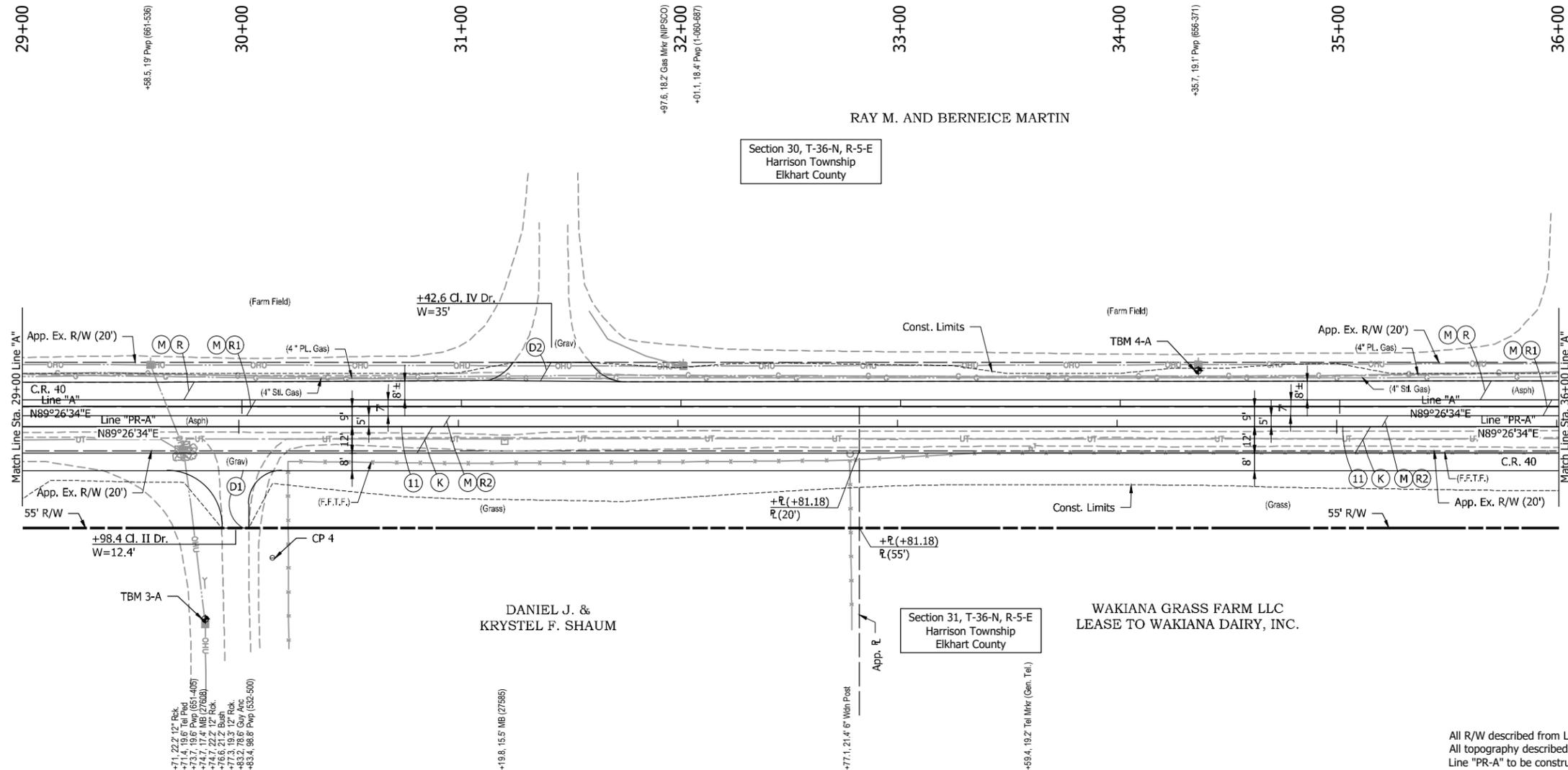
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 22+00 TO STA. 29+00

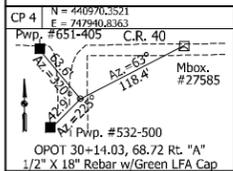
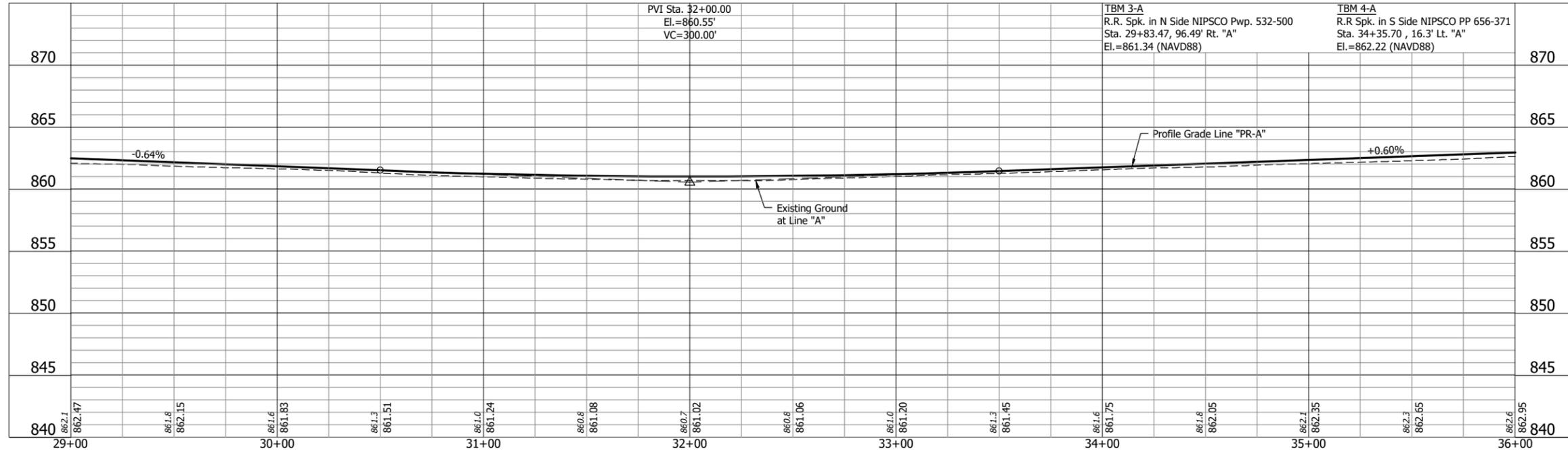
HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	20 of 84
CONTRACT	PROJECT
R-41142	

BJS - 7/13/2020 8:52 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\18844DTR_PP04.dwg (PLAN & PROFILE)



- LEGEND:**
- (D1) HMA for Approaches
165 #/sys HMA Surface, Type B on
275 #/sys HMA Intermediate, Type B on
6\" Compacted Aggregate No. 53 on
Subgrade Treatment Type II
 - (D2) HMA for Approaches
165 #/sys HMA Surface, Type B on
275 #/sys HMA Intermediate, Type B on
660 #/sys HMA Base, Type B on
Subgrade Treatment Type II on
Geogrid, Type 1B
 - (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on
Subgrade Treatment, Type 1C
 - (M) Milling, Profile
 - (M1) Milling, Approach
 - (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
 - (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
 - (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (11) Sawcut

All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.



NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

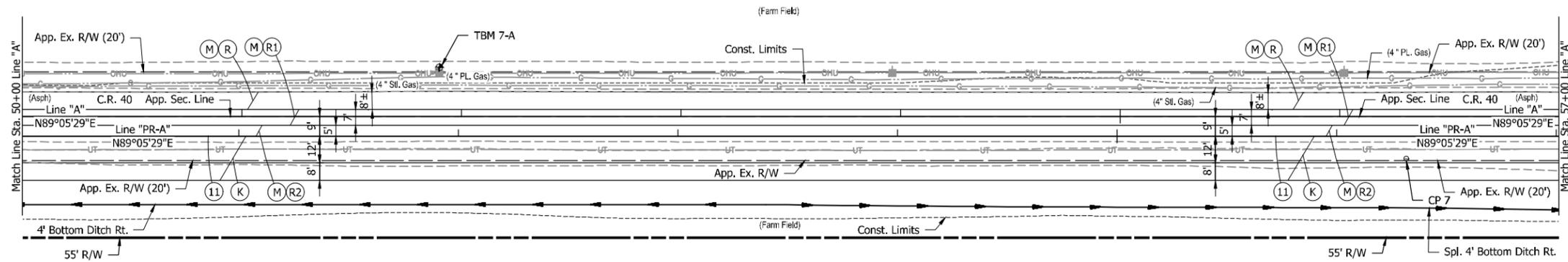
INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
STA. 29+00 TO STA. 36+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	21 of 84
CONTRACT	PROJECT
R-41142	1702848

50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00

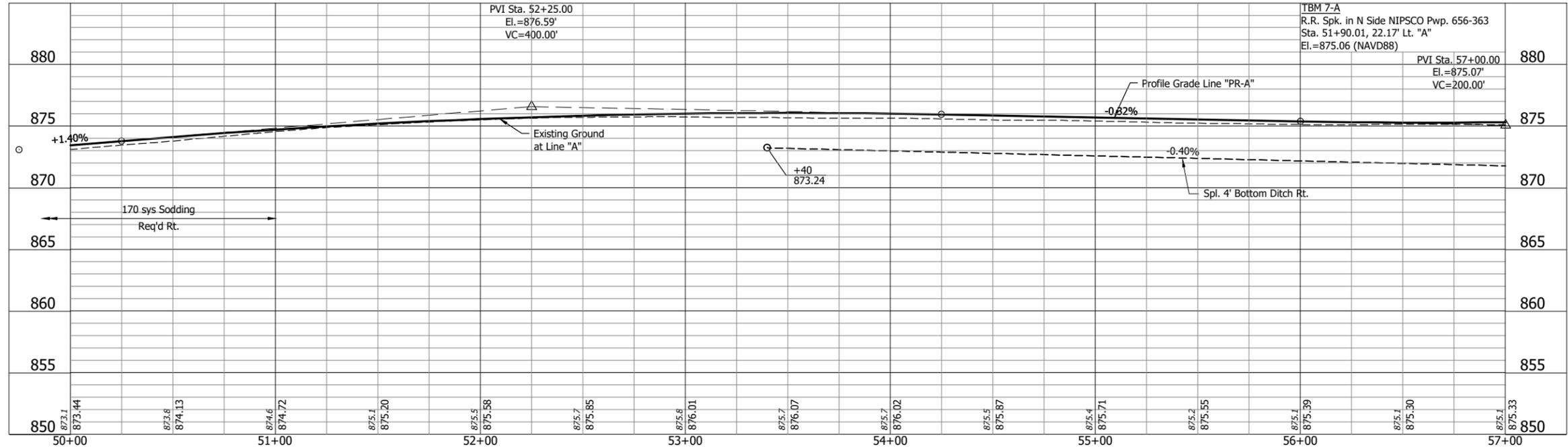
JONAS M. AND MARY ELLEN ZIMMERMAN
 Section 30, T-36-N, R-5-E
 Harrison Township
 Elkhart County



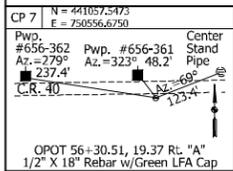
- LEGEND:**
- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on Subgrade Treatment, Type 1C
 - (M) Milling, Profile
 - (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
 - (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
 - (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (11) Sawcut

ARTHUR M. AND MARY ANN MARTIN
 Section 31, T-36-N, R-5-E
 Harrison Township
 Elkhart County

All R/W described from line "A".
 All topography described from line "A".
 Line "PR-A" to be constructed.



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NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "A"
 STA. 50+00 TO STA. 57+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	24 of 84
CONTRACT	PROJECT
R-41142	1702848

JDD - 7/13/2020 8:53 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440TR_PP08.dwg (PLAN & PROFILE)

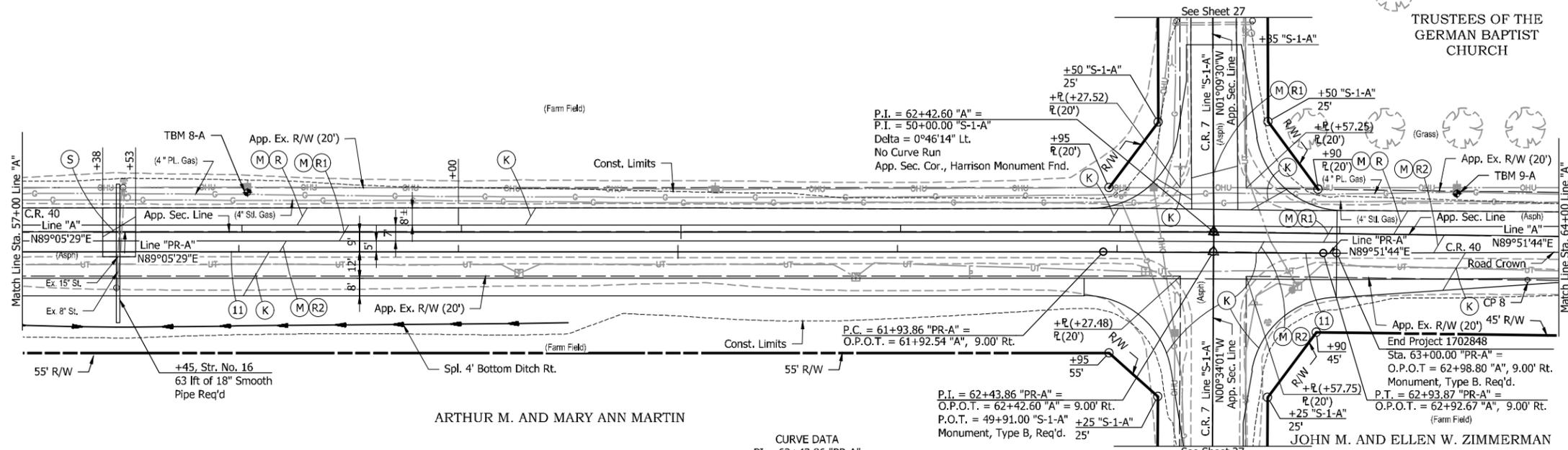
57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00

Section 30, T-36-N, R-5-E
Harrison Township
Elkhart County

JONAS M. AND MARY ELLEN ZIMMERMAN

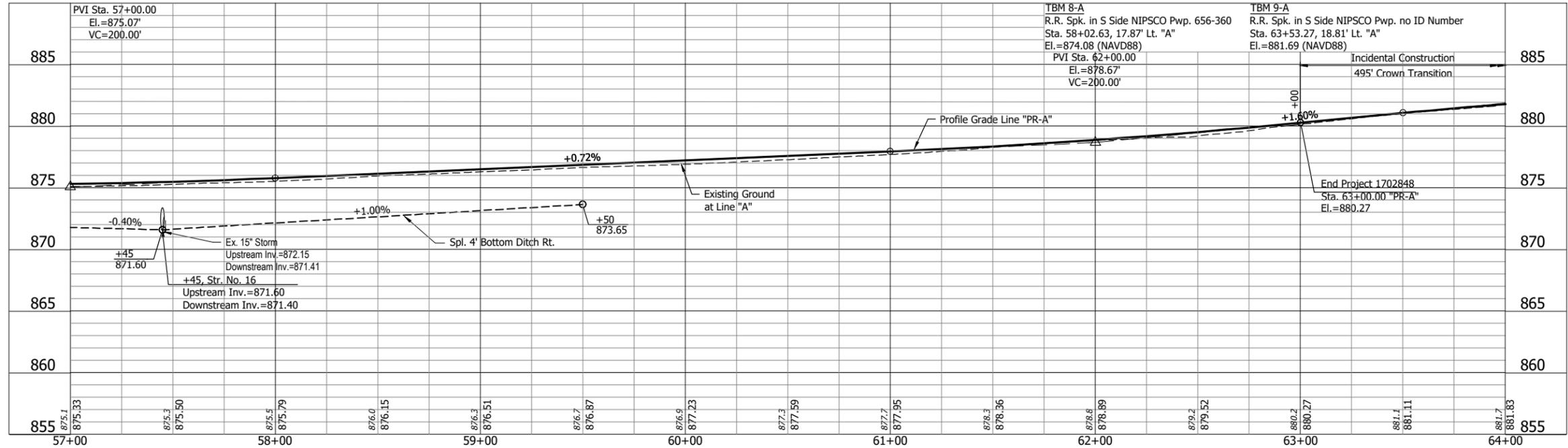
Section 29, T-36-N, R-5-E
Harrison Township
Elkhart County

TRUSTEES OF THE
GERMAN BAPTIST
CHURCH

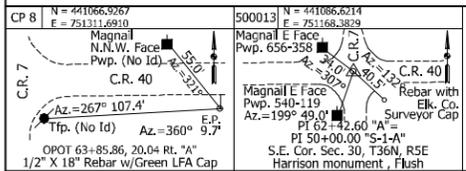


CURVE DATA
PI = 62+43.86 "PR-A"
Delta = 0°46'14"
R = 7435.65 ft
T = 50.0 ft
L = 100.0 ft
E = 0.17 ft
S.E. = None

- LEGEND:**
- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on Subgrade Treatment, Type 1C
 - (M) Milling, Profile
 - (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on
 - (R1) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
 - (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (S) HMA for Structure Installation, Type B 165 #/sys HMA Surface, Type B on 275 #/sys HMA Intermediate, Type B on 660 #/sys HMA Base, Type B on 6" Compacted Aggregate, No. 53 on Subgrade Treatment, Type II
 - (11) Sawcut



All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.



NOT FOR CONSTRUCTION

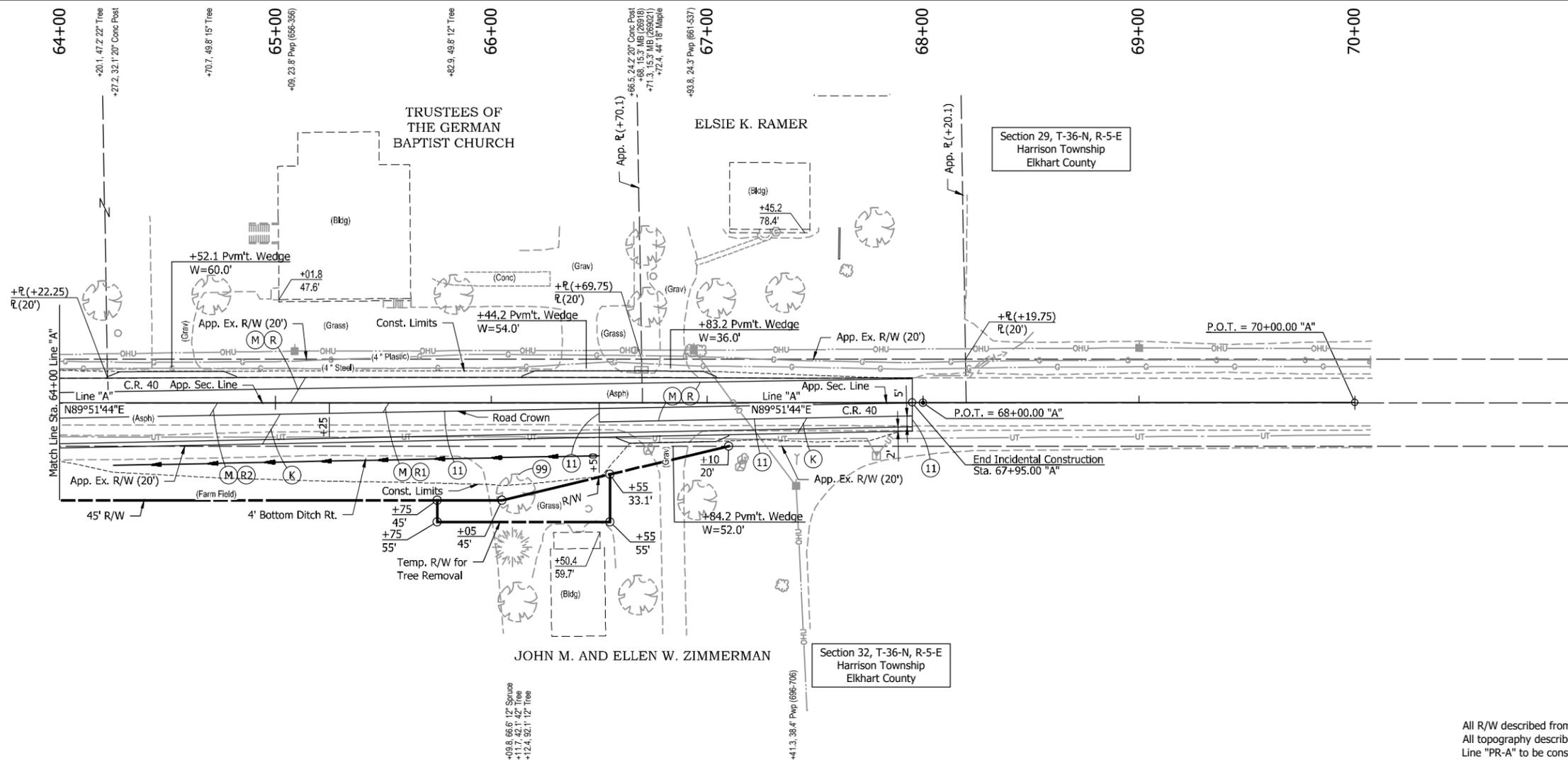
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE - LINE "A"
STA. 57+00 TO STA. 64+00**

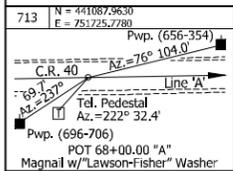
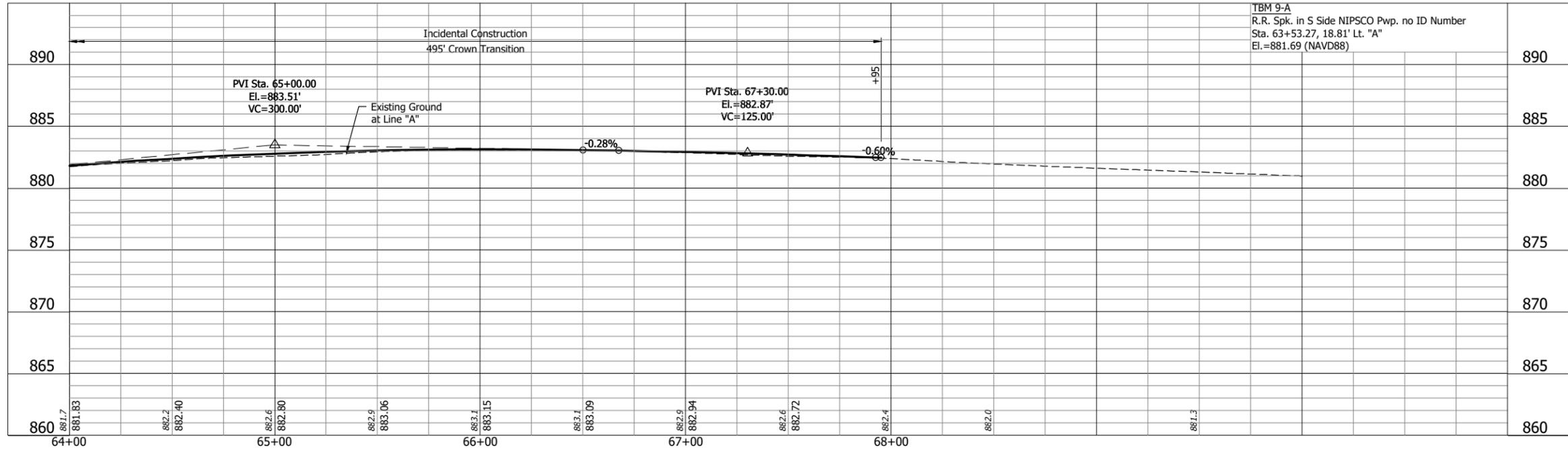
HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	25 of 84
CONTRACT	PROJECT
R-41142	1702848

JDD - 7/13/2020 8:53 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440TR_PFO9.dwg (PLAN & PROFILE)



- LEGEND:**
- (K) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on Subgrade Treatment, Type 1C
 - (M) Milling, Profile
 - (R) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (R2) 165 #/sys QC/QA HMA, 3, 70, Surface, 9.5 mm on 330 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 330 #/sys QC/QA HMA, 3, 64, Base 25.0 mm
 - (11) Sawcut

All R/W described from Line "A".
All topography described from Line "A".
Line "PR-A" to be constructed.



NOT FOR CONSTRUCTION

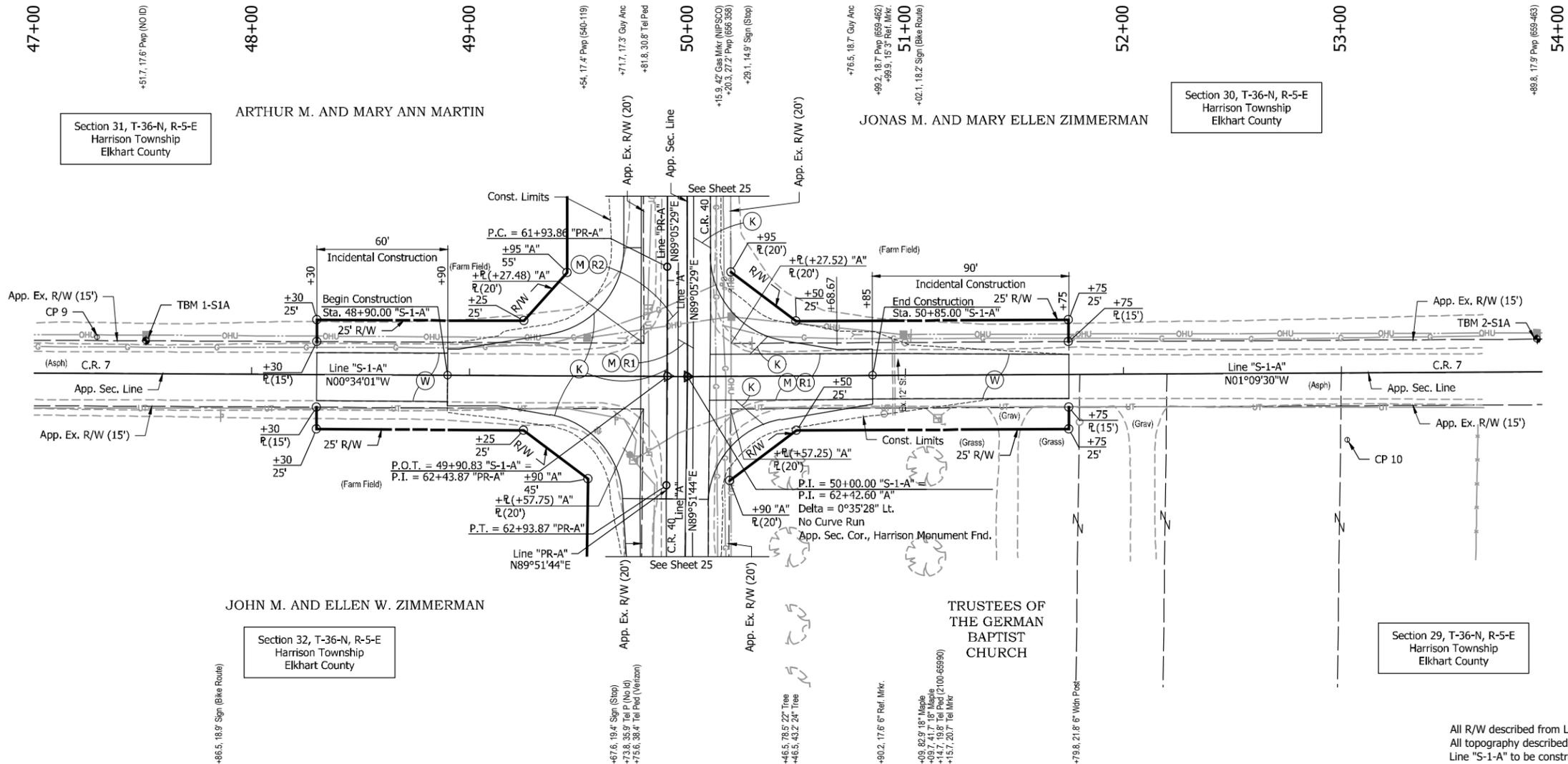
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: JDD	DRAWN: BJS		
CHECKED: MJG	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION

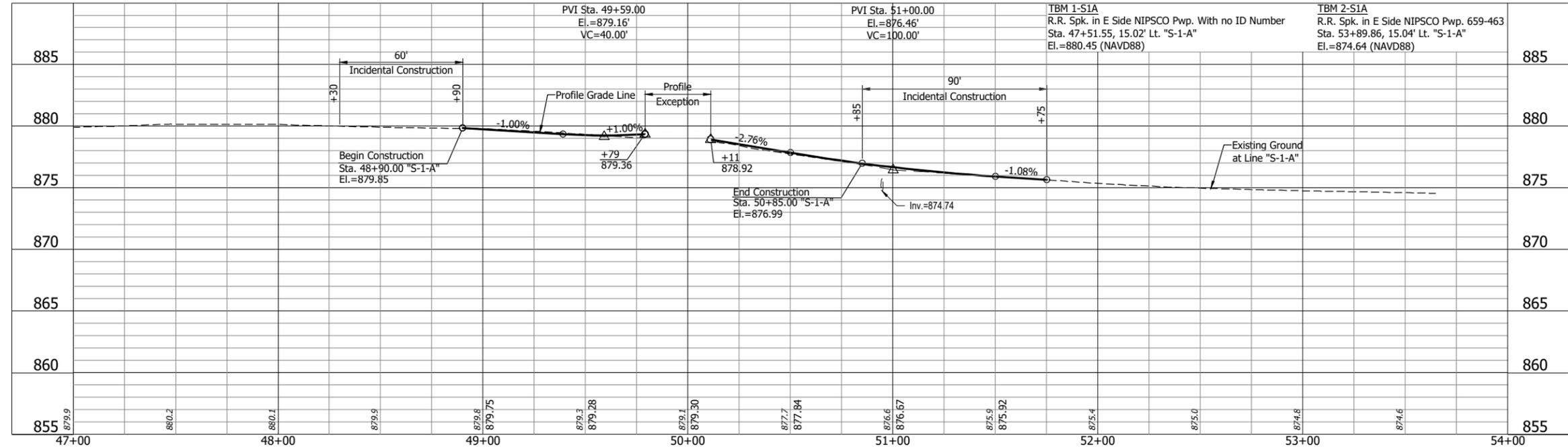
PLAN AND PROFILE - LINE "A"
STA. 64+00 TO STA. 70+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	26 of 84
CONTRACT	PROJECT
R-41142	1702848

JDD - 7/13/2020 8:53 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\188440TR_PP10.dwg (PLAN & PROFILE)



All R/W described from Line "S-1-A" except as shown.
 All topography described from Line "S-1-A".
 Line "S-1-A" to be constructed.



NOT FOR CONSTRUCTION

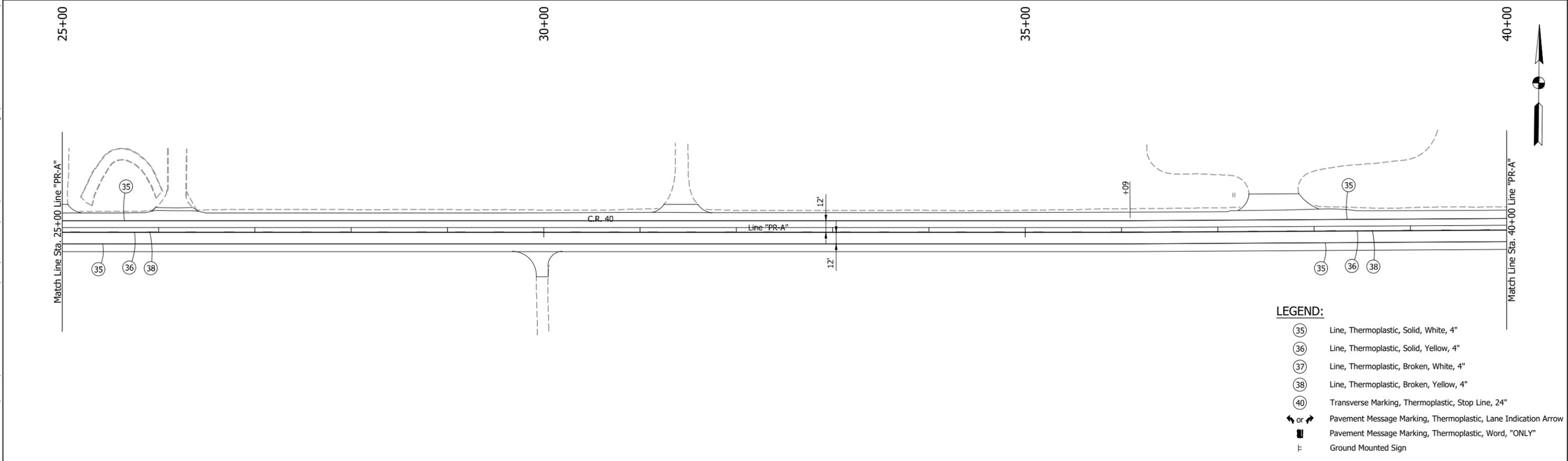
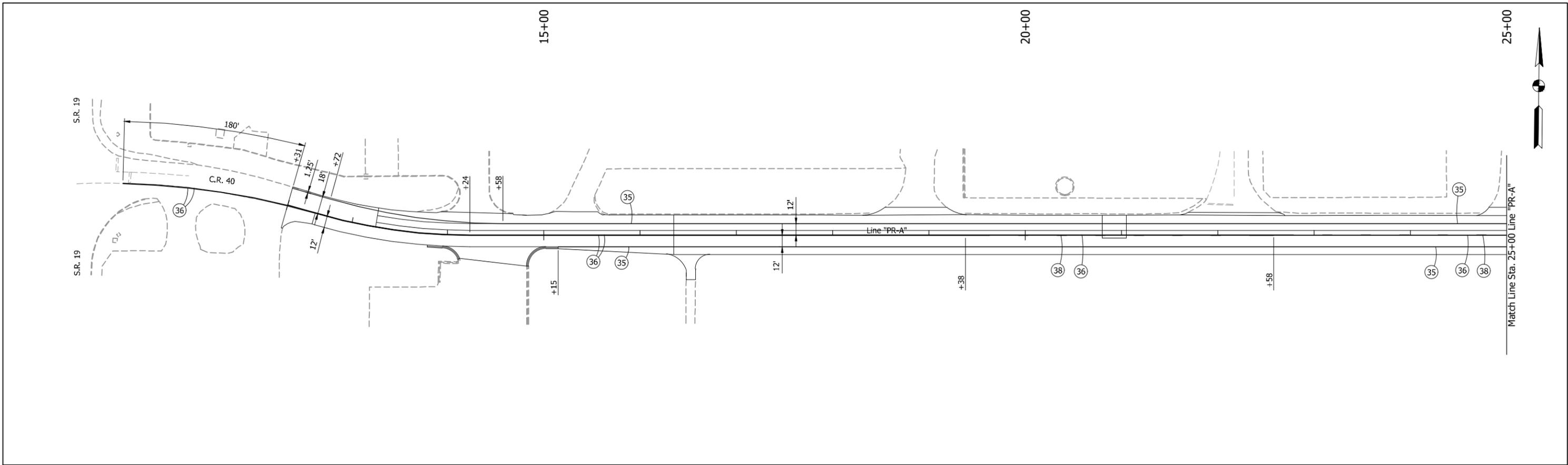
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JDD	DRAWN: BJS	
CHECKED: MJG	CHECKED: JDD	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE - LINE "S-1-A"
STA. 47+00 TO STA. 54+00

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1702848
SURVEY BOOK	SHEETS
	27 of 84
CONTRACT	PROJECT
R-41142	1702848

JDD - 7/13/2020 8:53 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\186440PM_PL01.dwg (PAYMENT MARKING - 01)



LEGEND:

- (35) Line, Thermoplastic, Solid, White, 4"
- (36) Line, Thermoplastic, Solid, Yellow, 4"
- (37) Line, Thermoplastic, Broken, White, 4"
- (38) Line, Thermoplastic, Broken, Yellow, 4"
- (40) Transverse Marking, Thermoplastic, Stop Line, 24"
- ↔ or ↔ Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- ONLY Pavement Message Marking, Thermoplastic, Word, "ONLY"
- ≡ Ground Mounted Sign

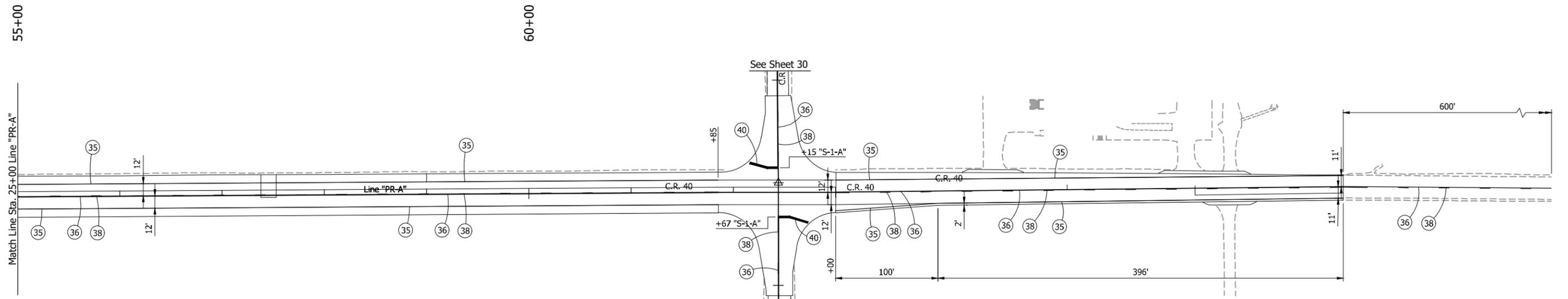
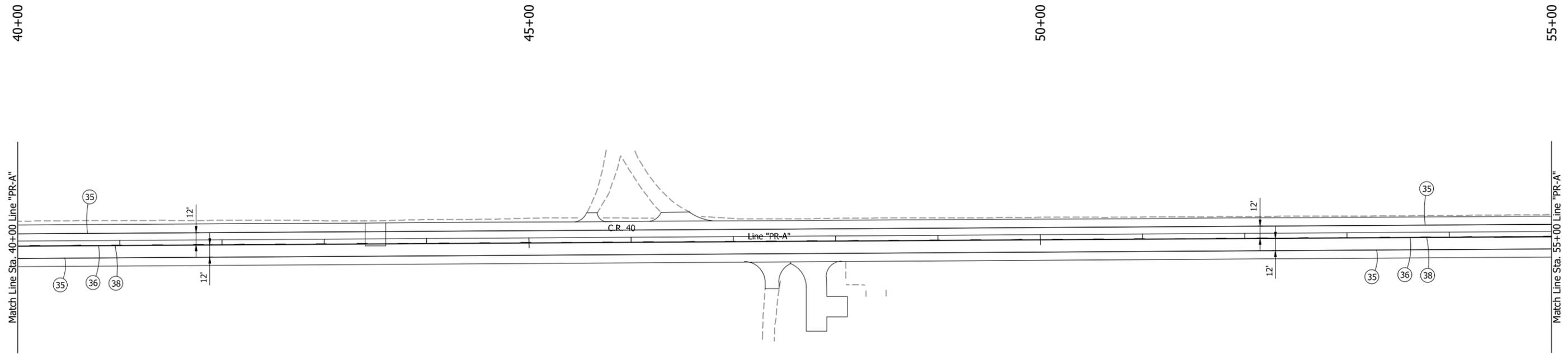
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____ DATE _____	
DESIGNED: DTC	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKINGS AND SIGNING PLANS	

SCALE 1"=50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 28 of 84
CONTRACT R-41142	PROJECT 1702848

JDD - 7/13/2020 8:53 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\186440PM_PL01.dwg (PAVEMENT MARKING - 02)



- LEGEND:**
- (35) Line, Thermoplastic, Solid, White, 4"
 - (36) Line, Thermoplastic, Solid, Yellow, 4"
 - (37) Line, Thermoplastic, Broken, White, 4"
 - (38) Line, Thermoplastic, Broken, Yellow, 4"
 - (40) Transverse Marking, Thermoplastic, Stop Line, 24"
 - ↔ or ↔ Pavement Message Marking, Thermoplastic, Lane Indication Arrow
 - ONLY Pavement Message Marking, Thermoplastic, Word, "ONLY"
 - ⊞ Ground Mounted Sign

NOT FOR CONSTRUCTION

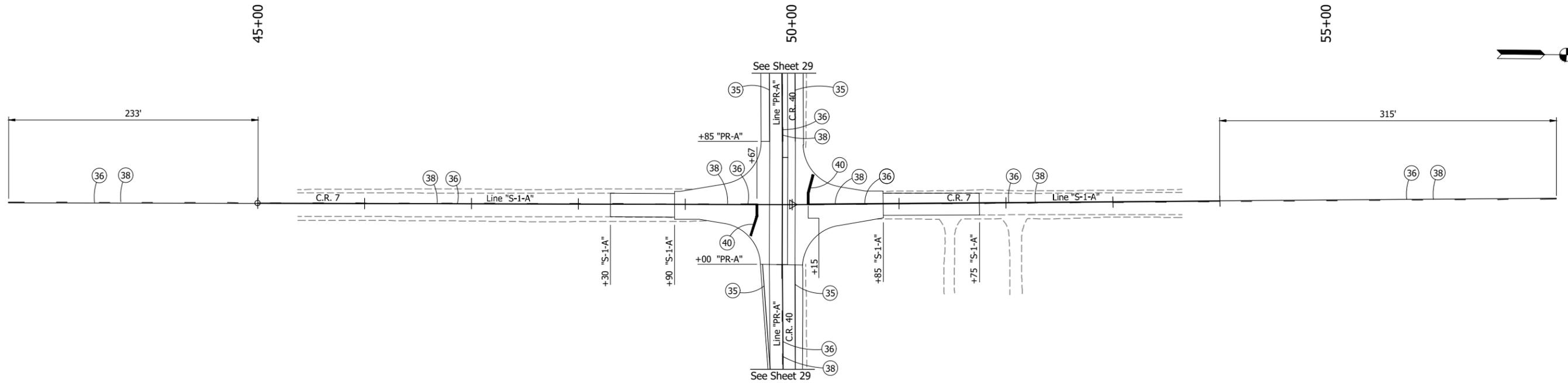
RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: DTC	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING PLANS

SCALE 1"=50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 29 of 84
CONTRACT R-41142	PROJECT 1702848

JDD - 7/13/2020 8:53 AM - U:\2018\201884 Elk Co CR40\Cad\Plan Set\Civil\186440PM_PL01.dwg (PAVEMENT MARKING - 03)



LEGEND:

- ③⑤ Line, Thermoplastic, Solid, White, 4"
- ③⑥ Line, Thermoplastic, Solid, Yellow, 4"
- ③⑦ Line, Thermoplastic, Broken, White, 4"
- ③⑧ Line, Thermoplastic, Broken, Yellow, 4"
- ④① Transverse Marking, Thermoplastic, Stop Line, 24"
- ↔ or ↔ Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- ONLY Pavement Message Marking, Thermoplastic, Word, "ONLY"
- ⊞ Ground Mounted Sign

NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: DTC	DRAWN: JAJ		
CHECKED: JDD	CHECKED: JDD		

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKINGS AND SIGNING PLANS	

SCALE 1"=50'	BRIDGE FILE
	DESIGNATION 1702848
SURVEY BOOK	SHEETS 30 of 84
CONTRACT R-41142	PROJECT 1702848



APPENDIX C
EARLY COORDINATION



Sample Early Coordination Letter

PAUL A. HUMMEL, P.E.
PIPER C. TITTLE, P.E.
MICHAEL J. GUZIK, P.E.

201884.20

GREGORY L. HOLDEN, P.E.
JON E. RIEMKE, P.E.
JEFFREY L. McKEAN, P.E.
CHRISTOPHER J. JETER, P.E.
DENNIS A. ZEBELL, P.E.
BENJAMIN P. HOLDEN, P.E.
DAN G. DELGADO, P.E.
MICHAEL F. JOHNSTON, P.E.
JEFFREY M. BYRD, P.E.
JARED M. HUSS, P.E.
AARON W. BLANK, P.L.S., P.E.
BREAGAN P. EICHER, P.E.
KEVIN J. SIEDLECKI, P.E.
CHRISTOPHER M. VANHULLE, P.E.
MICHELLE M.G. SLACK, P.L.S.
MAX WATKINS, P.E., S.E.
DMITRI G. ADAMS, P.E.
AMANDA R. BUDREAU, P.E.
JOSEPH D. DUNBAR, P.E.

July 3, 2019
(Sent Via Email 7-3-19)

Mr. Jerry Raynor
State Conservationist
Natural Resources Conservation Service
6013 Lakeside Boulevard
Indianapolis, Indiana 46278

RE: Project: 1702848
Des. No.: 1702848
Route: County Road (C.R.) 40 from State Road (S.R.) 19 to C.R.7
Description: Road Reconstruction and Buggy Lane Additions Project
Elkhart County, Indiana

Dear Mr. Raynor:

Elkhart County, through the Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA), intends to proceed with a project involving the aforementioned roadway in Elkhart 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 on C.R. 40, from S.R. 19 to C.R. 7, in Elkhart County, Indiana. This section of C.R. 40 is a two-lane Rural Major Collector. The existing C.R. 40 roadway, in the project area, consists of 11 ft travel lanes in each direction and minimal existing usable shoulders. Culverts, drainage tiles, and standpipes exist throughout the project area. The approximate existing right-of-way is 40 ft in full for C.R. 40 and 40 ft in full for C.R. 7. Additional permanent right-of-way will be required and is expected to equal or exceed 0.5 acres.

The purpose of this project is to enhance roadway safety along C.R. 40 for Amish horse and buggy, bicyclist, and motor vehicle traffic and to improve the current roadway geometrics to meet current INDOT Design Standards for Rural Collectors of Annual Average Daily Traffic (AADT) between 3,000 and 5,000 Vehicles Per Day (VPD). The current proposed project would include the widening of C.R. 40 into two 12 ft travel lanes with 8 ft paved shoulders. The project limits would be from approximately 60 ft east of the C.R. 40 and S.R. 19 intersection, continue along C.R. 40, and end approximately 400 ft east of the C.R. 40 and C.R. 7 intersection. The preferred method of traffic maintenance would be to maintain traffic on C.R. 40 during construction without a detour route. Traffic would be maintained on the existing pavement as the widened portion of the project is being constructed to the south. Work on the terminus ends of the project, HMA surface placement, and work on crossing culverts would require flagging operations to execute the construction activities.



Mr. Jerry Raynor
July 3, 2019
Page 2

Land use in the vicinity of the project is primarily comprised of agricultural and industrial land with some residential land use. The INDOT Ecology & Permits Office will review any waters and wetlands determinations and a biological assessment to identify any ecological resources that may be present. This project qualifies for the application of the USFWS range-wide programmatic informal consultation for the Indiana Bat and the Northern Long-eared Bat and a USFWS IPaC determination key will be provided to USFWS for review separately. Coordination will occur with INDOT Cultural Resources Office regarding any archaeological and historic resources for compliance with Section 106 conformity. The results of this investigation will be forwarded to the State Historic Preservation Officer for review and concurrence.

Should we not receive your response **within thirty (30) calendar days** from the date of this letter, it will be assumed your agency feels there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. Please feel free to contact Mr. Christopher J. Jeter, P.E. of Lawson-Fisher Associates P.C. at (574) 234-3167, cjeter@lawson-fisher.com or Mr. Kent P. Schumacher, P.E., Elkhart County Engineer at (574) 533-0538, kschumacher@elkcohw.org should you have any questions regarding this matter. Thank you in advance for your input.

Very truly yours,

LAWSON-FISHER ASSOCIATES P.C.

Christopher J. Jeter, P.E.
Senior Civil Engineer

CJJ/ael

Encls.

- c: Environmental Geology Section, Indiana Geological Survey
- Regional Environmental Coordinator, National Park Service w/Encls.
- Joyce Newland, Federal Highway Administration w/Encls.
- IDNR Environmental Coordinator w/Encls.
- Michael Wurl, U.S. Department of Housing and Urban Development w/Encls.
- Indiana Department of Environmental Management
- Chief, Groundwater Section, Indiana Department Environmental Management w/Encls.
- Karen Novak, Environmental Manager Supervisor, INDOT Fort Wayne District w/Encls.
- Michiana Area Council of Governments w/Encls.
- Elizabeth McCloskey, U.S. Fish and Wildlife Service w/Encls.
- Phil Barker, P.S., Elkhart County Surveyor w/Encls.
- Carl Gilbert, Elkhart County Drainage Technician II w/Encls.
- Charlie McKenzie, P.E., Director, Elkhart County Highway Department w/Encls.
- Manager, Public Hearings, INDOT w/Encls.
- Elkhart County Council w/Encls.
- Elkhart County Board of Commissioners w/Encls.
- Jeff Siegel, Elkhart County Sheriff w/Encls.
- Matt Moyer, Wakarusa Town Council President w/Encls.
- James Emans, P.E., Town of Wakarusa w/Encls.
- Jeff Troxel, Wakarusa Town Manager w/Encls.

September 24, 2020

Christopher J. Jeter, P.E.
Lawson-Fisher Associates
525 West Washington Avenue
South Bend, Indiana 46601

Dear Mr. Jeter:

On July 18, 2019 NRCS responded to an FPPA request for a proposed project to reconstruct the road in County Road 40 from State Road 19 to County Road 7 in Elkhart County, Indiana (Des Nos 1702848). The AD-1006, as completed by Lawson-Fisher Associates, had a value of 164 for Part VII.

7CFR658.4(c) (3) states that "Sites receiving scores totaling 160 or more be given increasingly higher levels of consideration for protection". 7CFR658.4(c) (4) lists options such as "Alternative sites and locations" or "use of land that is not farmland". Given the nature of this project, NRCS understands that the need to have this project in its current location.

The role of NRCS in this process is to inform all parties involved that the project has eclipsed a certain threshold, but we do not approve or disapprove of the specific project details or impacts. It is up to the sponsoring Federal Agency to make a final decision whether a higher level of consideration for protection is warranted.

If you need additional information, please contact Rick Neilson at 317-295-5875.

Sincerely,

RICHARD Digitally signed by
RICHARD NEILSON
NEILSON Date: 2020.09.24
12:09:43 -04'00'

RICK NEILSON
State Soil Scientist



From: [Chris Jeter](#)
To: [Ruffner, Shelby - NRCS, Indianapolis, IN](#)
Cc: daniel.phillips@usda.gov; jerry.raynor@usda.gov
Subject: RE: NRSC Response Letter - Des No 1702848
Date: Wednesday, September 9, 2020 5:00:39 PM
Attachments: [image004.png](#)
[190718_1317_Des1702848-LFA Response 200909-signed CJJ.pdf](#)
[image003.png](#)

Good Afternoon Shelby,

On behalf of Elkhart County, Indiana, please find the enclosed completed NRCS-CPA-106 form for the C.R. 40 Road Reconstruction and Buggy Lanes Addition Project (Des No. 1702848) for your records. The total points received were more than the threshold score of 160 for significant impacts to farmland.

Please contact me with any questions or comments.

Thank you,

Chris



Christopher J. Jeter, P.E. | Project Manager
525 West Washington Avenue | South Bend, IN 46601
O: 574-234-3167
C: 574-315-7470
www.lawson-fisher.com

From: Ruffner, Shelby - NRCS, Indianapolis, IN <shelby.ruffner@usda.gov>
Sent: Thursday, July 18, 2019 1:17 PM
To: Chris Jeter <cjeter@lawson-fisher.com>
Subject: NRSC Response Letter - Des No 1702848

Please find attached NRSC Response Letter - Des No 1702848.

Thanks,

Shelby Ruffner

Indiana State Office Administrative Support Assistant
United States Department of Agriculture
Natural Resources Conservation Service
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
Office: (317) 295-5842



**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)	3. Date of Land Evaluation Request	4. Sheet 1 of _____
---	------------------------------------	---------------------

1. Name of Project	5. Federal Agency Involved
--------------------	----------------------------

2. Type of Project	6. County and State
--------------------	---------------------

PART II (To be completed by NRCS)	1. Date Request Received by NRCS	2. Person Completing Form
--	----------------------------------	---------------------------

3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input type="checkbox"/> NO <input type="checkbox"/>	4. Acres Irrigated Average Farm Size
---	--

5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: _____ %	7. Amount of Farmland As Defined in FPPA Acres: _____ %
------------------	---	--

8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS
--	---	---

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
---	---	--	--	--

	Corridor A	Corridor B	Corridor C	Corridor D
--	------------	------------	------------	------------

A. Total Acres To Be Converted Directly				
---	--	--	--	--

B. Total Acres To Be Converted Indirectly, Or To Receive Services				
---	--	--	--	--

C. Total Acres In Corridor				
----------------------------	--	--	--	--

PART IV (To be completed by NRCS) Land Evaluation Information				
--	--	--	--	--

A. Total Acres Prime And Unique Farmland				
--	--	--	--	--

B. Total Acres Statewide And Local Important Farmland				
---	--	--	--	--

C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
---	--	--	--	--

D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
--	--	--	--	--

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
--	--	--	--	--

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points			
--	----------------	--	--	--

1. Area in Nonurban Use	15			
-------------------------	----	--	--	--

2. Perimeter in Nonurban Use	10			
------------------------------	----	--	--	--

3. Percent Of Corridor Being Farmed	20			
-------------------------------------	----	--	--	--

4. Protection Provided By State And Local Government	20			
--	----	--	--	--

5. Size of Present Farm Unit Compared To Average	10			
--	----	--	--	--

6. Creation Of Nonfarmable Farmland	25			
-------------------------------------	----	--	--	--

7. Availability Of Farm Support Services	5			
--	---	--	--	--

8. On-Farm Investments	20			
------------------------	----	--	--	--

9. Effects Of Conversion On Farm Support Services	25			
---	----	--	--	--

10. Compatibility With Existing Agricultural Use	10			
--	----	--	--	--

TOTAL CORRIDOR ASSESSMENT POINTS	160			
----------------------------------	-----	--	--	--

PART VII (To be completed by Federal Agency)				
---	--	--	--	--

Relative Value Of Farmland (From Part V)	100			
--	-----	--	--	--

Total Corridor Assessment (From Part VI above or a local site assessment)	160			
---	-----	--	--	--

TOTAL POINTS (Total of above 2 lines)	260			
--	------------	--	--	--

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
-----------------------	---	-----------------------	--

5. Reason For Selection:

Signature of Person Completing this Part: <i>Christopher J. Jeter</i>	DATE
--	------

NOTE: Complete a form for each segment with more than one Alternate Corridor

July 18, 2019

Christopher J. Jeter, P.E.
Lawson-Fisher Associates
525 West Washington Avenue
South Bend, Indiana 46601

Dear Mr. Jeter:

The proposed project to reconstruct the road in County Road 40 from State Road 19 to County Road 7 in Elkhart County, Indiana (Des No. 1702848), as referred to in your letter received July 8, 2019, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact Daniel Phillips at 317-295-5871.

Sincerely,

JERRY RAYNOR Digitally signed by JERRY RAYNOR
Date: 2019.07.18 12:58:55 -04'00'

JERRY RAYNOR
State Conservationist

Enclosures



Organization and Project Information

Project ID: 1702848
Des. ID: 1702848
Project Title: C.R. 40 Road Reconstruction and Buggy Lane Additions Project
Name of Organization: Lawson-Fisher Associates P.C.
Requested by: Christopher Jeter

Environmental Assessment Report

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

*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.

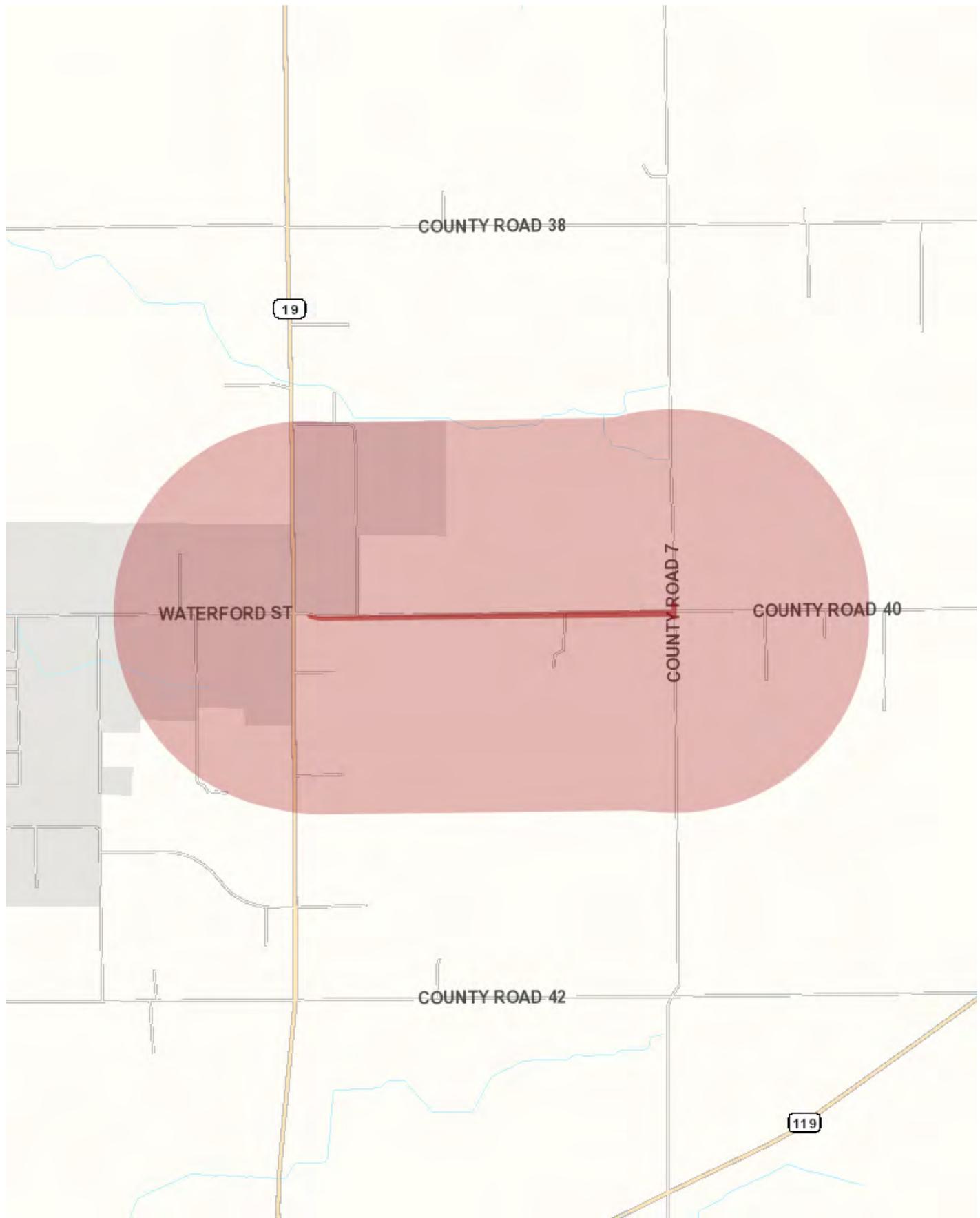
This information was furnished by Indiana Geological Survey

Address: 420 N. Walnut St., Bloomington, IN 47404

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: October 28, 2020



Metadata:

- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

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

DNR #: ER-21663

Request Received: July 8, 2019

Requestor: Lawson-Fisher Associates PC
Christopher J Jeter, PE
525 West Washington Avenue
South Bend, IN 46601-0000

Project: CR 40 road reconstruction and buggy lane additions from SR 19 to CR 7, Wakarusa;
Des #1702848

County/Site info: Elkhart

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

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

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

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

Fish & Wildlife Comments: The 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 within the project area using a mixture of grasses (excluding all varieties of tall fescue), sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. 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.
5. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
6. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

THIS IS NOT A PERMIT

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

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Date: August 7, 2019

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

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

Elkhart County Highway Department
Timothy W. Jackson, P.E.
610 Steury Avenue
Goshen , IN 46528
Date August 26, 2020

Lawson-Fisher Associates P.C.
Christopher J. Jeter, P.E.
525 West Washington Avenue
South Bend , IN 46601

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: INDOT Des No. 1702848 - C.R. 40 from S.R. 19 to C.R. 7. Road Reconstruction and Buggy Lane Additions Project: The purpose of this project is to enhance roadway safety along C.R. 40 for Amish horse and buggy, bicyclist, and motor vehicle traffic. The current proposed project would include widening C.R. 40 to the south, into two 12 foot travel lanes with 8 foot paved shoulders. The project limits would start approximately 60 feet east of the C.R. 40 and S.R. 19 intersection, continue along C.R. 40, and end 400 feet east of the C.R. 40 and C.R. 7 intersection.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service

National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the following statutes:
 - o IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - o IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - o IC 14-28-1 Flood Control Act 310 IAC 6-1
 - o IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - o IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - o IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>) . Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
 - <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq> (<http://www.in.gov/idem/4917.htm#constreq>)), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html> (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm> (<http://www.in.gov/idem/4148.htm>)) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).)

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation

of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf.) It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit:

<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit:

<http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2, Asphalt Paving Rule

(<http://www.ai.org/legislative/iac/T03260/A00080.PDF>
(<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

INDOT Des No. 1702848 - C.R. 40 from S.R. 19 to C.R. 7. Road Reconstruction and Buggy Lane Additions
Project: The purpose of this project is to enhance roadway safety along C.R. 40 for Amish horse and buggy, bicyclist, and motor vehicle traffic. The current proposed project would include widening C.R. 40 to the south, into two 12 foot travel lanes with 8 foot paved shoulders. The project limits would start approximately 60 feet east of the C.R. 40 and S.R. 19 intersection, continue along C.R. 40, and end 400 feet east of the C.R. 40 and C.R. 7 intersection.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: August 26, 2020

Signature of the INDOT
Project Engineer or Other Responsible Agent *Timothy W. Jackson*

Timothy W. Jackson, P.E.

Date: August 26, 2020

Signature of the
For Hire Consultant *Christopher J. Jeter*

Christopher J. Jeter, P.E.



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

Bruno Pigott
Commissioner

July 9, 2019

66-33

Lawson-Fisher Associates P.C.
Attention: Christopher J. Jeter
525 West Washington Avenue
South Bend, Indiana 46601

Dear Christopher J. Jeter,

RE: Wellhead Protection Area
Proximity Determination
Des No 1702848
County Road (C.R.) 40 from State
Road (S.R.) 19 to C.R.7
Road Reconstruction and Buggy
Lane Additions Project
Elkhart 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.

Note: the Drinking Water Branch has launched a new self service feature which allows one to determine wellhead proximity without submitting the application form. Use the following instructions:

1. Go to <http://idemmaps.idem.in.gov/whpa2/>
2. Use the search tool located in the upper left hand corner of the application to zoom to your site of interest by way of city, county, or address; or use the mouse to click on the site of interest displayed on the map.
3. Once the site of interest has been located and selected, use the print tool to create a .pdf of a wellhead protection area proximity determination response.

In the future please consider using this self service feature if it suits your needs.

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,

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



From: [McCloskey, Elizabeth](#)
To: [Chris Jeter](#)
Subject: Re: [EXTERNAL] Environmental Early Coordination - C.R. 40 Road Reconstruction and Buggy Lane Additions Project - Des No. 1702848
Date: Tuesday, July 9, 2019 9:15:28 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Good morning, because the proposed project will have minor impacts on natural resources, and no Federally endangered species are known to be present, the U.S. Fish and Wildlife Service will not be providing a comment letter.

Elizabeth McCloskey
U.S. Fish and Wildlife Service
Northern Indiana Suboffice
Chesterton, Indiana

On Mon, Jul 8, 2019 at 1:28 PM Chris Jeter <cjeter@lawson-fisher.com> wrote:

Good Afternoon Liz,

On behalf of Elkhart County, Indiana, please find the attached pdf containing information related to the Environmental Early Coordination efforts for the road reconstruction and buggy lane additions project along C.R. 40 in Elkhart County, Indiana (INDOT Des No. 1702848).

Please feel free to contact me with any questions or comments.

Thank you,

Chris

Christopher J. Jeter, P.E.

Senior Civil Engineer

LFA Online - lfa 

From: [Carl Gilbert](#)
To: [Chris Jeter](#)
Subject: Project: 1702848
Date: Wednesday, July 10, 2019 3:08:47 PM

Christopher,

RE: Project: 1702848
Des. No.: 1702848

After reviewing the scope of work, it was determined that no County Regulated Drains would be impacted. However I did note there is a significant water way draining from the southeast to the northwest that crosses County Road 40 approximately 1,900 feet west of County Road 7. After reviewing previous years aerials there were several private tiles that cross County Road 40. If you would like any further information on the private tiles you can come to our office and review the aerials.

If you have any further questions please give me a call.

Thanks,

Carl Gilbert, Drainage Tech. II
Elkhart County Surveyor's Office
Phone: (574) 971-4677
Fax: (574) 971-4569
CGilbert@elkhartcounty.com

Elkhart County Public Services Building
4230 Elkhart Rd.
Goshen, IN 46526

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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

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>



In Reply Refer To:

July 30, 2020

Consultation Code: 03E12000-2019-SLI-1111

Event Code: 03E12000-2020-E-09256

Project Name: C.R. 40 Road Reconstruction and Added Buggy Lanes (Des No. 1702848)

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project "may affect" listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

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.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number 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

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

Consultation Code: 03E12000-2019-SLI-1111

Event Code: 03E12000-2020-E-09256

Project Name: C.R. 40 Road Reconstruction and Added Buggy Lanes (Des No. 1702848)

Project Type: TRANSPORTATION

Project Description: The project (Des No. 1702848) is located on C.R. 40 from S.R. 19 to C.R. 7. Specifically, the project is in Sections 29, 30, 31, and 32, Township 36 North, Range 5 East, Harrison Township, Elkhart County, Indiana.

C.R. 40 is classified as a rural, local agency collector. The existing C.R. 40 approach cross section consists of two 11 ft. lanes with minimal existing useable shoulders. Notable drainage features include a 36-inch crossing culvert and a drainage pipe extending across the road to the south side from the improved THOR parking lot.

The preferred alternative for the project consists of shifting the roadway centerline 9 feet to the south and widening the total pavement width from 22 feet to 40 feet. This additional pavement width and shoulder widening will provide non-motorized vehicles a riding surface to separate from the through lanes occupied by the motoring public. One (1) existing 15-inch diameter crossing culvert (approximately 500 feet west of the C.R. 40/C.R. 7 intersection) will be replaced with an 18-inch diameter culvert. An 8-inch diameter pipe with a 12-inch diameter extension (located approximately 1,100 feet east of the C.R. 40/S.R. 19 intersection) will be replaced with a 24-inch diameter crossing culvert. An existing 36-inch diameter crossing culvert (approximately 1,900 feet west of the C.R. 40/C.R. 7 intersection) will be replaced with a 42-inch diameter crossing culvert. Approximately 35 feet of additional right-of-way width will be acquired along the south side of the C.R. 40 corridor. Temporary right-of-way shall be acquired for grading and drive construction as needed. All work will occur within 100 feet of the edge of the C.R. 40 pavement.

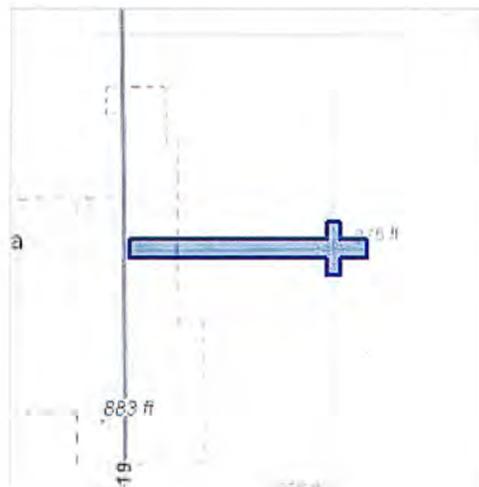
This section of C.R. 40 is primarily agricultural and includes one residence on the south side of the road. The north side of the road includes a large employee parking lot for THOR Industries, a farm with cattle fencing near the road, and a German Baptist Church and Cemetery. Suitable summer bat habitat is located along the entire C.R. 40 corridor. One (1) 30-inch diameter tree (unknown species), one (1) 38-inch diameter tree (unknown species), three (3) 10-inch diameter crab apple

trees, and two (2) 12-inch diameter spruces are within the proposed construction limits and will need to be removed during the inactive season for bats. The remaining trees adjacent to the C.R. 40 corridor will not be trimmed or removed.

The USFWS database was reviewed on June 24, 2019 and did not indicate the presence of endangered bat species in or within 0.5 miles of the project area. A field survey for bat habitat was conducted on September 12, 2019 for the 36-inch diameter and 15-inch diameter crossing culverts and no evidence of bats was noted. Temporary lighting may be necessary during construction activities. Permanent lighting is not proposed for the project. Construction is anticipated to begin in spring 2023 and end by fall 2023.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.536394277961655N85.99005460739136W>



Counties: Elkhart, IN

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA 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 is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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



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

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>



In Reply Refer To:

July 31, 2020

Consultation Code: 03E12000-2019-I-1111

Event Code: 03E12000-2020-E-09288

Project Name: C.R. 40 Road Reconstruction and Added Buggy Lanes (Des No. 1702848)

Subject: Concurrence verification letter for the 'C.R. 40 Road Reconstruction and Added Buggy Lanes (Des No. 1702848)' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **C.R. 40 Road Reconstruction and Added Buggy Lanes (Des No. 1702848)** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion 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, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

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/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted 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. 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.

Project Description

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

Name

C.R. 40 Road Reconstruction and Added Buggy Lanes (Des No. 1702848)

Description

The project (Des No. 1702848) is located on C.R. 40 from S.R. 19 to C.R. 7. Specifically, the project is in Sections 29, 30, 31, and 32, Township 36 North, Range 5 East, Harrison Township, Elkhart County, Indiana.

C.R. 40 is classified as a rural, local agency collector. The existing C.R. 40 approach cross section consists of two 11 ft. lanes with minimal existing useable shoulders. Notable drainage features include a 36- inch crossing culvert and a drainage pipe extending across the road to the south side from the improved THOR parking lot.

The preferred alternative for the project consists of shifting the roadway centerline 9 feet to the south and widening the total pavement width from 22 feet to 40 feet. This additional pavement width and shoulder widening will provide non-motorized vehicles a riding surface to separate from the through lanes occupied by the motoring public. One (1) existing 15-inch diameter crossing culvert (approximately 500 feet west of the C.R. 40/C.R. 7 intersection) will be replaced with an 18-inch diameter culvert. An 8-inch diameter pipe with a 12-inch diameter extension (located approximately 1,100 feet east of the C.R. 40/S.R. 19 intersection) will be replaced with a 24-inch diameter crossing culvert. An existing 36-inch diameter crossing culvert (approximately 1,900 feet west of the C.R. 40/C.R. 7 intersection) will be replaced with a 42-inch diameter crossing culvert. Approximately 35 feet of additional right-of-way width will be acquired along the south side of the C.R. 40 corridor. Temporary right-of-way shall be acquired for grading and drive construction as needed. All work will occur within 100 feet of the edge of the C.R. 40 pavement.

This section of C.R. 40 is primarily agricultural and includes one residence on the south side of the road. The north side of the road includes a large employee parking lot for THOR Industries, a farm with cattle fencing near the road, and a German Baptist Church and Cemetery. Suitable summer bat habitat is located along the entire C.R. 40 corridor. One (1) 30-inch diameter tree (unknown species), one (1) 38-inch diameter tree (unknown species), three (3) 10-inch diameter crab apple trees, and two (2) 12-inch diameter spruces are within the proposed construction limits and will need to be removed during the inactive season for bats. The remaining trees adjacent to the C.R. 40 corridor will not be trimmed or removed.

The USFWS database was reviewed on June 24, 2019 and did not indicate the presence of endangered bat species in or within 0.5 miles of the project area. A field survey for bat habitat was conducted on September 12, 2019 for the 36-inch diameter and 15-inch diameter crossing culverts and no evidence of bats was noted. Temporary lighting may be necessary during construction activities. Permanent lighting is not proposed for the project. Construction is anticipated to begin in spring 2023 and end by fall 2023.

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 threatened 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 revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

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

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

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

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

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

A) Federal Highway Administration (FHWA)

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

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

No

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

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

No

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

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

No

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

No

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

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

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

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

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?

No

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)?

Yes

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

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

Yes

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

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

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

Yes

SUBMITTED DOCUMENTS

- *USFWS Bat Datasheet.pdf* <https://ecos.fws.gov/ipac/project/Q2XZLZCHURHMZOF2432WDM5GEE/projectDocuments/22801546>
- *USFWS Bat Datasheet 15 in Culvert.pdf* <https://ecos.fws.gov/ipac/project/Q2XZLZCHURHMZOF2432WDM5GEE/projectDocuments/22801564>

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

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

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

No

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

No

29. 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

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

Yes

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

Yes

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

No

33. 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

34. 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

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

No

36. 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

37. 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.

38. 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.

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

Automatically answered

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

40. **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

41. **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

42. **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

43. **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 triangulation/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

44. Lighting AMM 1

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

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.

0.63

4. Please describe the proposed bridge work:

An existing 36-inch diameter crossing culvert will be replaced with a 42-inch diameter crossing culvert. An existing 15-inch diameter crossing culvert will be replaced with an 18-inch diameter culvert.

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

Construction is anticipated to begin in spring 2023 and end by fall 2023.

6. Please enter the date of the bridge assessment:

September 12, 2019

Avoidance And Minimization Measures (AMMs)

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

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.

LIGHTING AMM 1

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

TREE REMOVAL AMM 1

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

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.

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.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on December 02, 2019. 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 threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion 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.

From: [Joe Dunbar](#)
To: [Chris Jeter](#)
Subject: FW: Request for Water and Sewer Plans/Maps
Date: Monday, September 28, 2020 9:17:22 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[CR 40 Survey Limits.pdf](#)
[Wakarusa Utilities-Water System.pdf](#)
[Wakarusa Utilities Sewer.pdf](#)
[Wakarusa Utilities Water.pdf](#)
[image009.png](#)

Chris,

See emails below. I hope this is enough. I don't believe we have any other correspondence.



Joseph D. Dunbar, P.E. | Civil Engineer
525 West Washington Avenue | South Bend, IN 46601
O: 574-234-3167
C: 317-626-5426
www.lawson-fisher.com

From: James Emans <emanseng@mchsi.com>
Sent: Friday, February 8, 2019 9:21 AM
To: Rebecca Hinkle <rhinkle@lawson-fisher.com>
Cc: Terry Flickinger <terry@townofwakarusa.com>
Subject: FW: Request for Water and Sewer Plans/Maps

Rebecca,

Attached are PDG drawings of the general layout of the Town utility system along CR40 east of SR19. Hope this helps.

As I mentioned, I pretty sure that LFA designed the 12" water main along the north side of the road along with the water tower in the early 1990s.

James W. Emans, PE
EMANS Engineering
3900 East 3rd Road
Bremen, IN 46506
(574) 209-0105 cell

(574) 546-4685 office/fax

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From: Terry Flickinger [<mailto:terry@townofwakarusa.com>]
Sent: Wednesday, February 06, 2019 4:20 PM
To: James Emans
Subject: FW: Request for Water and Sewer Plans/Maps

James

Do you have any of the section out by St Rd 19 where this project is going on that are smaller prints or copy of pdf files to send them. All I have is a big print of when water tower went up and also your big print of water system and sewer lines.

Terry

From: Rebecca Hinkle <rhinkle@lawson-fisher.com>
Sent: Wednesday, February 6, 2019 2:32 PM
To: terry@townofwakarusa.com
Subject: Request for Water and Sewer Plans/Maps

Terry,

I am a land surveyor working on a survey for a road improvement project for Elkhart County. Our project is located on CR 40 (Waterford Street) extending from SR 19 to CR 7. See attached pdf of our project limits. I am looking for any plans or maps you may have for water and sewer in this area. I understand only the west portion of this area is within the town limits so you probably won't have any plans further east. If you could send me any information you have, I would appreciate it.

Please feel free to call me at (574)234-3167 if you have any questions.

Thank you,

Rebecca Hinkle, E.I.T., S.I.T.
Civil Engineer



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Lawson-Fisher Associates P.C.
525 West Washington Ave.
South Bend, IN 46601
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Cell: 270-312-4612
Fax: 574-236-1330



APPENDIX D
SECTION 106 OF THE NHPA

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 10/2/2019

Project Designation Number: 1702848

Route Number: CR 40

Project Description: Road Reconstruction from SR 19 to CR 7

Elkhart County proposes to proceed with the improvement of County Road (CR) 40 from State Road 19 to a point 177.3 m (581.7 ft) east of CR 7, Harrison Township, Elkhart County, Indiana (Des. No. 1702848). The preferred alternative is to widen the road to include one 12 foot lane and adding one eight foot paved shoulder (ten foot usable shoulder) buggy lane in each direction to separate motor vehicles from horse and buggy and bicycle traffic. A majority of the widening will take place south of the existing road to reduce the impact to businesses and utilities along the north side of CR 40. Three (3) small drainage structures along the project route will be extended as needed.

The proposed survey area is approximately 11m (36.1 ft) from the edge of pavement north of CR 40 and 16 m (52.5 ft) from the edge of pavement south of CR 40 and extends for a length of 1.8 km (1.1 mi). The survey area also extends 79.6 m (261.1 ft) north and south along CR 7 with a width of 23 m (75.5 ft). The survey encompasses 6.3 ha (15.5 ac).

Feature crossed (if applicable):

Township: Harrison

City/County: Wakarusa/Elkhart County

Information reviewed (please check all that apply):

General project location map USGS map Aerial photograph
Written description of project area General project area photos
Previously completed archaeology reports Interim Report
Previously completed historic property reports
Soil survey data Bridge inspection information

Other (please specify): Indiana Historic Bridge Inventory; Indiana State Historic Architectural and Archaeological Research Database (SHAARD); Indiana Buildings, Bridges, and Cemeteries Map website; *Elkhart County Interim Report*; online street-view imagery; ArcMap GIS, MPPA application (including maps and photographs) sent by Metric Environmental dated September 23rd, 2019 and on file at INDOT CRO.

Snell, Samuel P.
2019 Phase Ia Archaeological Survey for the Elkhart County Road 40/Waterford Street Road Improvement Projects, Des. No. 1702848, Wakarusa, Harrison Township, Elkhart County, Indiana. Report on file, Indiana Department of Transportation, Cultural Resources Office, Indianapolis, In.

Results of the Records Review for Above-Ground Resources:

With regard to above-ground resources, an INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Elkhart County. No listed resources are located near the project area.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Elkhart County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *Elkhart County Interim Report* (2005; Harrison Township) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. An INDOT-CRO historian reviewed the SHAARD Online Map and checked it against the Interim Report hard-copy maps. No resources rated higher than "contributing" are located within 0.25 miles of the project area.

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

The INDOT CRO historian reviewed structures adjacent to the project area utilizing online aerial and street-view photography. The project area is located in an exurban and agricultural setting with adjacent above-ground resources consisting of early to mid-twentieth century residences, late-twentieth to early-twenty-first century commercial buildings, and a late-twentieth century cemetery. None of the structures appear to possess the age, significance or integrity required to be considered NRHP eligible.

The project proposes the extension, where necessary, of three (3) small culvert drainage structures along the project area. These structures include a twelve (12) inch drainage tile, a fifteen (15) inch corrugated metal pipe, and a thirty-six (36) inch corrugated plastic pipe and do not have culvert asset numbers nor are inventoried in the Bridge Inspection Asset System. Photographs of the structures were provided by the consultant did not exhibit any wood, stone, or brick structures or parts therein in the provided photographs nor did they appear to possess any historical or engineering significance.

Based on the available information, as summarized above, no above-ground concerns exist.

Archaeology Report Author/Date:

Samuel P. Snell/September 23, 2019

Summary of Archaeology Investigation Results:

An archaeological records check and Phase Ia field reconnaissance (Snell 2019) were conducted by Metric personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. The records check identified no previously recorded sites within or adjacent to the project area and determined that the project area had not by previously surveyed. The survey area consisted of agricultural, residential, and commercial land and was investigated by a combination of pedestrian survey, shovel probing, coring, and visual inspection. Agricultural fields displayed good visibility and were examined through close interval pedestrian transects. Sixty one shovel probes and seven oakfield cores were used to test residential yards, pastures, and commercial properties. No archaeological sites were identified by the reconnaissance. The report has been reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. It is

our opinion that the report is acceptable, and we concur with the evaluations and recommendations made in it. Therefore, there are no archaeological concerns.

Does the project appear to fall under the Minor Projects PA? yes no

If yes, please specify category and number (**applicable conditions are highlighted**):

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

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

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions [***BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied***]:

Condition A (Archaeological Resources)

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

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

Condition B (Above-Ground Resources)

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

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

Condition A (Archaeological Resources)

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

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

Condition B (Above-Ground Resources)

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

- i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions (*Condition a, Condition b, or Condition c must be satisfied*):
 - a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 - b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 - c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met (*BOTH Condition 1 AND Condition 2 must be met*):
 - 1. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
 - 2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior’s Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.
- ii. Work involves the installation of a new culvert and other drainage structures *AND/OR* there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions (*BOTH Condition a and Condition b must be satisfied*):
 - a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
 - b. The subject structure exhibits one of the characteristics described below (*Condition 1, Condition 2 or Condition 3 must be satisfied*).
 - 1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 - 2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 - 3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior’s Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

If no, please explain:

Additional comments: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction in the immediate area of the find will be stopped, and the INDOT Cultural Resources Section and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Clint Kelly and Shaun Miller

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

ARCHAEOLOGICAL SHORT REPORT

PHASE IA ARCHAEOLOGICAL SURVEY FOR THE
ELKHART COUNTY ROAD 40/ WATERFORD STREET
ROAD IMPROVEMENT PROJECT
DES. NO. 1702848,
WAKARUSA, HARRISON TOWNSHIP, ELKHART COUNTY, INDIANA.

PREPARED FOR:

LAWSON-FISHER ASSOCIATES P.C.

LEAD AGENCY:

**FEDERAL HIGHWAY ADMINISTRATION
AND
ELKHART COUNTY, INDIANA**

Prepared by:



Complex Environment. Creative Solutions.

6971 Hillsdale Court
Indianapolis, IN 46256
Telephone: 317.400.1633
www.metricenv.com

A handwritten signature in cursive script that reads "Samuel P. Snell".

Samuel P. Snell, MS, RPA
Archaeological Principal Investigator
sams@metricenv.com
September 23, 2019



INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (1-11)

INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhp@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology.

Author: Samuel P. Snell, MS, RPA

Date (month, day, year): September 23, 2019

Project Title: Phase Ia Archaeological Survey for the Elkhart CR 40/ Waterford Street Road Improvement Project
Des. No. 1702848, Wakarusa, Harrison Township, Elkhart County, Indiana.

PROJECT OVERVIEW

Project Description: Elkhart County proposes to proceed with the improvement of County Road (CR) 40 from State Road 19 to a point 177.3 m (581.7 ft) east of CR 7, Harrison Township, Elkhart County, Indiana (Des. No. 1702848). The preferred alternative is to widen the road to include one 12 foot lane and adding one eight foot paved shoulder (ten foot usable shoulder) buggy lane in each direction to separate vehicles from horse and buggy and bicycle traffic. A majority of the widening will take place south of the existing road to reduce the impact to businesses and utilities along the north side of CR 40. The project is in Sections 29-32, Township 36 North, Range 5 East, on the 7.5-minute Foraker and Wakarusa, Indiana United States Geological Survey (USGS) topographic maps. The proposed survey area is approximately 11 m (36.1 ft) from the edge of pavement north of CR 40 and 16 m (52.5 ft) from the edge of pavement south of CR 40 and extends for a length of 1.8 km (1.1 mi). The survey area also extends 79.6 m (261.1 ft) north and south along CR 7 with a width of 23 m (75.5 ft). The survey encompasses 6.3 ha (15.5 ac).

INDOT Designation Number/ Contract Number: 1702848 Project Number:

DHPA Number: Approved DHPA Plan Number:

Prepared For: Lawson-Fisher Associates P.C.

Contact Person: Jeff Byrd, P.E.

Address: 525 West Washington Street

City: South Bend State: IN ZIP Code: 46601

Telephone Number: 574.234.3167 Email Address: jbyrd@lawson-fisher.com

Principal Investigator: Samuel P. Snell, MS, RPA

Signature:

Company/Institution: Metric Environmental, LLC.

Address: 6971 Hillside Court

City: Indianapolis State: IN ZIP Code: 46250

Describe Methods:

Visual Inspection: Areas of obvious physical disturbance or greater than 20 percent slope were visually inspected with a walkover at 5-m (16.4-ft) intervals. In some areas, this was generally sufficient to document obvious disturbances such as buried utilities. If grass or other vegetation obscured the ground surface, then it was walked and signs of disturbance (landscaping, utilities, drainage ditches, etc.) were noted. Photographs were taken as appropriate.

Pedestrian Survey: In areas where the ground surface had at least 30 percent surface visibility and well weathered surface conditions, generally within tilled agricultural fields, pedestrian survey was utilized. No-till areas are excluded from this survey method. The area is examined via pedestrian survey, with transects spaced at no more than 5-m (16.4-ft) intervals.

Shovel Test Probes (STP): In areas where the ground surface had at less than 30 percent visibility, shovel probing was utilized. This method consisted of systematically digging shovel probes every 15-m (49.2-ft). A standard record was kept that includes soil profile, soil texture, soil color (Munsell), and presence/absence of cultural materials.

Soil Cores: In areas where visual inspection suggested potential disturbance, soil cores were advance at 30-m (98.4-ft) intervals. If intact soils are found, then shovel probes would be dug at 15-m (49.2-ft) intervals.

Attach photographs documenting disturbances below

Describe Disturbances:

Disturbances were caused by underground utilities; roadside drainage ditches; built up house pads; and driveways/parking lots.

Comments:

Field work was completed on Aug 5-6 and Sept 10-11, 2019. A 2.5 m interval was used for pedestrian survey in Area 3 with a visibility of 50% or lower.

Results

- Archaeological records check has determined that the project area does not have the potential to contain archaeological resources.
- Archaeological records check has determined that the project area has the potential to contain archaeological resources.
- Phase Ia reconnaissance has located no archaeological resources in the project area.
- Phase Ia reconnaissance has identified landforms conducive to buried archaeological deposits.

Actual Area Surveyed hectares:

acres:

Comments:

See Attachments

Recommendation

- The archaeological records check has determined that the project area has the potential to contain archaeological resources and a Phase Ia archaeological reconnaissance is recommended.
- The archaeological records check has determined that the project area does not have the potential to contain archaeological resources and no further work is recommended before the project is allowed to proceed.
- The Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and it is recommended that the project be allowed to proceed as planned.
- The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits. It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed.
- The Phase Ia archaeological reconnaissance has determined that the project area is within 100 feet of a cemetery and a Cemetery Development Plan is required per IC-14-21-1-26.5.

Cemetery Name:

Other Recommendations/Commitments:

In the unlikely event that archaeological deposits or human remains are encountered during the construction phase of the project, all work must cease and archaeologists from the DHPA and the INDOT-CRO must be notified.

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

Attachments

- Figure showing project location within Indiana.
- USGS topographic map showing the project area (*1:24,000 scale*).
- Aerial photograph showing the project area, land use and survey methods.
- Photographs of the project area.
- Project plans (*if available*)

Other Attachments:

Fieldwork Comments and Figures

From: [Sam Snell](#)
To: [Chris Jeter](#); [Jeff Byrd](#)
Cc: [Luella Beth Hillen](#)
Subject: FW: County Road 40 Road Improvement Project Des 1702848 Phase IA and MPPA Submission
Date: Thursday, October 3, 2019 8:18:50 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image007.png](#)
[image008.jpg](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.jpg](#)

Good Morning Jeff and Chris,

Please find attached the INDOT-CRO approved MPPA determination for this project. The email below was the notification we received from INDOT-CRO with the MPPA determination. Also, find attached the final version of the archaeological short report that was uploaded to INSCOPE and I passed on to DHPA including the requested date change.

Thank you.

Sam

Samuel P. Snell, MS, RPA

Archaeological Principal Investigator

Metric Environmental, LLC

Phone: 317.912.3499

Email: sams@metricenv.com

From: Kelly, Clint <CKelly1@indot.IN.gov>
Sent: Wednesday, October 2, 2019 3:46 PM
To: Sam Snell <sams@metricenv.com>
Cc: Kumar, Anuradha <akumar@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Ross, Anthony <ARoss3@indot.IN.gov>; Yarian, Matthew <MYarian@indot.IN.gov>; Novak, Karen <KNovak@indot.IN.gov>; kschumacher@elkcohw.org
Subject: RE: County Road 40 Road Improvement Project Des 1702848 Phase IA and MPPA Submission

Sam,

Thank you for the submittal of this project information for our review. We have determined that this project falls under Category B-3 and B-9 of the MPPA, thus concluding the Section 106 process. Please find attached the completed determination forms for inclusion in the CE.

The archaeological report has been reviewed and approved by INDOT CRO. Please forward one hard copy of the report to DHPA, indicating in the cover letter that the project qualified as a Minor Project

and therefore the report is for their records only and no formal review is required under Section 106. In addition, we ask that a copy of the DHPA submittal letter be sent to INDOT CRO care of Shaun Miller during the time of submission and that the archaeological report be posted to IN SCOPE (please ensure that the uploaded file follows the IN SCOPE naming conventions). **Note: Please change Branstner 2007 to Branster 2017 in the Previous Studies section before sending the report to DHPA.**

Please keep in mind that if the scope of the project or project limits should change, our office will need to re-examine the information to determine whether the MPPA still applies. Please don't hesitate to contact us should you have any questions or need additional information.

Thanks,
Clint

Clint Kelly

Historian

Cultural Resources Office

Environmental Services

100 N. Senate Ave., Rm. 642

Indianapolis, IN 46204

Office: (317) 232-1349

Email: ckelly1@indot.in.gov



From: Ross, Anthony

Sent: Monday, September 23, 2019 2:37 PM

To: Sam Snell <sams@metricenv.com>

Cc: Branigin, Susan <SBranigin@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Kelly, Clint <CKelly1@indot.IN.gov>; Yarian, Matthew <MYarian@indot.IN.gov>; kschumacher@elkcohw.org

Subject: RE: County Road 40 Road Improvement Project Des 1702848 Phase IA and MPPA Submission

Sam,

Thank you for the submittal of this project information for our review. It's been placed in our review queue, and you should hear from us within 15 business days.

Best,
Anthony

Anthony Ross, Ph.D.

LPA Program Administrator

Cultural Resources Office

Environmental Services

100 N. Senate Ave., Room N642-ES

Indianapolis, IN 46204

Office: (317) 234-0142

Email: aross3@indot.in.gov



**** Historic Property Report (HPR) guidelines can be found [here](#)**

From: Sam Snell [<mailto:sams@metricenv.com>]
Sent: Monday, September 23, 2019 1:00 PM
To: Kumar, Anuradha <akumar@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Branigin, Susan <SBranch@indot.IN.gov>
Subject: County Road 40 Road Improvement Project Des 1702848 Phase IA and MPPA Submission

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

Hello

Please find attached the Phase IA archaeological short report, MPPA submission, and GIS file for the above referenced project to begin INDOT-CRO review.

Thank you.

Sam

Samuel P. Snell, MS, RPA
Archaeological Principal Investigator



Phone: 317.912.3499 Email: sams@metricenv.com
6971 Hillside Court, Indianapolis, IN 46250



www.metricenv.com

Complex Environment. Creative Solutions.
Certified DBE/MBE/SBE INDIANAPOLIS | GARY | CINCINNATI

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APPENDIX E
RED FLAG AND HAZARDOUS MATERIALS



HIGHWAY DIVISION

ENGINEERING SECTION

Date: June 26, 2019

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

From: Christopher J. Jeter, P.E.
Lawson-Fisher Associates P.C.
525 West Washington Avenue
South Bend, Indiana 46601
cjeter@lawson-fisher.com

Re: RED FLAG INVESTIGATION
DES #1702848, Local Project
Road Reconstruction and Buggy Lane Additions
County Road 40
Elkhart County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The purpose of this project is to enhance roadway safety along County Road (C.R.) 40 for Amish horse and buggy, bicyclist, and motor vehicle traffic and to improve current roadway geometrics. This is a local project to be designed meeting current INDOT Design Standards for Rural Collectors of Annual Average Daily Traffic (AADT) between 3,000 and 5,000 Vehicles Per Day (VPD). The proposed project is for the reconstruction of C.R. 40 from the Wakarusa Town Limits (approximately State Road (S.R.) 19) to C.R. 7 in Wakarusa, Elkhart County, Indiana. C.R. 40 at the project location is a two lane roadway with 11 ft travel lanes in each direction with minimal existing usable shoulders. The proposed alternative is to widen C.R. 40 providing two 12 ft travel lanes with 8 ft paved shoulders, separating vehicular traffic from non-motorized traffic. It is proposed that this widening improvement will occur to the south of C.R. 40 and that the project will tie into the S.R. 19 intersection and extend through the C.R. 40 and C.R. 7 intersection. Culverts, drainage tiles, and standpipes exist throughout the project area; both IDNR and INDOT will be consulted for hydraulic assessments.

Bridge and/or Culvert Project: Yes No Structure # N/A

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).

Proposed right of way: Temporary # Acres _____ Permanent # Acres ≥0.5, Not Applicable

Type of excavation: The existing pavement south of the existing crown would require wedge and level to adjust for the proposed pavement cross-slopes. This vertical adjustment is expected to require a fill section along the south side of the roadway for the entire length of the project (approximately 5,600 ft). Excavation activities for roadside ditches are not anticipated to exceed 10 ft in depth.

Maintenance of traffic: Traffic is anticipated to be maintained on C.R. 40 during construction with no detour route required. Traffic would be maintained on the existing pavement section as the widened portion of the project is being constructed to the south. Work on the terminus ends of the project, HMA surface placement, and work on crossing culverts would require flagging operations to execute the construction activities. Coordination with THOR and other industries, including farms, will occur to reduce the impact of truck traffic during construction.

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	1	Recreational Facilities	N/A
Airports ¹	N/A	Pipelines	N/A
Cemeteries	1	Railroads	1
Hospitals	N/A	Trails	N/A
Schools	N/A	Managed Lands	N/A

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 ft) is required.

Explanation:

Religious Facilities: One (1) religious facility, German Baptist Church, is located within the 0.5 mile search radius. German Baptist Church is located northeast of and adjacent to the C.R. 40 and C.R. 7 intersection project area. Although no impact is expected, coordination with German Baptist Church will occur.

Cemetery: One (1) cemetery, Old German Church, is located within the 0.5 mile search radius. Old German Church is located northeast of and adjacent to the C.R. 40 and C.R. 7 intersection project area. Although no impact is expected, a Cemetery Development Plan may be required since this project is within 100 ft of a cemetery. Coordination with INDOT Cultural Resources is recommended. Coordination with Old German Church will occur.

Railroads: One (1) railroad segment, Unknown RR, is located 0.49 mile south of the C.R. 40 and S.R. 19 intersection project area. A functioning railroad no longer exists in this location. No impact is expected.

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	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	15
Canal Structures – Historic	N/A	Lakes	8
NPS NRI Listed	N/A	Floodplain - DFIRM	11
NWI-Lines	N/A	Cave Entrance Density	N/A

IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	4	Sinking-Stream Basins	N/A

Explanation:

Rivers and Streams: Four (4) river and stream segments are located within the 0.5 mile search radius. The nearest, Werntz Ditch, is located 0.27 mile southwest of the C.R. 40 and S.R. 19 intersection project area. No impact is expected.

NWI-Wetlands: Fifteen (15) NWI-wetlands are located within the 0.5 mile search radius. The nearest NWI-wetland is located 0.03 mile north of project area. No impact is expected.

Lakes: Eight (8) lakes are located within the 0.5 mile search radius. The nearest, a perennial lake, is located 0.10 mile south of the C.R. 40 and S.R. 19 intersection project area. No impact is expected.

Floodplain – DFIRM: Eleven (11) floodplain – DFIRM polygons are located within the 0.5 mile search radius. The nearest, a Zone AE DFIRM, is located 0.10 mile southwest of the C.R. 40 and S.R. 19 intersection project area. No impact is expected.

It is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. Coordination with INDOT ES Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation: N/A

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	N/A	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation: N/A

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A

State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	2	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	2	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	7
Solid Waste Landfill	N/A	NPDES Facilities	2
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	5	Notice of Contamination Sites	N/A

Explanation:

Underground Storage Tanks (USTs): Two (2) USTs are located within the 0.5 mile search radius. One (1), Bell Mart BP (Agency ID 35416, 1010 East Waterford Street, Wakarusa, Indiana 46573), is located west of and adjacent to the C.R. 40 and S.R. 19 intersection project area. One (1), Wakarusa Farm Center (Agency ID 31400, 1025 East Waterford Street, Wakarusa, Indiana 46573), is located within the C.R. 40 and S.R. 19 intersection project area.

Bell Mart BP (Agency ID 35416, 1010 East Waterford Street, Wakarusa, Indiana 46573): According to IDEM's Virtual File Cabinet (VFC), via a letter dated November 6, 2017, the Wakarusa BP Station was found to have achieved compliance, during an Office of Land Quality review, following a violation the site received on June 21, 2017. The violations included: failure to maintain records; failure to prevent spill; release detection criteria; and failure to have financial responsibility. Further noted was the submersible turbine pump (STP) contaminant sumps and dispenser under dispenser contaminants (UDCs) had excessive fluids, requiring cleanout and the RUL spill bucket had excessive fluids. No impact is expected.

Wakarusa Farm Center (Agency ID 31400, 1025 East Waterford Street, Wakarusa, Indiana 46573): According to IDEM's VFC, via a letter dated November 19, 1991, Wakarusa Farm Center announced to IDEM their intent to close an UST. In a letter dated October 31, 1995, Borkholder Corporation completed a Notification for Underground Storage Tanks form to demonstrate a change of ownership to Borkholder Investments Inc. as of September 23, 1993. The form further states that one tank was temporarily out of use in 1993 and the other permanently made out of use, by way of fill, in 1992. No impact is expected.

Voluntary Remediation Program (VRP): Two (2) VRPs are located within the 0.5 mile search radius. The nearest, GIS: Utilimaster Corporation; VFC: Spartan Motors USA Incorporated (Agency ID 12158, 65906 S.R. 19, Wakarusa, Indiana 46573), is located 0.07 mile north of the C.R. 40 and S.R. 19 intersection project area. According to IDEM's VFC, via a letter dated December 3, 2013, Forest River Housing, Inc. (formerly Utilimaster Corporation) created an Environmental Restrictive Covenant (ERC) on the property on November 26, 2013. The ERC states that Utilimaster Corporation (previous owner) entered into Indiana's VRP to address releases of hazardous substances and / or petroleum ("contaminants of concern") related to the Real Estate. In a letter dated May 5, 2014 from IDEM, Utilimaster's Voluntary Remediation Completion Report was approved. Coordination with IDEM will occur.

Leaking Underground Storage Tank (LUST): Five (5) LUSTs are location within the 0.5 mile search radius. The nearest, GIS: El Roy Service; VFC: National Oil & Gas Incorporated (Agency ID 33627, 66009 S.R. 19, Wakarusa, Indiana 46573), is located 0.02 mile west of the C.R. 40 and S.R. 19 intersection project area. Petroleum impacts appear to extend into and beneath SR 19 toward the project area. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

Institutional Controls: Seven (7) Institutional Controls are located within the 0.5 mile search radius. The nearest, Monaco RV (Agency ID 4130601, 606 Nelsons Parkway, Wakarusa, Indiana 46573), is located 0.29 mile southwest of the project area. No impact is expected.

NPDES Facility: Two (2) NPDES Facilities are located within the 0.5 mile search radius. The nearest, Thor Motor Coach Plant 450 (Agency ID 118740, 1060 East Waterford Street, Wakarusa, Indiana 46573), is located north of and adjacent to the project area. According to IDEM's VFC, via a letter dated August 4, 2017, a Notice of Sufficiency was issued regarding an NOI associated with a proposed construction activity on the property. The items in the NOI were found to be sufficient and in compliance with the facility's NPDES General Permit (INR10P380) for storm water discharge. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Elkhart County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of ETR species within the 0.5 mile search radius.

A review of the USFWS database on June 24, 2019 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 INDOT Projects".

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

Religious Facilities: German Baptist Church is located north of and adjacent to the C.R. 40 and C.R. 7 intersection project area. Although no impact is expected, coordination with German Baptist Church will occur.

Cemeteries: Old German Church (Cemetery – SHAARD ID CR-20-50) is located northeast of and adjacent to the C.R. 40 and C.R. 7 intersection project area. Although no impact is expected, a Cemetery Development Plan may be required since this project is within 100 ft of a cemetery. Coordination with INDOT Cultural Resources is recommended. Coordination with Old German Church will occur.

Coordination with THOR and other industries, including farms, will occur to reduce the impact of truck traffic during construction.

WATER RESOURCES:

*www.in.gov/dot/
An Equal Opportunity Employer*

It is likely that additional water resources, such as unnamed tributaries, regulated drains, wetlands, and roadside ditches are located in the project area. Coordination with INDOT ES Ecology and Waterway Permitting will occur.

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: Voluntary Remediation Program (VRP): Two (2) VRPs are located within the 0.5 mile search radius. The nearest, GIS: Utilimaster Corporation; VFC: Spartan Motors USA Incorporated (Agency ID 12158, 65906 S.R. 19, Wakarusa, Indiana 46573), is located 0.07 mile north of the C.R. 40 and S.R. 19 intersection project area. According to IDEM’s VFC, via a letter dated December 3, 2013, Forest River Housing, Inc. (formerly Utilimaster Corporation) created an Environmental Restrictive Covenant (ERC) on the property on November 26, 2013. The ERC states that Utilimaster Corporation (previous owner) entered into Indiana’s VRP to address releases of hazardous substances and / or petroleum (“contaminants of concern”) related to the Real Estate. In a letter dated May 5, 2014 from IDEM, Utilimaster’s Voluntary Remediation Completion Report was approved. Coordination with IDEM will occur.

Leaking Underground Storage Tank (LUST): Five (5) LUSTs are location within the 0.5 mile search radius. The nearest, GIS: El Roy Service; VFC: National Oil & Gas Incorporated (Agency ID 33627, 66009 S.R. 19, Wakarusa, Indiana 46573), is located 0.02 mile west of the C.R. 40 and S.R. 19 intersection project area. Petroleum impacts appear to extend into and beneath SR 19 toward the project area. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.

ECOLOGICAL INFORMATION:

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 Environmental Services concurrence: Nicole Fohey Breting (Signature)
Digitally signed by Nicole Fohey-Breting
Date: 2019.09.04 22:02:10 -04'00'

Prepared by:
Christopher J. Jeter, P.E.
Senior Civil Engineer
Lawson-Fisher Associates P.C.

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

URBANIZED AREA BOUNDARY: N/A

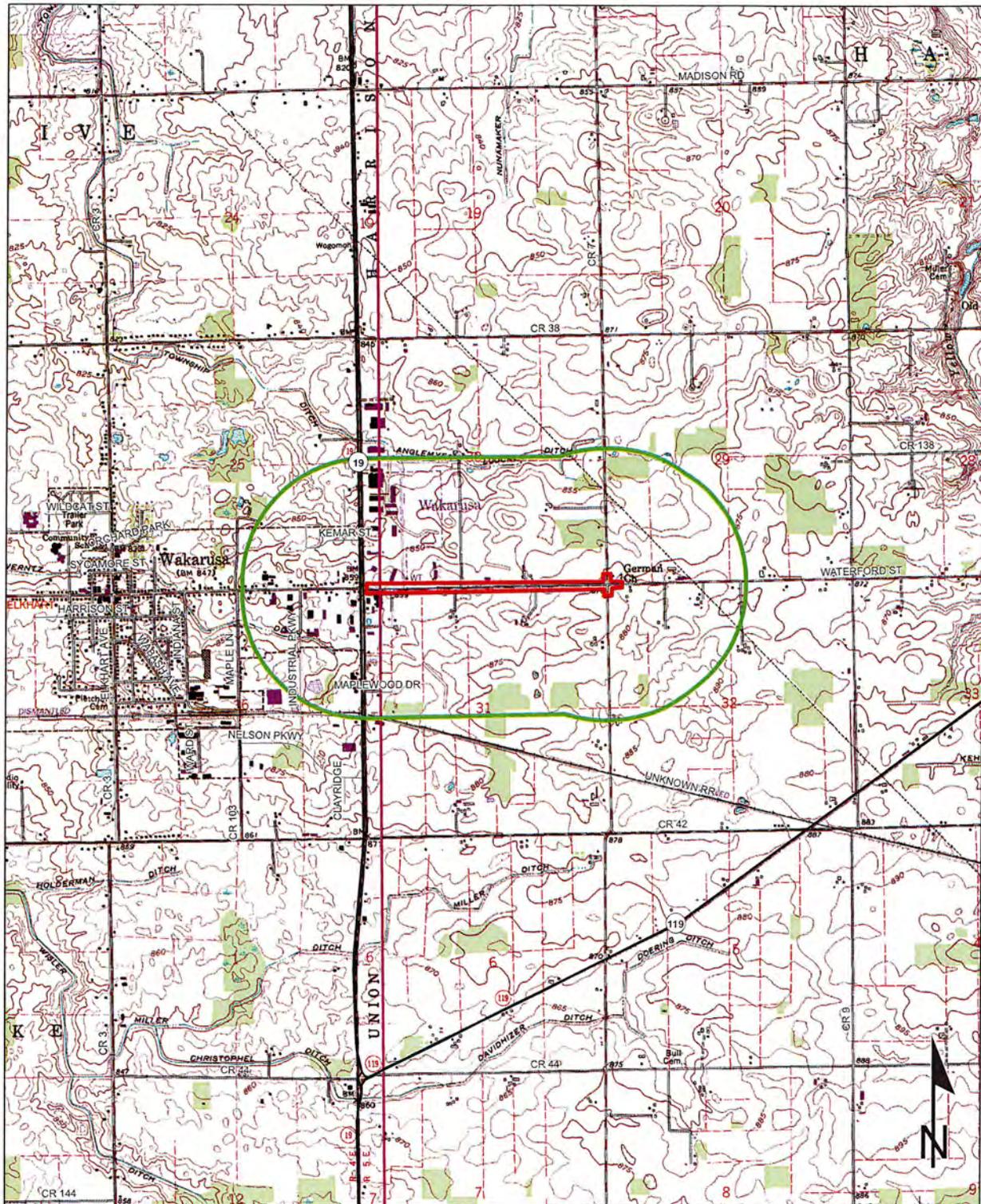
MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: YES



RED FLAG INVESTIGATION GRAPHICS

Red Flag Investigation - Site Map
 C.R. 40, Wakarusa Town Limits (S.R. 19) to C.R. 7
 Des. No. 1702848, Road Reconstruction and Added Buggy Lanes
 Elkhart County, Indiana



Sources: 0.5 0.25 0 0.5 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.

**FORAKER QUADRANGLE
 INDIANA
 7.5 MINUTE SERIES
 (TOPOGRAPHIC)**

Red Flag Investigation - Infrastructure
 C.R. 40, Wakarusa Town Limits (S.R. 19) to C.R. 7
 Des. No. 1702848, Road Reconstruction and Added Buggy Lanes
 Elkhart County, Indiana



Sources: 0.25 0.125 0 0.25 Miles
 Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
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	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
 C.R. 40, Wakarusa Town Limits (S.R. 19) to C.R. 7
 Des. No. 1702848, Road Reconstruction and Added Buggy Lanes
 Elkhart County, Indiana

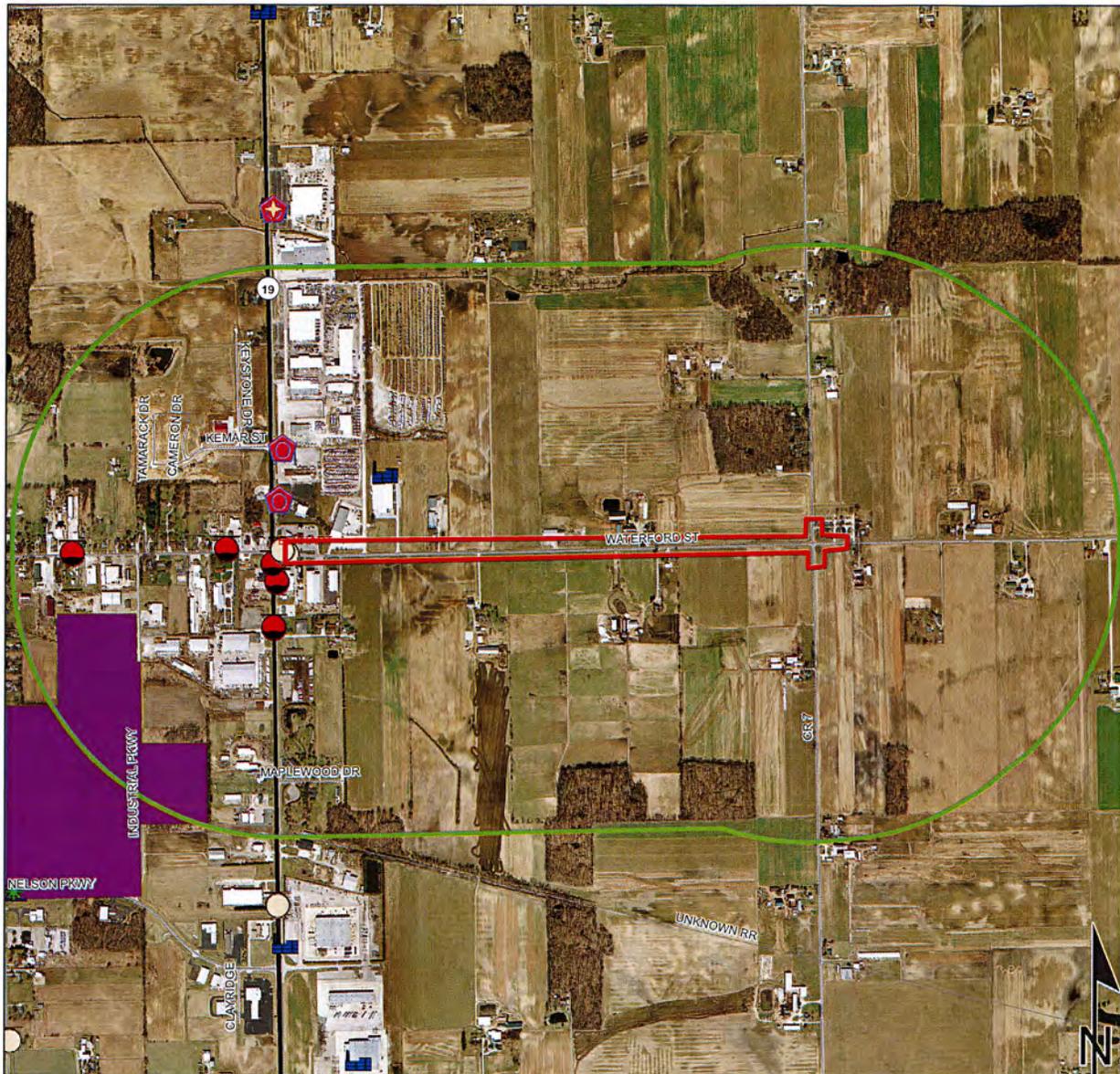


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NWI - Point	Wetlands	Project Area
Karst Spring	Lake	Half Mile Radius
NWI- Line	Floodplain - DFIRM	Toll
Impaired_Stream_Lake	Cave Entrance Density	Interstate
NPS NRI listed	Sinkhole Area	State Route
River	Sinking-Stream Basin	US Route
Canal Structure - Historic	County Boundary	Local Road
Canal Route - Historic		

Red Flag Investigation - Hazardous Material Concerns
C.R. 40, Wakarusa Town Limits (S.R. 19) to C.R. 7
Des. No. 1702848, Road Reconstruction and Added Buggy Lanes
Elkhart County, Indiana



	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				



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Sources:
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 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



ECOLOGICAL INFORMATION

Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
Mollusk: Gastropoda					
Campeloma decisum	Pointed Campeloma		SSC	G5	S2
Insect: Coleoptera (Beetles)					
Nicrophorus americanus	American Burying Beetle	LE	SX	G2G3	SX
Insect: Hymenoptera					
Formica ulkei				G5	S1
Insect: Lepidoptera (Butterflies & Moths)					
Apamea lignicolora	The Wood-colored Apamea		ST	G5	S1S2
Apamea nigrior	Black-dashed Apamea		SR	G5	S2S3
Capis curvata	Curved Halter Moth		ST	G5	S2S3
Catocala praeclara	Praeclara Underwing		SR	G5	S2S3
Crambus girardellus	Orange-striped Sedge Moth		SR	GNR	S2S3
Dasychira cinnamomea	Cinnamon Tussock Moth		SR	G4	S1
Exyra fax	Pitcher Window Moth		SE	G4	S1S2
Iodopepla u-album	White-eyed Borer Moth		SR	G5	S2
Leucania multilinea	Many-lined Wainscot		SR	G5	S1S2
Macrochilo absorptalis	Slant-lined Owlet		SR	G4G5	S2S3
Macrochilo hypocriticalis	Twin-dotted Macrochilo		SR	G4	S2
Melanomma auricinctaria	Huckleberry Eye-spot Moth		SR	G4	S2S3
Papaipema appassioata	The Pitcher Plant Borer Moth		SE	G4	S1
Papaipema speciosissima	The Royal Fern Borer Moth		ST	G4	S2S3
Insect: Odonata (Dragonflies & Damselflies)					
Sympetrum semicinctum	Band-winged Meadowhawk		SR	G5	S2S3
Insect: Tricoptera (Caddisflies)					
Setodes oligius	A Caddisfly		SE	G5	S1
Fish					
Coregonus artedi	Cisco		SSC	G5	S2
Ichthyomyzon fossor	Northern Brook Lamprey		SE	G4	S1
Moxostoma valenciennesi	Greater Redhorse		SE	G4	S2
Rhinichthys cataractae	Longnose Dace		SSC	G5	S2
Amphibian					
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Macrochelys temminckii	Alligator Snapping Turtle	C	SE	G3G4	SH

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Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
<i>Sistrurus catenatus</i>	Eastern Massasauga	LT	SE	G3	S2
<i>Terrapene carolina carolina</i>	Eastern Box Turtle		SSC	G5T5	S3
Bird					
<i>Bartramia longicauda</i>	Upland Sandpiper		SE	G5	S3B
<i>Botaurus lentiginosus</i>	American Bittern		SE	G5	S2B
<i>Certhia americana</i>	Brown Creeper			G5	S2B
<i>Circus hudsonius</i>	Northern Harrier		SE	G5	S2
<i>Cistothorus palustris</i>	Marsh Wren		SE	G5	S3B
<i>Cistothorus platensis</i>	Sedge Wren		SE	G5	S3B
<i>Empidonax alnorum</i>	Alder Flycatcher			G5	S2B
<i>Grus canadensis</i>	Sandhill Crane		SSC	G5	S2B,S1N
<i>Haliaeetus leucocephalus</i>	Bald Eagle		SSC	G5	S2
<i>Ixobrychus exilis</i>	Least Bittern		SE	G5	S3B
<i>Lanius ludovicianus</i>	Loggerhead Shrike		SE	G4	S3B
<i>Pandion haliaetus</i>	Osprey		SSC	G5	S1B
<i>Rallus elegans</i>	King Rail		SE	G4	S1B
<i>Rallus limicola</i>	Virginia Rail		SE	G5	S3B
Mammal					
<i>Condylura cristata</i>	Star-nosed Mole		SSC	G5	S2?
<i>Mustela nivalis</i>	Least Weasel		SSC	G5	S2?
<i>Taxidea taxus</i>	American Badger		SSC	G5	S2
Vascular Plant					
<i>Actaea rubra</i>	Red Baneberry		ST	G5	S2
<i>Amelanchier humilis</i>	Running Serviceberry		SE	G5	S1
<i>Andromeda glaucophylla</i>	Bog Rosemary		ST	G5T5	S2
<i>Besseyia bullii</i>	Kitten Tails		SE	G3	S1
<i>Boechera stricta</i>	Drummond Rockcress		SE	G5	S1
<i>Borodinia missouriensis</i>	Missouri Rockcress		SE	G5	S1
<i>Carex bebbii</i>	Bebb's Sedge		SR	G5	S3
<i>Carex debilis</i> var. <i>rudgei</i>	White-edge Sedge		WL	G5T5	S3
<i>Carex straminea</i>	Straw Sedge		ST	G5	S2
<i>Chimaphila umbellata</i> ssp. <i>cisatlantica</i>	Pipsissewa		SE	G5T5	S1
<i>Dendrolycopodium hickeyi</i>	Hickey's Clubmoss		SR	G5	S3
<i>Dendrolycopodium obscurum</i>	Tree Clubmoss		SR	G5	S3
<i>Eleocharis equisetoides</i>	Horse-tail Spikerush		SE	G4	S1
<i>Eleocharis robbinsii</i>	Robbins Spikerush		ST	G4G5	S2
<i>Epigaea repens</i>	Trailing Arbutus		SR	G5	S3
<i>Eriocaulon aquaticum</i>	Pipewort		SE	G5	S1
<i>Eriophorum gracile</i>	Slender Cotton-grass		ST	G5	S2
<i>Eriophorum viridicarinatum</i>	Green-keeled Cotton-grass		SR	G5	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

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<i>Fuirena pumila</i>	Dwarf Umbrella-sedge		ST	G4	S2
<i>Geranium robertianum</i>	Herb-robert		SR	G5	S3
<i>Juniperus communis</i> var. <i>depressa</i>	Ground Juniper		SR	G5T5	S3
<i>Linum striatum</i>	Ridged Yellow Flax		WL	G5	S3
<i>Malaxis unifolia</i>	Green Adder's-mouth Orchid		SE	G5	S1
<i>Matteuccia struthiopteris</i>	Ostrich Fern		SR	G5	S3
<i>Milium effusum</i>	Tall Millet-grass		ST	G5	S1
<i>Minuartia michauxii</i> var. <i>michauxii</i>	Michaux's Stitchwort		ST	G5T5	S2
<i>Pinus strobus</i>	Eastern White Pine		SR	G5	S3
<i>Piptochaetium avenaceum</i>	Blackseed Needlegrass		SR	G5	S3
<i>Platanthera leucophaea</i>	Prairie White-fringed Orchid	LT	SE	G2G3	S1
<i>Platanthera psycodes</i>	Small Purple-fringe Orchis		SR	G5	S2
<i>Poa paludigena</i>	Bog Bluegrass		SR	G3	S3
<i>Potamogeton pulcher</i>	Spotted Pondweed		ST	G5	S2
<i>Pseudognaphalium macounii</i>	Winged Cudweed		SX	G5	SX
<i>Pyrola americana</i>	American Wintergreen		ST	G5	S2
<i>Quercus prinoides</i>	Dwarf Chinquapin Oak		SE	G5	S1
<i>Rhynchospora macrostachya</i>	Tall Beaked-rush		SR	G4	S3
<i>Rhynchospora scirpoides</i>	Long-beaked Bulrush		SR	G4	S3
<i>Schoenoplectiella purshiana</i>	Weakstalk Bulrush		SR	G4G5	S3
<i>Schoenoplectiella smithii</i>	Smith's Bulrush		ST	G5?	S2
<i>Selaginella rupestris</i>	Ledge Spike-moss		SE	G5	S1
<i>Spiranthes lucida</i>	Shining Ladies'-tresses		SR	G4	S3
<i>Symphyotrichum boreale</i>	Rushlike Aster		ST	G5	S2
<i>Triantha glutinosa</i>	False Asphodel		ST	G5	S2
<i>Utricularia cornuta</i>	Horned Bladderwort		SE	G5	S1
<i>Utricularia minor</i>	Lesser Bladderwort		ST	G5	S1
<i>Utricularia purpurea</i>	Purple Bladderwort		SR	G5	S3
<i>Vaccinium oxycoccos</i>	Small Cranberry		ST	G5	S2
<i>Valerianella chenopodiifolia</i>	Goose-foot Corn-salad		WL	G4	S3
<i>Xyris difformis</i>	Carolina Yellow-eyed Grass		ST	G5	S2
High Quality Natural Community					
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland mesic Northern Lakes	Northern Lakes Mesic Upland Forest		SG	GNR	S1
Lake - lake	Lake		SG	GNR	S2
Prairie - sand dry-mesic	Dry-mesic Sand Prairie		SG	G3	S3
Wetland - beach marl	Marl Beach		SG	G3	S2
Wetland - bog acid	Acid Bog		SG	G3	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Elkhart

Species Name	Common Name	FED	STATE	GRANK	SRANK
Wetland - bog circumneutral	Circumneutral Bog		SG	G3	S3
Wetland - fen	Fen		SG	G3	S3
Wetland - flat muck	Muck Flat		SG	G2	S2
Wetland - flat sand	Sand Flat		SG	G2	S1
Wetland - marsh	Marsh		SG	GU	S4
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2

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APPENDIX F
ECOLOGICAL AND WATER RESOURCES

Indiana Floodplain Information Portal



Indiana
Natural Resources

Find an address

Example: 300 Michigan Avenue, Auburn, IN, 46706

Go To Address

Jump to a county

Select your county from below

Elkhart

For the best feel and performance, use

[< Pre](#)

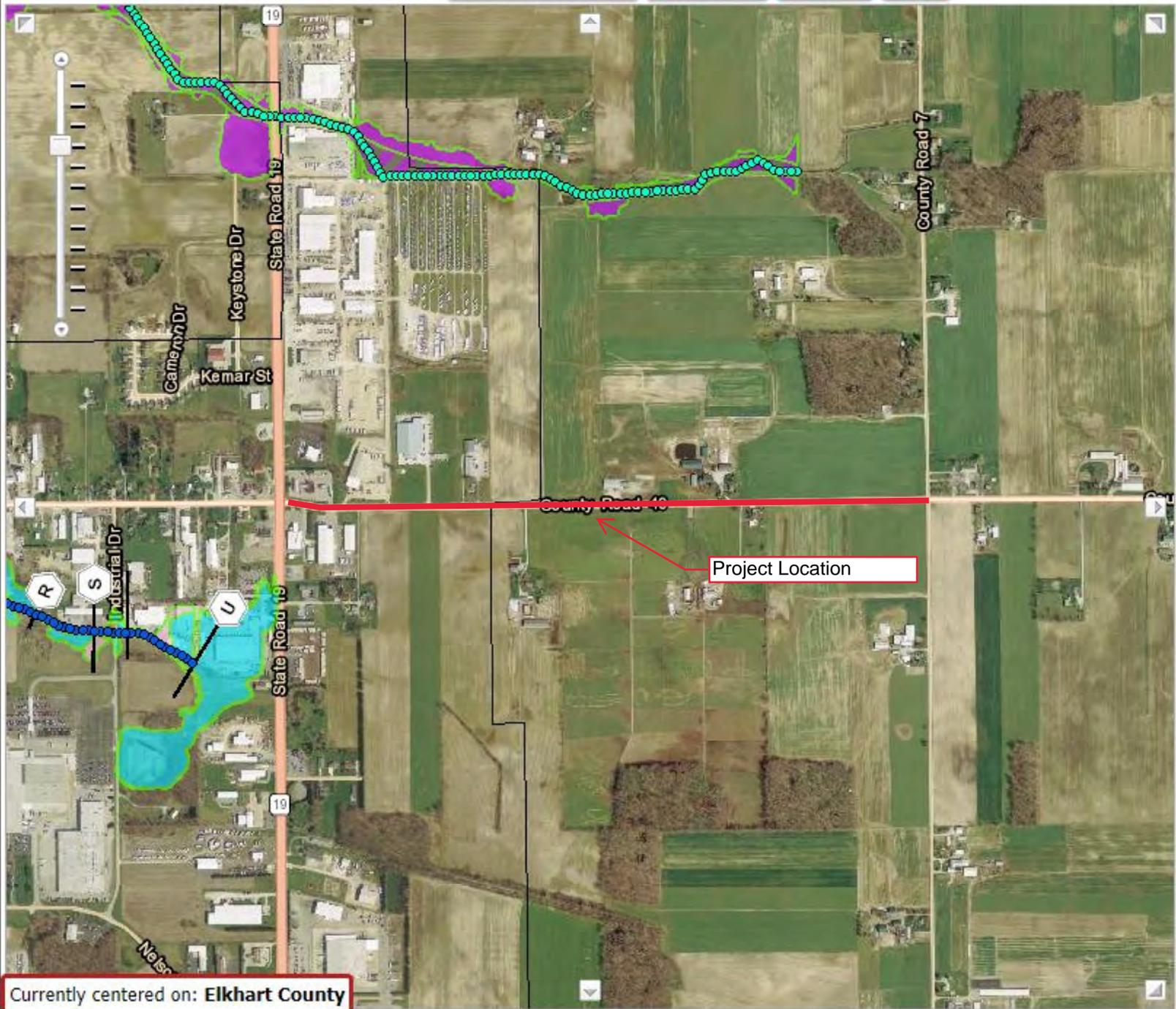
[Map](#) [FEMA Flood Insurance Study](#) [Floodplain Layers](#) [Frequently Asked Questions](#)

[Profile Chart](#)

[Layers](#)

[Legend](#)

[Help](#)



WATERS DETERMINATION REPORT

COUNTY ROAD 40 / WATERFORD STREET

ROAD IMPROVEMENT

DES. NO. 1702848

HARRISON TOWNSHIP, ELKHART COUNTY, INDIANA

Prepared for:

Lawson-Fisher Associates

December 18, 2019



Prepared by:

Metric Environmental, LLC

Complex Environment. Creative Solutions.

6971 Hillside Court

Indianapolis, IN 46256

Telephone: 317.207.4286

www.metricenv.com

Contents

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Wetlands	4
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WATERS OF THE U.S. DETERMINATION REPORT
County Road 40 / Waterford Street
Road Improvement
Harrison Township, Elkhart County, Indiana
Des. No. 1702848
Prepared By: Cory Shumate, Metric Environmental, LLC
December 13, 2019

Date of Waters Field Investigation: September 12, 2019

Location:

Sections 29, 30, 31, and 32; Township 36 North; Range 5 West
 Foraker, IN 7.5-minute USGS Topographic Quadrangles (**Exhibit 2**)
 Harrison Township, Elkhart County, Indiana
 12-Digit HUC Watershed: 040500012102 and 040500012103
 Latitude: 41.53622 Longitude: -85.9901

National Wetlands Inventory (NWI) Information:

No mapped NWI polygons are located within the project study limits (PSL). The nearest NWI polygon was located 200 ft. north of the PSL and was identified as a Palustrine, Emergent, Persistent, Temporarily Flooded, Partially Drained/Ditched (PEM1Ad) wetland. The NWI map is provided as **Exhibit 3**.

FEMA Flood Insurance Rate Map (FIRM):

No mapped floodplains are located within the PSL. The nearest floodplain was located 540 ft. southwest of the PSL and was associated with Werntz Ditch. This floodplain was identified as Zone AE, an area subject to inundation by the 1 percent chance of annual flood. The FIRM map for this area is provided as **Exhibit 3**.

Karst Feature Information:

No mapped karst features were found within 0.5 mi. of the PSL during the desktop review.

USGS National Hydrography Dataset (NHD) Information:

Six mapped NHD flowlines are located within the PSL, listed by occurrence from west to east in the table below. The NHD map is provided in **Exhibit 3 and Exhibit 4**.

Corresponding Feature	NDH Flowline Classification	Photo Nos.	USGS Blue line
None	Stream/River	9-14	No
None	Stream/River	15	No

Corresponding Feature	NDH Flowline Classification	Photo Nos.	USGS Blue line
UNT to Anglemyer Loucke Ditch, Wetland A, Culvert 1, and Culvert 2	Stream/River	16, 17, 19, 20	No
Wetland A	Canal/Ditch	25	No
None	Stream/River	24	No
Culvert 3	Stream/River	26-30	No

Soils:

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Elkhart County, Indiana, the PSL contained five mapped soil units, listed in the table below. The NRCS soil survey map is provided as **Exhibit 3**.

Map Unit Symbol	Map Unit Name	Hydric Rating (%)
BuuA	Brookston loam, 0 to 1 percent slopes	Hydric (92)
CvdA	Crosier loam, 0 to 1 percent slopes	Hydric (5)
CvdB	Crosier loam, 1 to 4 percent slopes	Hydric (10)
Uam	Udorthents, loamy	Not Hydric (0)
UeaA	Urban land-Crosier complex, 0 to 3 percent slopes	Hydric (4)

Attached Documents:

- Maps of the project area (**Exhibits 1-4**)
- Photo Location Map (**Exhibit 4**)
- Site Photographs
- Wetland Determination Data Form(s)
- Preliminary Jurisdictional Determination Form

Project Description:

The proposed project (Des. 1702848) includes road improvements along County Road (C.R.) 40. Work is to include widening along the entire project length, for a total length of approximately 1.0 mi. The lane widths will be increased to 12 ft. with 8 ft. paved shoulders. A 36-in. culvert, drainage tiles, and stand pipes will be extended along the south side of C.R. 40. The project begins at the Wakarusa town limits and extends approximately one mile east and terminates at C.R. 7.

Field Reconnaissance:

The wetland determination field visit was conducted on September 12, 2019 by Zachary Root and Cory Shumate of Metric Environmental, LLC. The area had received approximately 0.1 in. of precipitation on September 11, 2019, but this was not enough precipitation to cause an

observable disturbance within the PSL. The PSL consists of the area that has the potential to be impacted, based on the provided design scenario. This area was evaluated for the presence of wetlands and Waters of the United States. This investigation was conducted in accordance with the *1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual* and the *August 2010 Midwest Regional Supplement (version 2.0) Manual*.

A Location Map showing the project location is provided as **Exhibit 1**. The proposed project is located in Harrison Township in the southwestern quadrant of Elkhart County, Indiana. The PSL extended along C.R. 40 for approximately 1.0 mi., extending approximately 50 ft. north and south from the C.R. 40 centerline. Additionally, the PSL extends north and south approximately 500 ft. at the intersection of C.R. 7 and C.R. 40, extending east and west approximately 60 ft. from C.R. 7 centerline. An aerial map of sampling points, water features, and photograph locations is provided as **Exhibit 4** and site photographs are attached.

The site was investigated for evidence of hydrophytic vegetation, hydric soil, and wetland hydrology to determine if the project impacts wetlands and other Waters of U.S. The sampling point (SP) locations were chosen in possible wetland areas within the project study limits. The upland areas consisted of agricultural crop fields, pasture fields, residential lawn, and commercial lawn. Upland areas where sampling points were not taken, were investigated and determined to be upland due to upward sloping topography and presence of dominant upland vegetation. Two sampling points were taken and identified as SP-A1 and SP-A2. The sampling points, recorded on the USACE Wetland Determination Data Forms and shown on **Exhibit 4**, provided the following information:

**Sampling Plot Data Summary Table
County Road 40 / Waterford Street
Road Improvement
Harrison Township, Elkhart County, Indiana
Des. No. 1702848**

Plot #	Photo #s	Lat/Long	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Within Wetland
SP-A1	18-20	41.53615 -85.98922	Yes	Yes	Yes	Yes, Wetland A
SP-A2	21-23	41.53611 -85.98938	Yes	No	No	No, Wetland A Upland

Wetlands:

One wetland was observed within the PSL. Descriptions of the wetland and corresponding sampling points are provided below.

**Wetland Summary Table
County Road 40 / Waterford Street
Road Improvement
Harrison Township, Elkhart County, Indiana
Des. No. 1702848**

Wetland Name	Photo #s	Lat/Long	Cowardin Class	Total Area	Quality	Likely Water of the U.S.
				acres		
Wetland A	17-19, 20, 25	41.536105 -85.989234	PEM1A	0.053	Poor	Yes

Wetland A (0.053 ac.) – PEM1A

Wetland A was classified as Palustrine, Emergent, Persistent, Temporarily Flooded (PEM1A) wetland. This wetland is located south of C.R. 40, within an agricultural drainage ditch. The boundaries of Wetland A were delineated by increased elevation. Since Wetland A is located within an agricultural drainage ditch, it likely receives runoff on a consistent basis during rain events. Water drains north through Wetland A, Culvert 2, and Unnamed Tributary (UNT) to Anglemyer Loucke Ditch into Culvert 1. From Culvert 1, based off of NHD flowlines, topographic contour lines, and aerial imagery, it can be deduced water then flows into Anglemyer Loucke Ditch, which flows into Township Ditch, which flows into Baugo Creek, which flows into St. Joseph River, a Section 10 Traditional Navigable Water (TNW). Therefore, Wetland A should be considered a jurisdictional Water of the U.S. The wetland was not associated with a mapped NWI polygon and was formed within the BuuA mapped soil unit, which is listed as 92 percent hydric. Wetland A was adjacent to C.R. 40 and pasture fields and likely receives run-off from both of these sources. The wetland also exhibited poor plant species diversity and no wildlife or aquatic life were observed. These factors contribute to the conclusion that Wetland A can only support a poor amount of wildlife or aquatic habitat, and therefore should be considered to be of poor quality.

Sampling Point A1 (SP-A1) – Wetland A

SP-A1 was located at the toe of the hillslope within an agricultural drainage ditch south of C.R. 40. The dominant vegetation at this sampling point was reed canary grass (*Phalaris arundinacea*, FACW) in the herb stratum. This passed the hydrophytic vegetation indicators of rapid test for hydrophytic vegetation, dominance test (100 percent), and prevalence index (2.05). To a depth of 11 in., the soil in the test pit was a sandy loam. A restrictive layer of gravel was present at 11 in. which prevented further excavation. Multiple attempts were made to dig a test pit deeper in this area with no success. From 0 to 8 in., the soil exhibited a matrix color of 10YR 3/2 (100

percent). From 8 to 11 in., the soil exhibited a matrix color of 10YR 4/1 (85 percent) with 10YR 5/8 (15 percent) prominent redox concentrations in the matrix. Indicators of wetland hydrology observed during the field reconnaissance include surface water (A1), high water table (A2), saturation (A3), geomorphic position (D2) due to the sampling point's location at the toe of a hillslope with concave local relief, and FAC-neutral test (D5). Due to the presence of agricultural drainage tiles (as noted in the project description) and the restrictive layer of gravel at an 11 in. depth, it can be deduced that the soils within the vicinity of SP-A1 are significantly disturbed. In addition, the criteria for hydrophytic vegetation and wetland hydrology were met. Therefore, it can be deduced that in the absence of the agricultural drainage tiles and the restrictive layer of gravel, the 8-11 in. layer in the test pit would have extended beyond 11 in. to have the full 6 in. starting within 10 in. to satisfy the criteria of the depleted matrix (F3) hydric soil indicator. Since all three required wetland criteria were met, this area qualified as a wetland.

Sampling Point A2 (SP-A2) – Wetland A upland

SP-A2 was located within an old field west of Wetland A. The dominant vegetation at this sampling point was reed canary grass (*Phalaris arundinacea*, FACW) in the herb stratum. This met the hydrophytic vegetation indicators of rapid test for hydrophytic vegetation, dominance test (100 percent) and prevalence index (2.00). To a depth of 20 in., the soil in the test pit was a silt loam. From 0 to 4 in., the soil exhibited a matrix color of 10YR 3/1 (100 percent) with organic matter present. From 4 to 15 in., the soil exhibited a matrix color of 10YR 3/3 (100 percent). From 15 to 20 in., the soil exhibited a matrix color of 10YR 4/2 (95 percent) with 7.5YR 3/3 (5 percent) faint redox concentrations in the matrix. This did not meet the criteria for hydric soils. No primary indicators of wetland hydrology were observed. Only one secondary indicator of wetland hydrology, FAC-neutral test (D5), were observed, which did not meet the criteria for wetland hydrology. Since only one of the three required wetland criteria were met, this area did not qualify as a wetland.

Streams:

One stream, UNT to Anglemyer Loucke Ditch, was observed within the PSL during the field reconnaissance. A description of the stream is provided below.

**Stream Summary Table
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848**

Stream Name	Photos	Lat/Long	OHWM Width	OHWM Depth	USGS Blue-line	Riffles Pools	Quality	Likely Water of the U.S.	Substrate	Potential Stream Impact
			ft.	ft.						ft.
UNT to Anglemyer Loucke Ditch	16	41.536332 -85.989266	2.67	0.08	No (Ephemeral)	No	Poor	Yes	Silt	16.8

UNT to Anglemyer Loucke Ditch (16.8 LFT)

UNT to Anglemyer Loucke Ditch flows north from Culvert 2 into Culvert 1 for 16.8 linear feet (0.001 ac.). Based off of NHD flowlines, topographic elevation contours, and aerial imagery, water from UNT to Anglemyer Loucke Ditch flows northwest into Anglemyer Loucke Ditch, a jurisdictional water of the U.S. Therefore, UNT to Anglemyer Loucke Ditch should also be considered a jurisdictional water of the U.S. The stream was not associated with a blue line on the USGS topographic map, indicating it was ephemeral. UNT to Anglemyer Loucke Ditch was also not associated with a mapped NWI polygon, but based off of field observations, it can be classified as a Riverine, Ephemeral stream, Corps designation R6. The ordinary high-water mark (OHWM) was 2.67 ft. wide and 0.08 ft. deep. Measurements of the OHWM could not be taken outside the influence of Culverts 1 and 2 because of their close proximity to each other. No observable OHWM was observed at the southern inlet of Culvert 2, where Wetland A was located. The dominant substrate was silt with some artificial substrate present as well. Neither riffle/pool complexes, instream cover, or wildlife/aquatic organisms were present. The riparian buffer of UNT to Anglemyer Loucke Ditch consisted of pastures where cows were present. No line was associated with this stream on USGS *Indiana StreamStats*, so the drainage area upstream of the PSL is estimated to be less than 0.1 square mile. Qualities of the stream listed above contribute to the conclusion that UNT to Anglemyer Loucke Ditch being classified as of poor quality.

Culverts and Drains:

Four culverts were identified within the PSL. The culverts varied in material including concrete, corrugated metal pipe (CMP), and high-density polyethylene (HDPE). The culverts and storm drains serve to aid in roadside drainage and stormwater conveyance. Only Culverts 1 and 2 carried jurisdictional waters of the U.S.: Wetland A and UNT to Anglemyer Loucke Ditch. Culverts 3 and 4 did not carry jurisdictional waters due to a lack of an OHWM, bed and bank, and lack of a significant nexus to any jurisdictional Waters of the U.S. Additional details on these culverts are provided in the table below, and locations of these culverts are shown on **Exhibits 4** and attached photosheet.

**Culverts and Drains Summary Table
County Road 40 / Waterford Street
Road Improvement
Harrison Township, Elkhart County, Indiana
Des. No. 1702848**

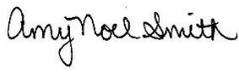
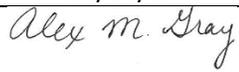
Culvert and Drain Number	Type	Diameter (in)	Photo #s	Purpose
1	Concrete Culvert	16	16	Stormwater Conveyance
2	HDPE Culvert	36	16, 20	Stormwater Conveyance
3	HDPE Culvert	12	26, 27, 29	Roadside Drainage
4	CMP Culvert	12	35, 36	Roadside Drainage

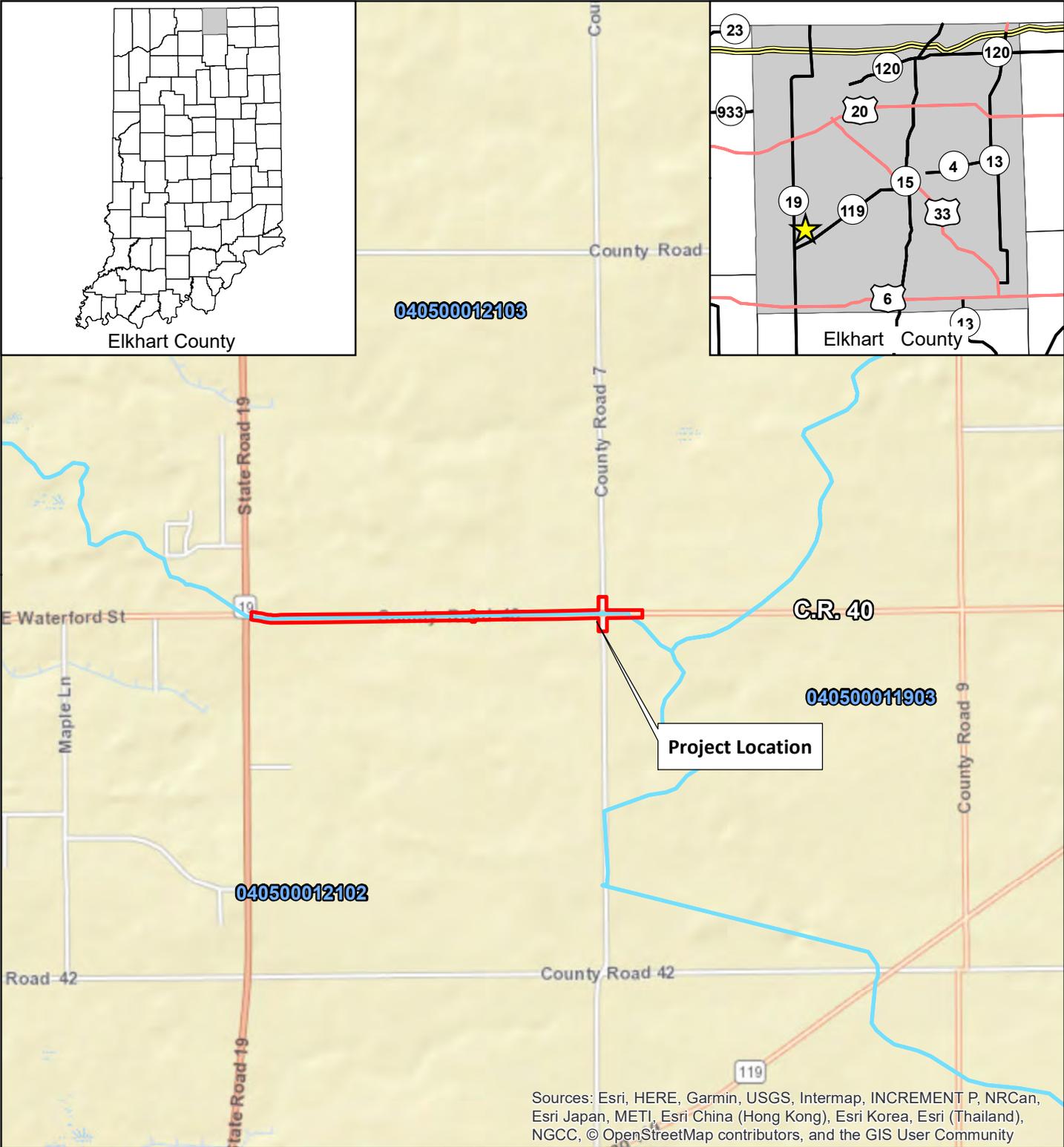
Conclusion:

One PEM1A wetland, totaling 0.053 ac., and one stream, UNT to Anglemyer Loucke Ditch, totaling 16.8 linear feet, were identified within the PSL. These waterways are likely Waters of the U.S. Every effort should be taken to avoid or minimize impacts to the waterway and wetland. If impacts are necessary, 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 USACE.

Acknowledgements:

This waters determination has been prepared based on the best available information, interpreted in 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.

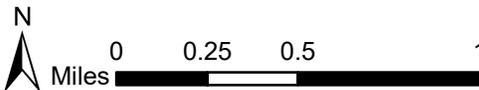
Metric Environmental Staff	Position	Contributing Effort	Signature/Date
Amy Noel Smith	Natural Resources Project Manager II	Project Manager, Field Data Collection	 12/18/19
Alex Gray	Natural Resources Project Manager I	QAQC	 12/18/19
Cory Shumate	Environmental Scientist 2	Field Data Collection, Report Preparation	 12/18/19
Zachary Root	Environmental Scientist 2	Field Data Collection	 12/18/19



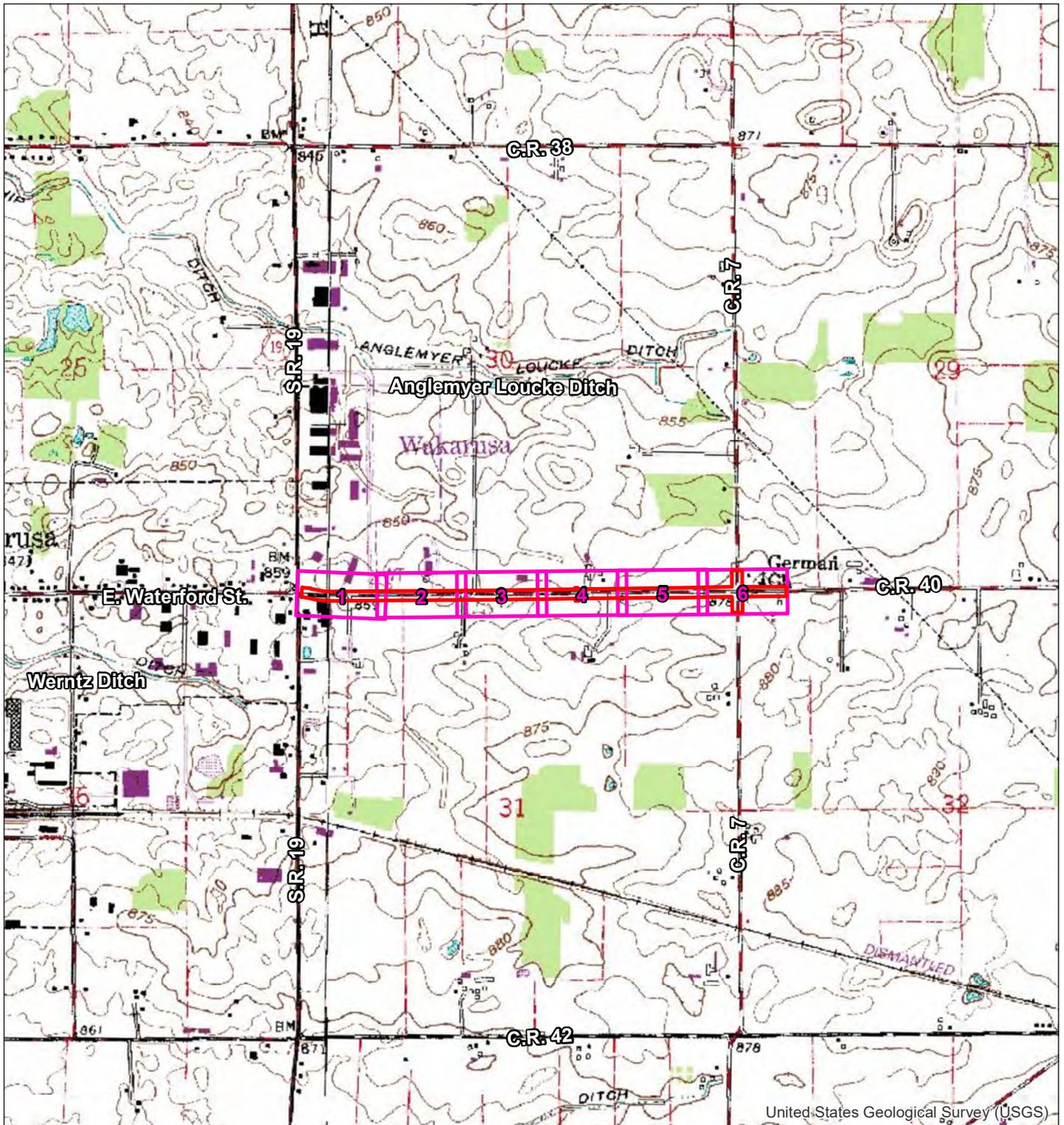
Project Study Limits (PSL) 12-Digit HUC Watershed

Exhibit 1 - Location Map
 County Road 40/ Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 2018 Basemap
 Latitude: 41.53622 Longitude: -85.9901



Exh. 1



United States Geological Survey (USGS)

Project Study Limits (PSL)
 Page Reference

Exhibit 2A - USGS Topographic Map - Small Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (1996)

N

 0 500 1,000 2,000
 Feet



Exh. 2A

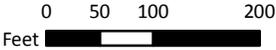


United States Geological Survey (USGS)

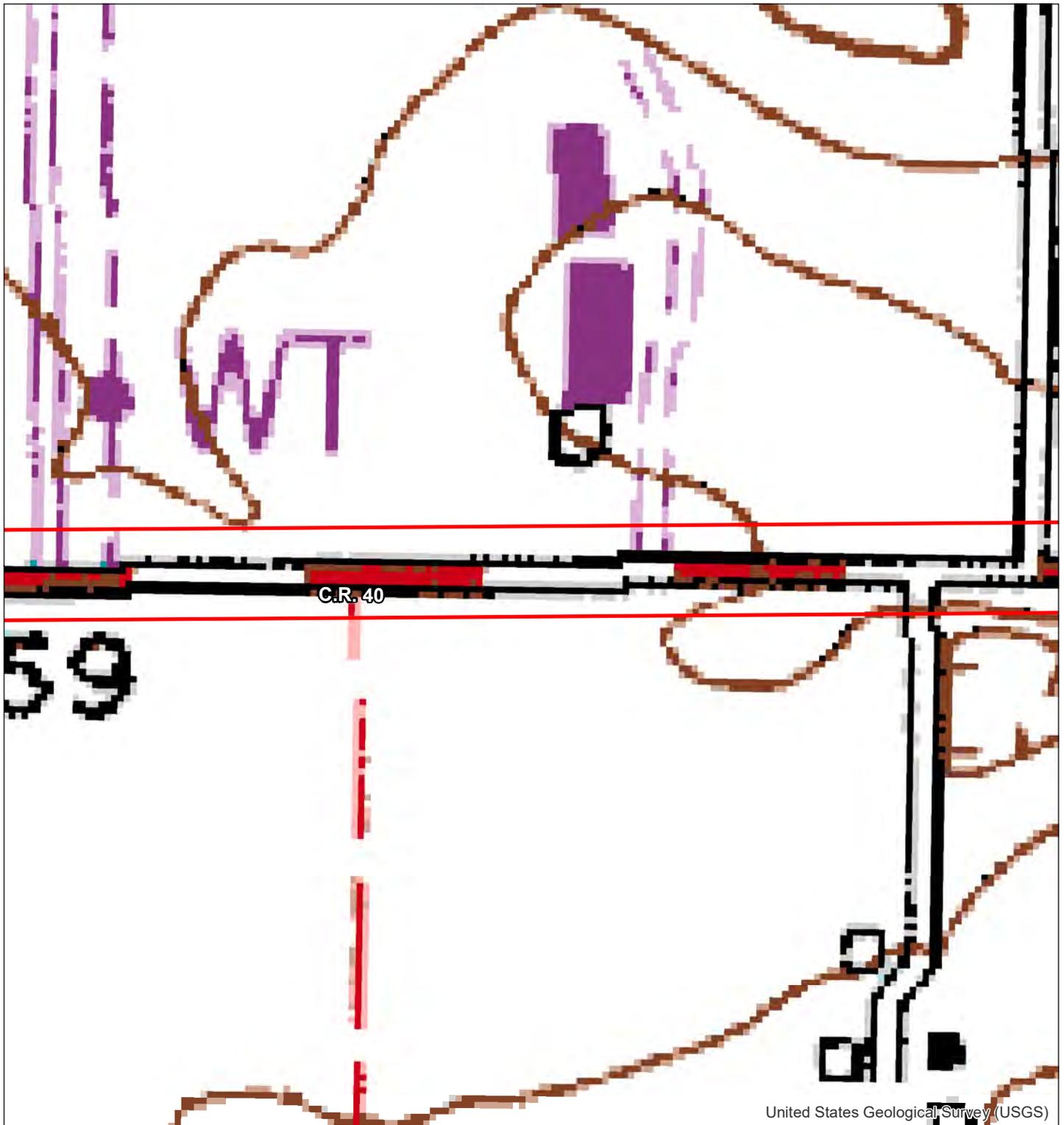
 Project Study Limits (PSL)

Exhibit 2B - USGS Topographic Map - Large Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (1996)



Exh. 2B Page 1 of 6



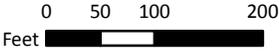
United States Geological Survey (USGS)

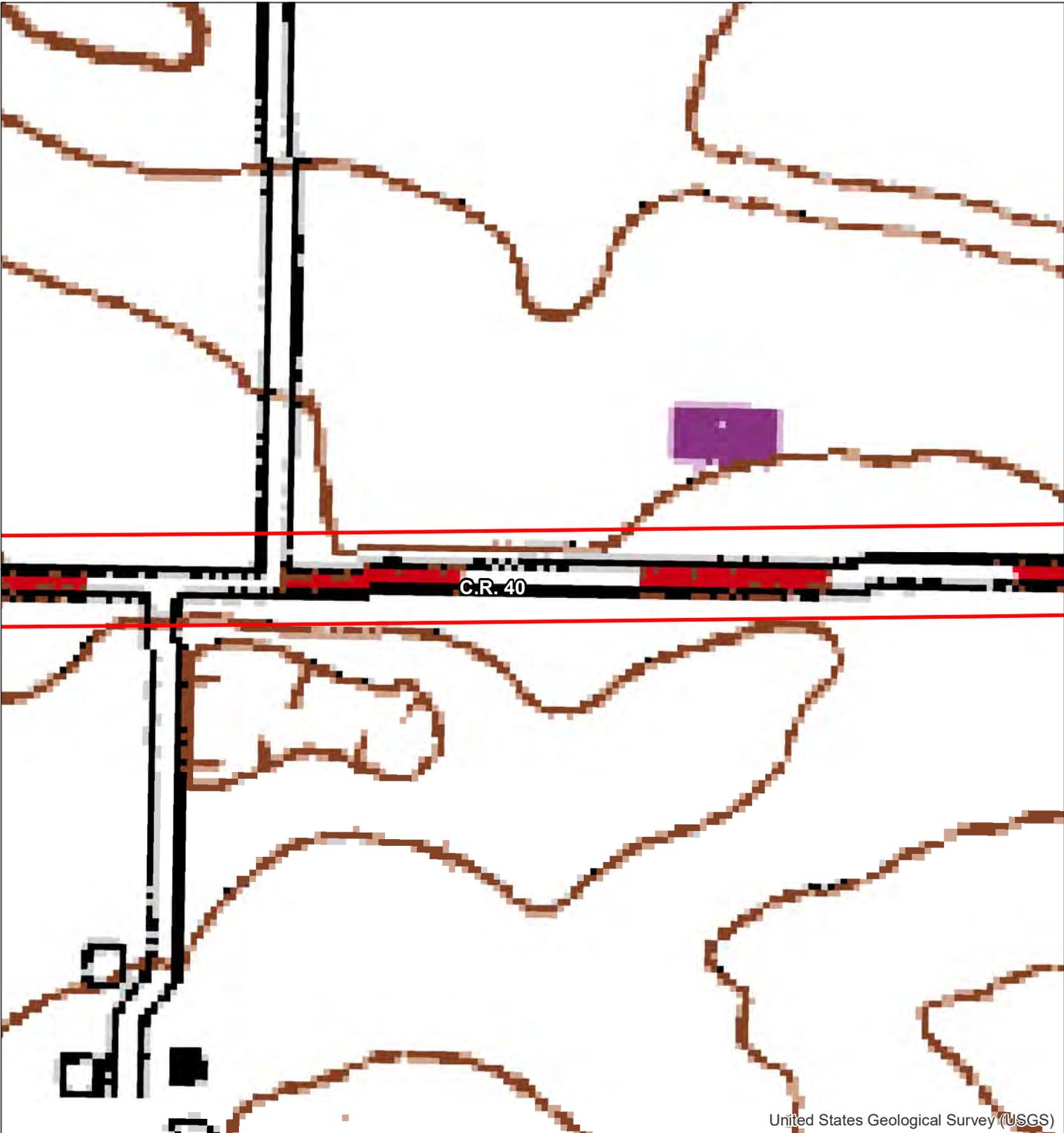


Project Study Limits (PSL)

Exhibit 2B - USGS Topographic Map - Large Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (1996)





United States Geological Survey (USGS)



Project Study Limits (PSL)

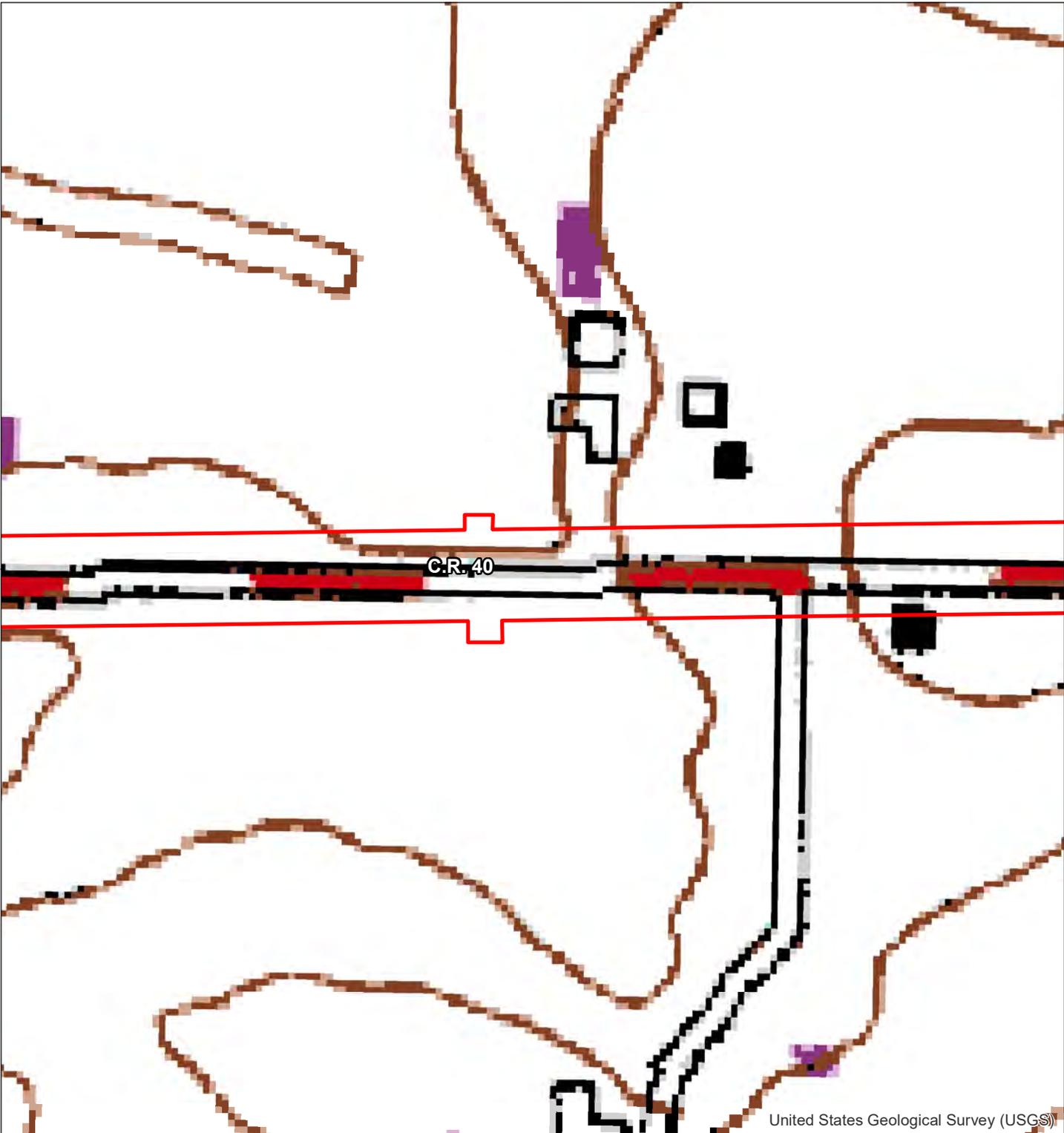
Exhibit 2B - USGS Topographic Map - Large Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (1996)

0 50 100 200
 Feet



Exh. 2B Page 3 of 6



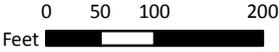
United States Geological Survey (USGS)



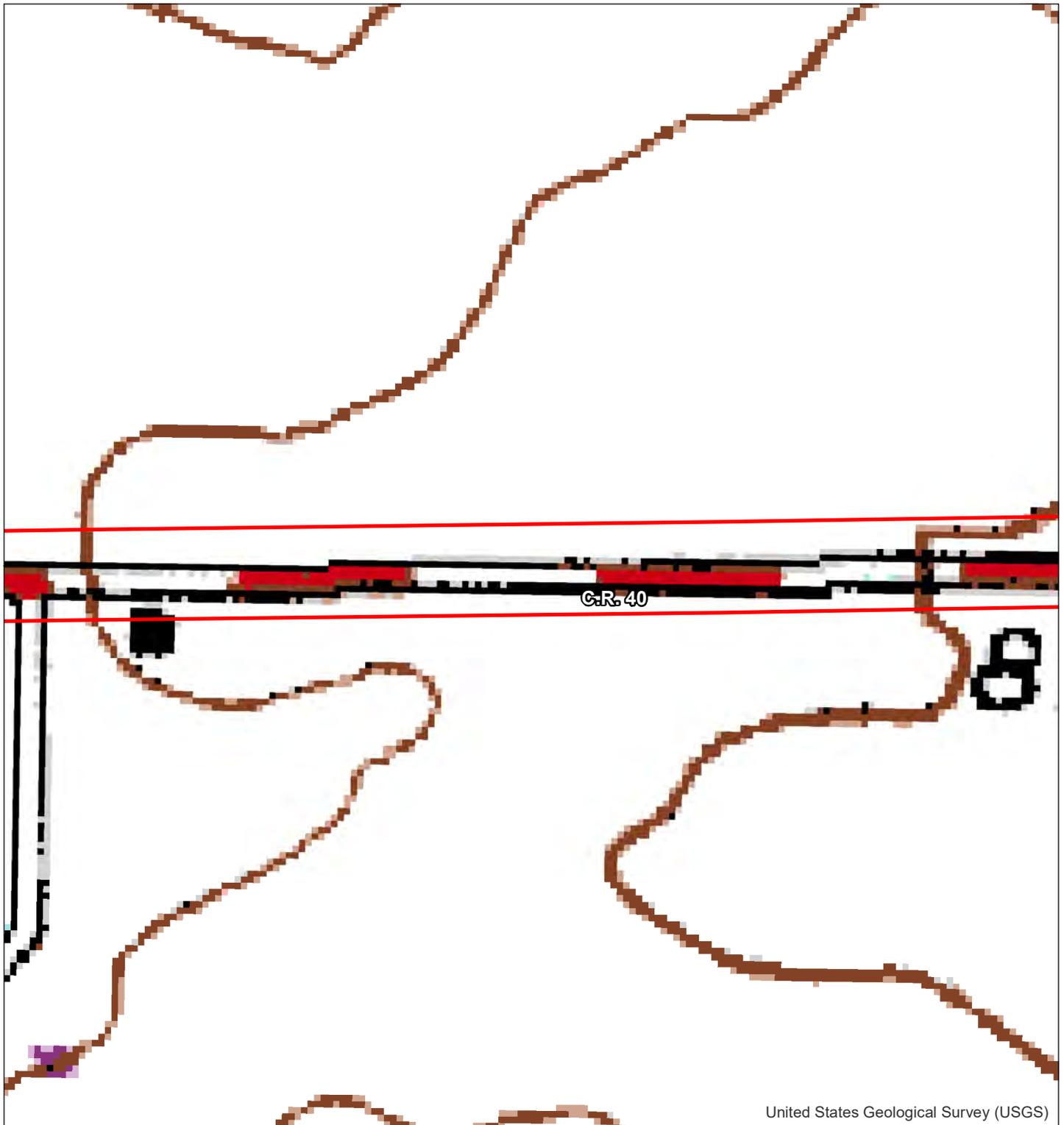
Project Study Limits (PSL)

Exhibit 2B - USGS Topographic Map - Large Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (1996)



Exh. 2B Page 4 of 6



United States Geological Survey (USGS)

 Project Study Limits (PSL)

Exhibit 2B - USGS Topographic Map - Large Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

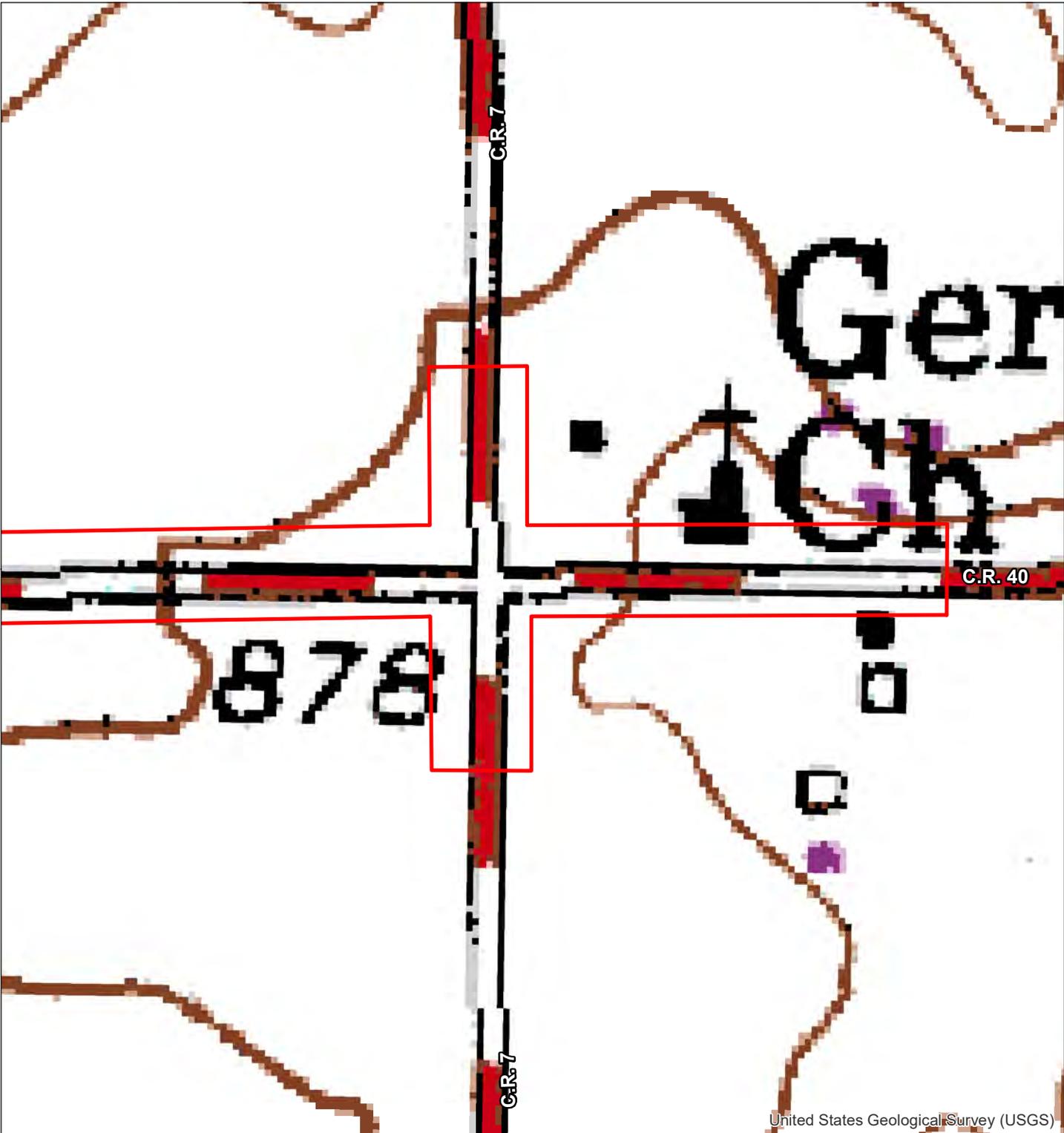
All locations approximate
 Source: Indiana Spatial Data Portal (1996)

0 50 100 200
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Exh. 2B Page 5 of 6



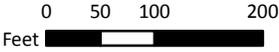
United States Geological Survey (USGS)



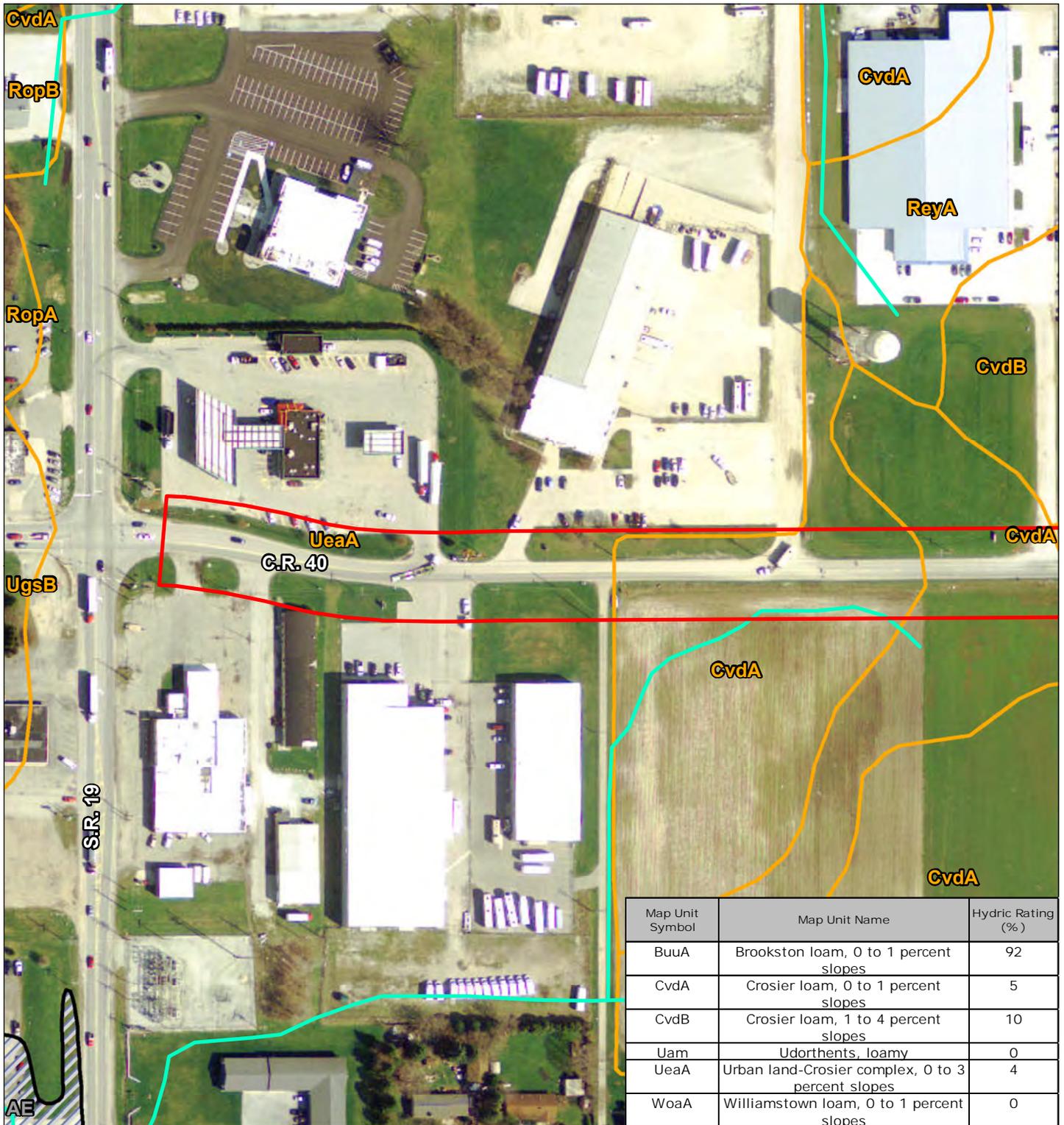
Project Study Limits (PSL)

Exhibit 2B - USGS Topographic Map - Large Scale
 Foraker, IN 7.5-minute Quadrangle
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (1996)



Exh. 2B Page 6 of 6



Map Unit Symbol	Map Unit Name	Hydric Rating (%)
BuuA	Brookston loam, 0 to 1 percent slopes	92
CvdA	Crosier loam, 0 to 1 percent slopes	5
CvdB	Crosier loam, 1 to 4 percent slopes	10
Uam	Udorthents, loamy	0
UeaA	Urban land-Crosier complex, 0 to 3 percent slopes	4
WoaA	Williamstown loam, 0 to 1 percent slopes	0

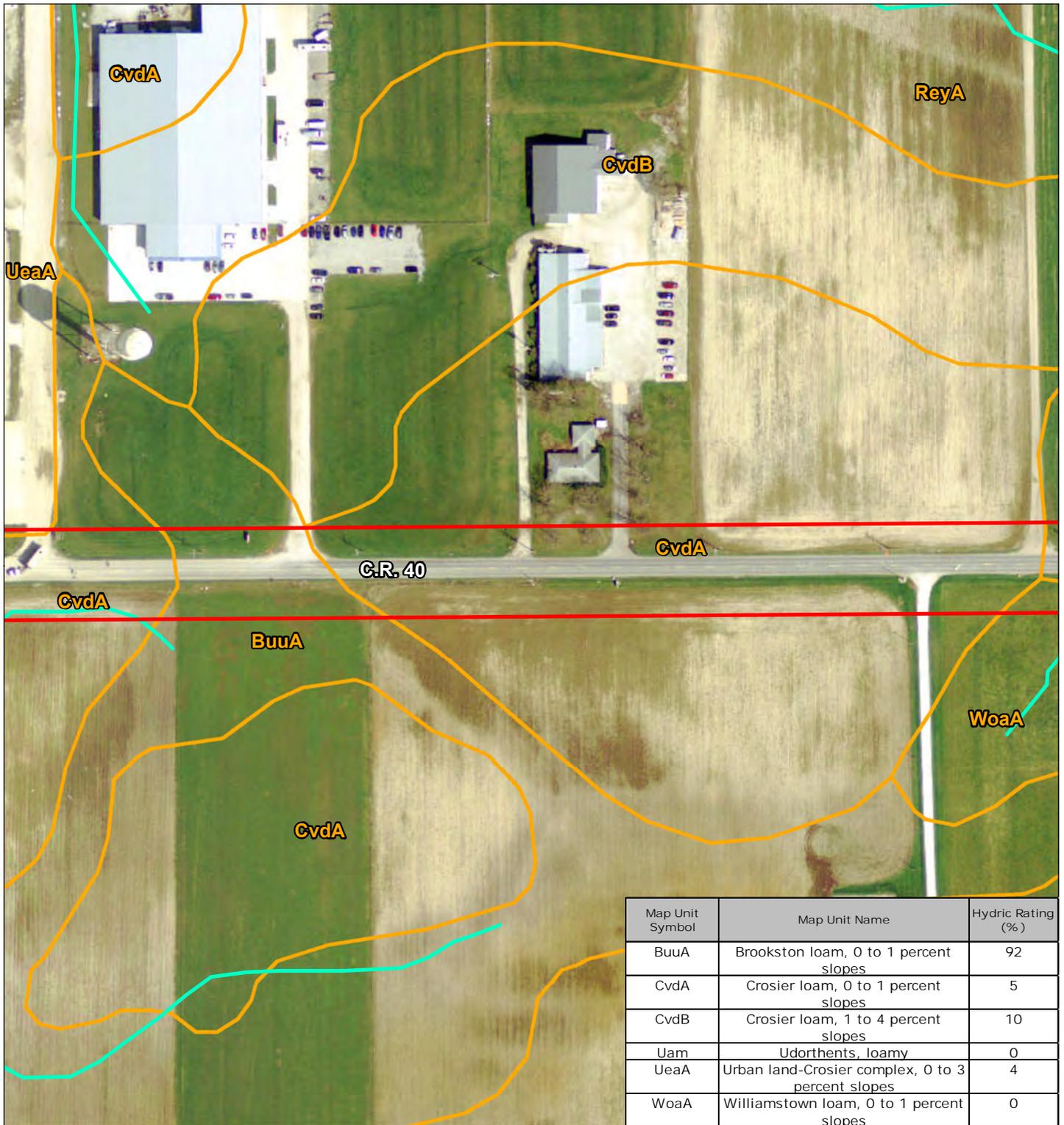
- Project Study Limits (PSL)
- NHD Flowline
- NRCS Soil Survey
- NWI Wetlands
- Floodplain - Zone AE - 1% Annual Chance

Exhibit 3 - NWI Wetland, NHD Flowline, NRCS Soil Survey, and FEMA Flood Insurance Rate Map (FIRM)
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

0 50 100 200
 Feet





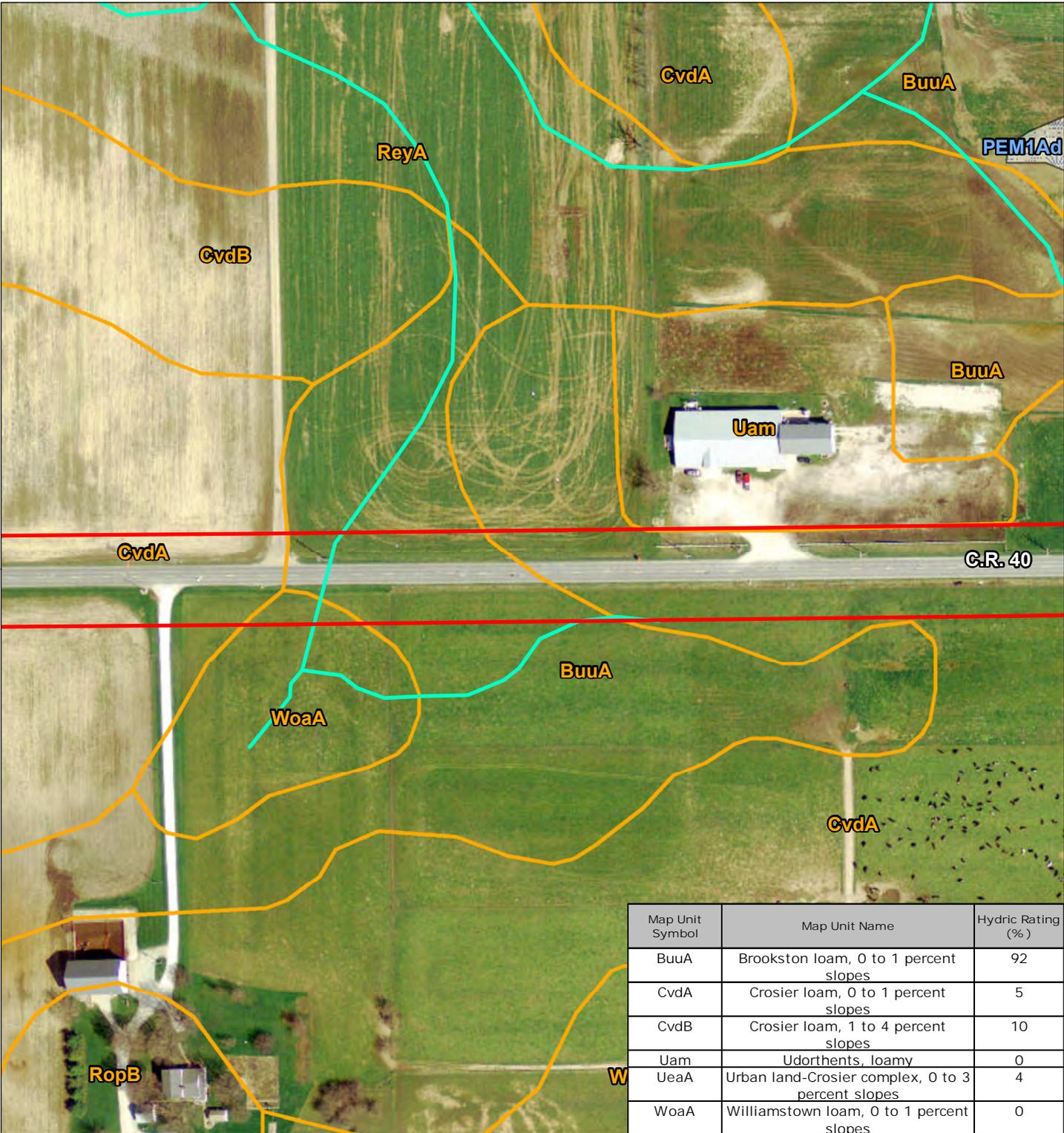
- Project Study Limits (PSL)
- NHD Flowline
- NWI Wetlands
- NRCS Soil Survey
- Floodplain - Zone AE - 1% Annual Chance

Exhibit 3 - NWI Wetland, NHD Flowline, NRCS Soil Survey, and FEMA Flood Insurance Rate Map (FIRM) County Road 40 / Waterford Street Road Improvement Harrison Township, Elkhart County, Indiana Des. No. 1702848 Metric Project No. 18-0121 Map Date: 9/6/2019 Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2016)

0 50 100 200
 Feet





Map Unit Symbol	Map Unit Name	Hydric Rating (%)
BuuA	Brookston loam, 0 to 1 percent slopes	92
CvdA	Crosier loam, 0 to 1 percent slopes	5
CvdB	Crosier loam, 1 to 4 percent slopes	10
Uam	Udorthents, loamy	0
UeaA	Urban land-Crosier complex, 0 to 3 percent slopes	4
WoaA	Williamstown loam, 0 to 1 percent slopes	0

Project Study Limits (PSL)
 NWI Wetlands
 Floodplain - Zone AE - 1% Annual Chance

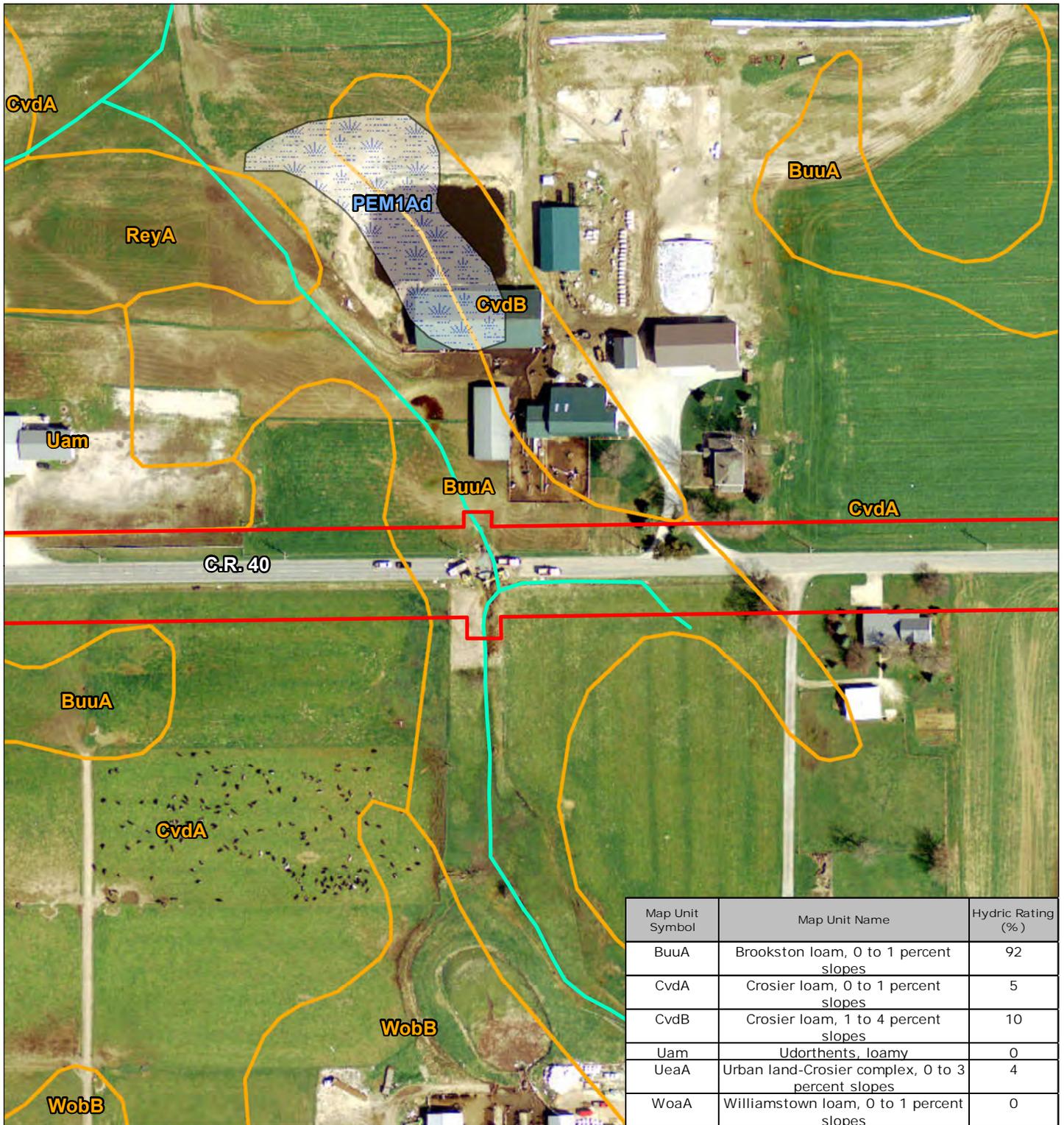
NHD Flowline
 NRCS Soil Survey

Exhibit 3 - NWI Wetland, NHD Flowline, NRCS Soil Survey, and FEMA Flood Insurance Rate Map (FIRM)
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

0 50 100 200
 Feet





Map Unit Symbol	Map Unit Name	Hydric Rating (%)
BuuA	Brookston loam, 0 to 1 percent slopes	92
CvdA	Crosier loam, 0 to 1 percent slopes	5
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UeaA	Urban land-Crosier complex, 0 to 3 percent slopes	4
WoaA	Williamstown loam, 0 to 1 percent slopes	0

- Project Study Limits (PSL)
- NWI Wetlands
- Floodplain - Zone AE - 1% Annual Chance
- NHD Flowline
- NRCS Soil Survey

Exhibit 3 - NWI Wetland, NHD Flowline, NRCS Soil Survey, and FEMA Flood Insurance Rate Map (FIRM)
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

0 50 100 200
 Feet





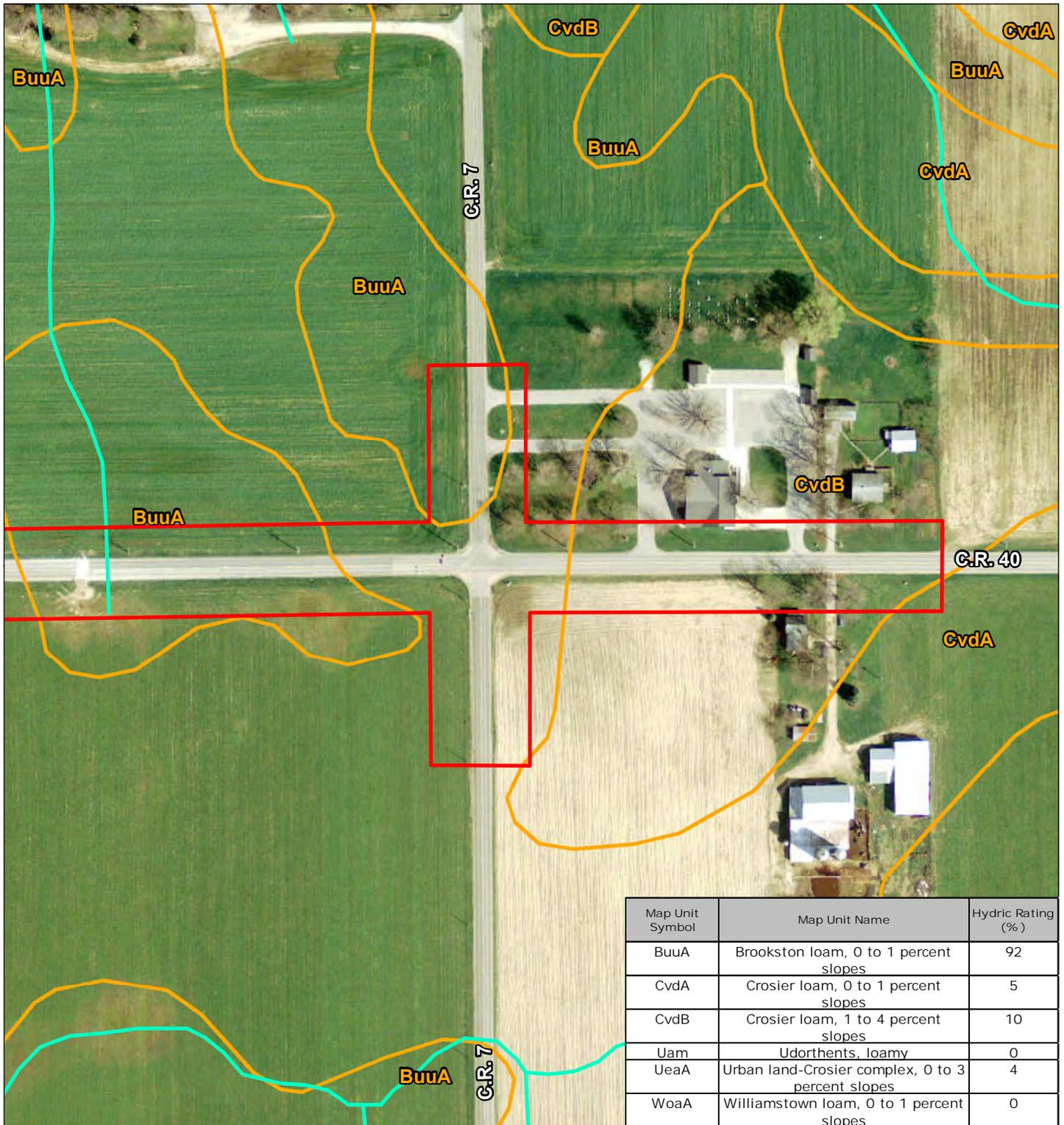
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BuuA	Brookston loam, 0 to 1 percent slopes	92
CvdA	Crosier loam, 0 to 1 percent slopes	5
CvdB	Crosier loam, 1 to 4 percent slopes	10
Uam	Udorthents, loamy	0
UeaA	Urban land-Crosier complex, 0 to 3 percent slopes	4
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- Project Study Limits (PSL)
- NHD Flowline
- NWI Wetlands
- NRCS Soil Survey
- Floodplain - Zone AE - 1% Annual Chance

Exhibit 3 - NWI Wetland, NHD Flowline, NRCS Soil Survey, and FEMA Flood Insurance Rate Map (FIRM)
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)





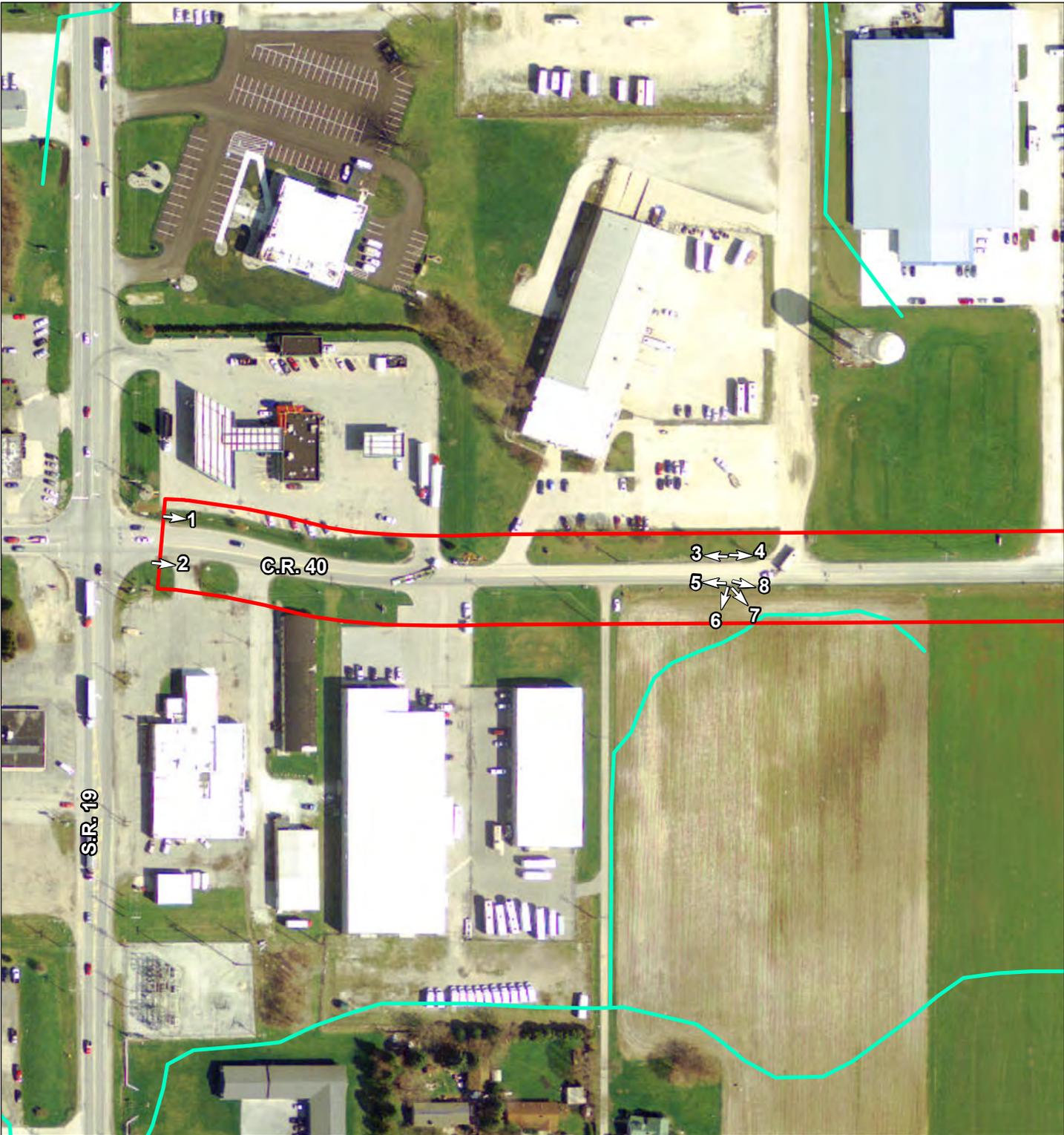
Map Unit Symbol	Map Unit Name	Hydric Rating (%)
BuuA	Brookston loam, 0 to 1 percent slopes	92
CvdA	Crosier loam, 0 to 1 percent slopes	5
CvdB	Crosier loam, 1 to 4 percent slopes	10
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- Project Study Limits (PSL)
- NHD Flowline
- NWI Wetlands
- NRCS Soil Survey
- Floodplain - Zone AE - 1% Annual Chance

Exhibit 3 - NWI Wetland, NHD Flowline, NRCS Soil Survey, and FEMA Flood Insurance Rate Map (FIRM)
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 9/6/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

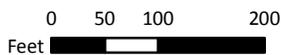




- Project Study Limits (PSL)
- Wetland
- Stream
- Culvert
- Sampling Point
- Wetland Beyond PSL
- Culvert Opening
- NHD Flowline

Exhibit 4 - Wetland Delineation & Photo Location Map
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 11/19/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)





- | | | | |
|----------------------------|--------------------|-----------------|--------------|
| Project Study Limits (PSL) | Wetland | Stream | Culvert |
| Sampling Point | Wetland Beyond PSL | Culvert Opening | NHD Flowline |

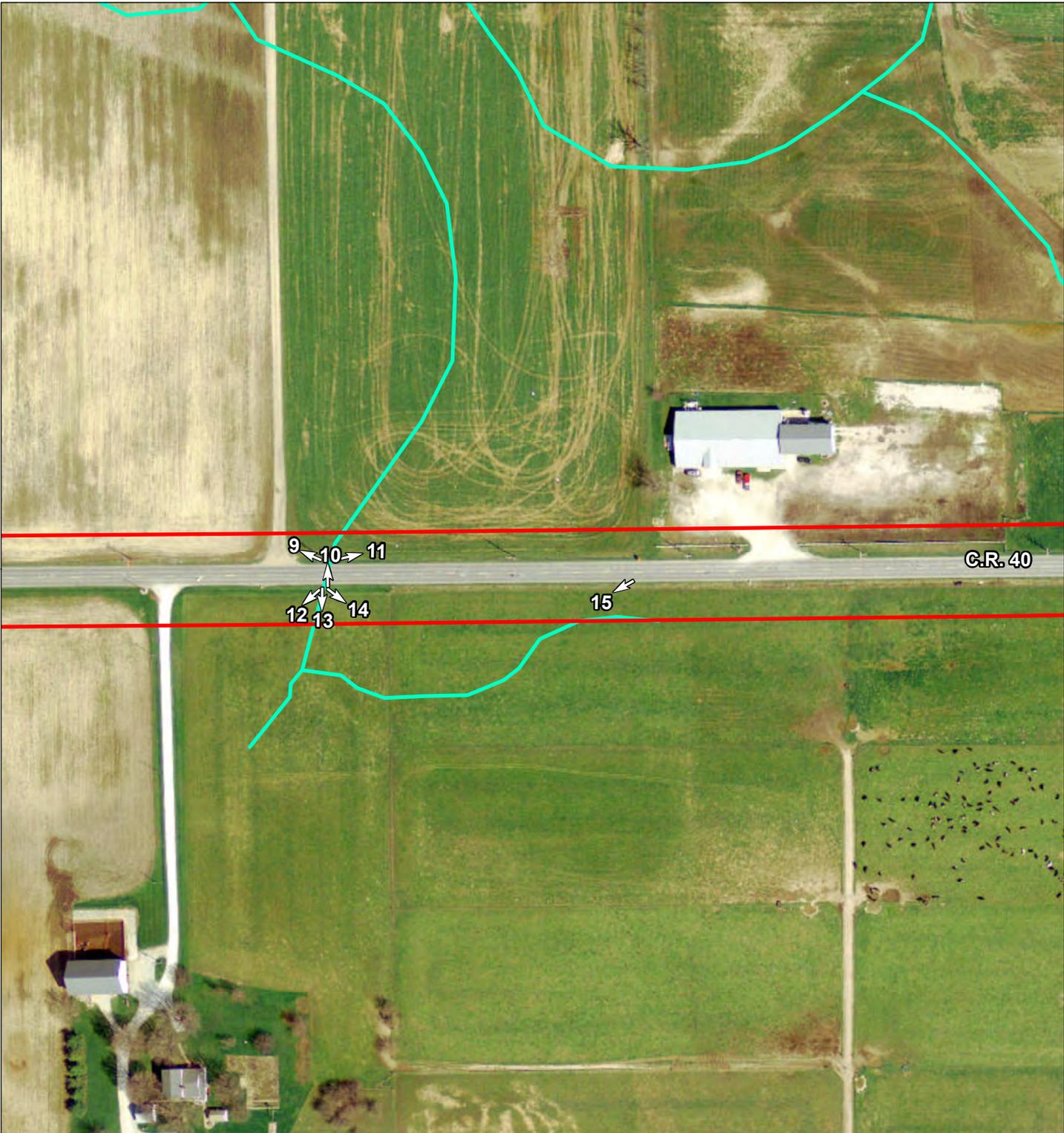
Exhibit 4 - Wetland Delineation & Photo Location Map
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 11/19/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

N

0 50 100 200
 Feet

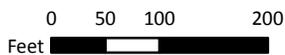


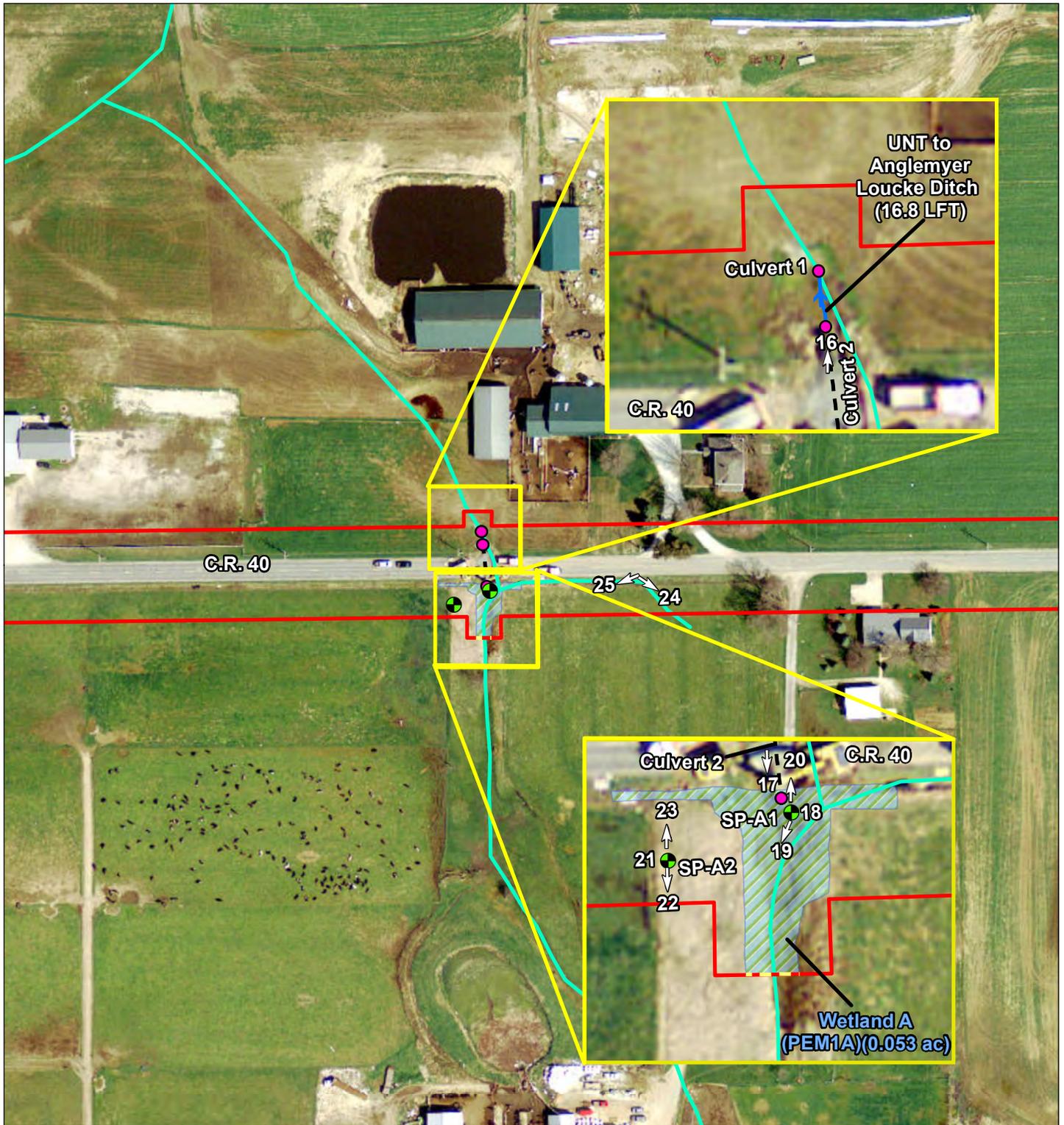


- Project Study Limits (PSL)
- Wetland
- Stream
- Culvert
- Sampling Point
- Wetland Beyond PSL
- Culvert Opening
- NHD Flowline

Exhibit 4 - Wetland Delineation & Photo Location Map
 County Road 40 / Waterford Street
 Road Improvement
 Harrison Township, Elkhart County, Indiana
 Des. No. 1702848
 Metric Project No. 18-0121
 Map Date: 11/19/2019
 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)

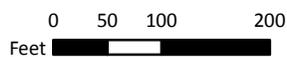


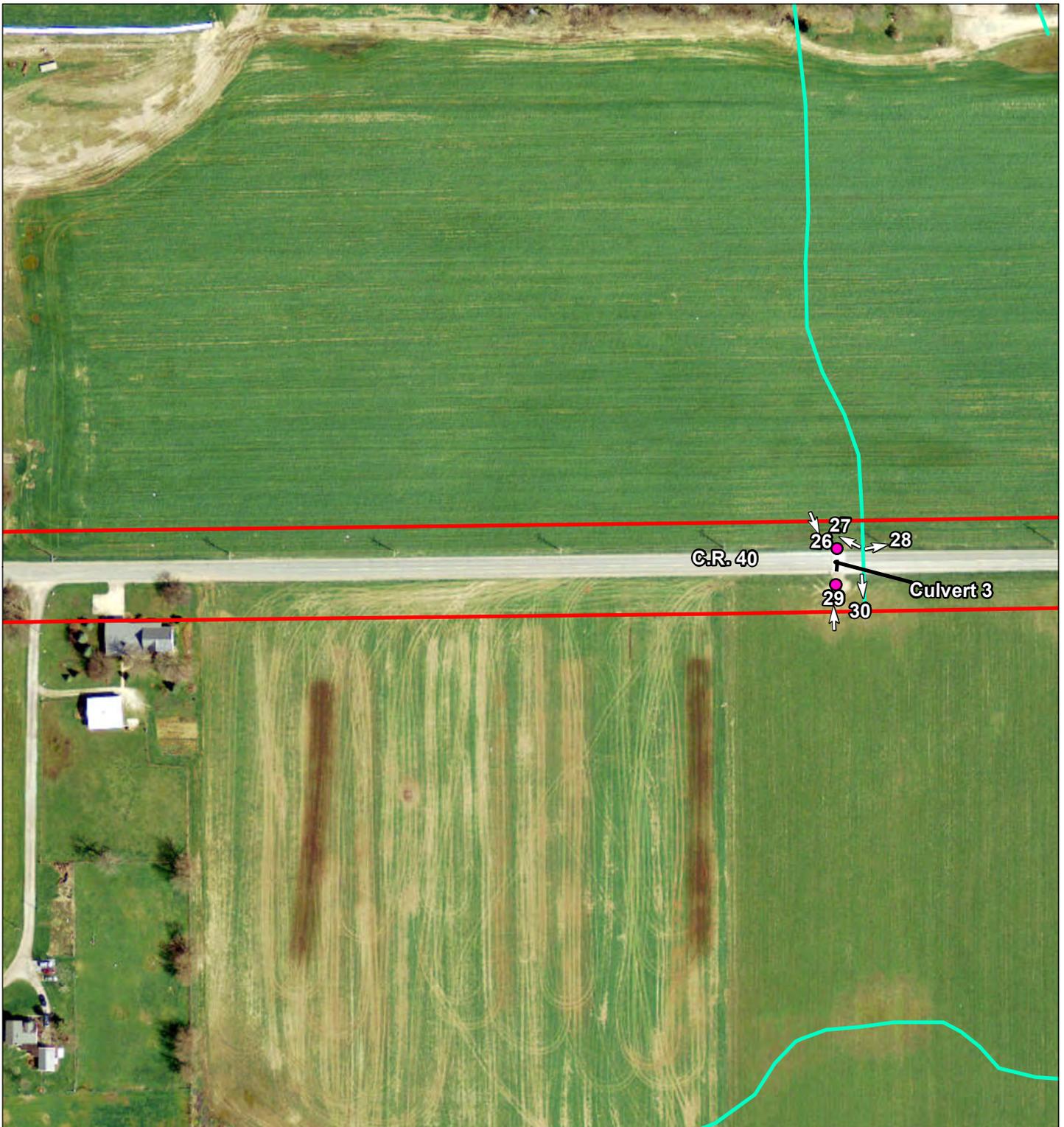


- Project Study Limits (PSL)
- Wetland
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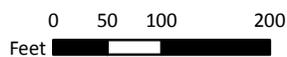


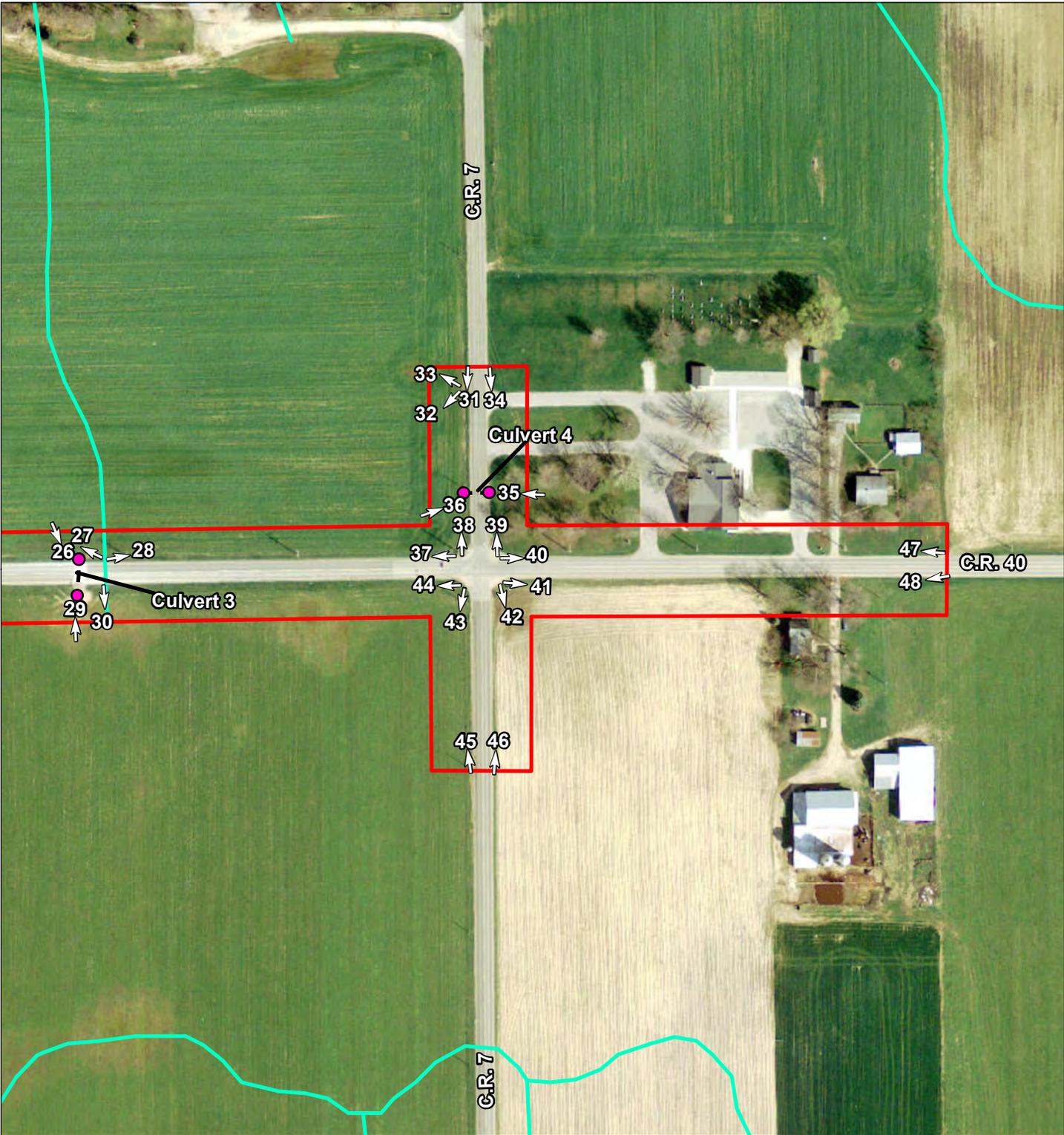


- | | | | |
|----------------------------|--------------------|-----------------|--------------|
| Project Study Limits (PSL) | Wetland | Stream | Culvert |
| Sampling Point | Wetland Beyond PSL | Culvert Opening | NHD Flowline |

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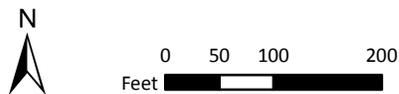




- Project Study Limits (PSL)
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 Map Author: Cory Shumate

All locations approximate
 Source: Indiana Spatial Data Portal (2016)





1. View of C.R. 40 right-of-way (ROW) from western project study limits (PSL), looking southeast.



2. View of C.R. 40 ROW from western PSL, looking southeast.



3. View of C.R. 40 ROW, looking west.



4. View of C.R. 40 ROW, looking east.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

Des. No. 1702848





5. View of C.R. 40 ROW, looking west.



6. View of C.R. 40 ROW and NHD flowline (unobserved), looking southwest.



7. View of C.R. 40 ROW and NHD flowline (unobserved), looking southeast.



8. View of C.R. 40 ROW and NHD flowline (unobserved), looking southeast.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

Des. No. 1702848





9. View of C.R. 40 ROW, looking northwest.



10. View of C.R. 40 ROW and NHD flowline (unobserved), looking northeast.



11. View of C.R. 40 ROW and NHD flowline (unobserved), looking northeast.



12. View of C.R. ROW, and NHD flowline (unobserved), looking southwest.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

Des. No. 1702848





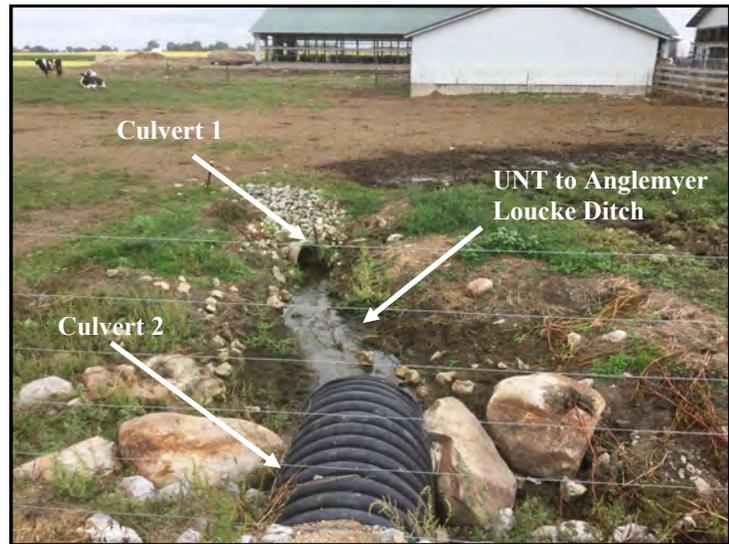
13. View of C.R. 40 ROW and NHD flowline (unobserved), looking south.



14. View of C.R. 40 ROW and NHD flowline (unobserved), looking southeast.



15. View of C.R. 40 ROW and NHD flowline (unobserved), looking southwest.



16. View of Unnamed Tributary (UNT) to Anglemyer Loucke Ditch, Culvert 1, Culvert 2, looking north (downstream).

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

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17. View of Wetland A (PEM1A), looking south.



18. View of SP-A1, Wetland A, soil profile.



19. View of SP-A1, Wetland A, looking southwest.



20. View of SP-A1, Wetland A, and Culvert 2, looking north.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

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21. View of SP-A2, Wetland A upland, soil profile.



22. View of SP-A2, Wetland A upland, looking south.



23. View of SP-A2, Wetland A upland, looking north.



24. View of C.R. 40 ROW and NHD flowline (unobserved), looking southeast.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

Des. No. 1702848

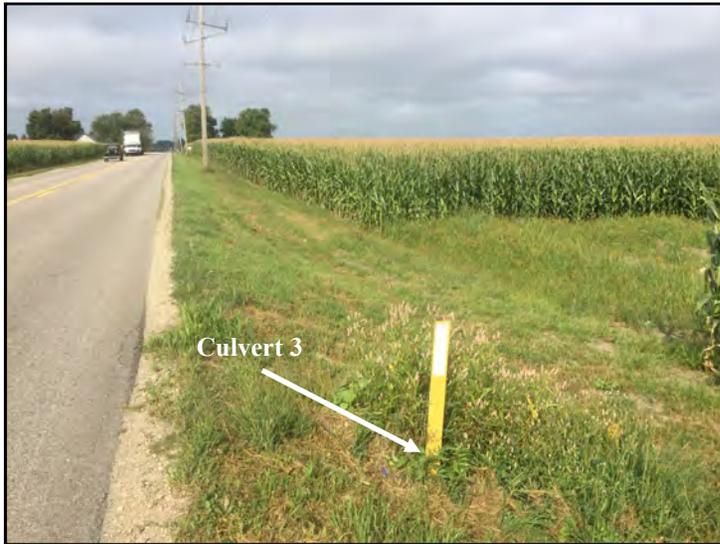




25. View of C.R. 40 ROW, Wetland A, and NHD flowline (unobserved), looking southwest.



26. View of Culvert 3, looking southwest.



27. View of C.R. 40 ROW and Culvert 3, looking northwest.



28. View of C.R. 40 ROW and NHD flowline (unobserved), looking northeast.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

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Des. No. 1702848





29. View of Culvert 3 (partially buried), looking north.



30. View of C.R. 40 ROW and NHD flowline (unobserved), looking south.



31. View of C.R. 7 ROW from northern PSL, looking south.



32. View of C.R. 7 ROW, looking southwest.

SITE PHOTOGRAPHS—9/12/2019
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Road Improvement
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33. View of C.R. 7 ROW, looking northwest.



34. View of C.R. 7 ROW from northern PSL, looking southeast.



35. View of Culvert 4 (partially buried), looking west.



36. View of Culvert 4 (partially buried), looking northeast.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

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Des. No. 1702848





37. View of C.R. 40 ROW from C.R. 40 and C.R. 7 intersection, looking northwest.



38. View of C.R. 7 ROW from C.R. 40 and C.R. 7 intersection, looking north.



39. View of C.R. 7 ROW from C.R. 40 and C.R. 7 intersection, looking north.



40. View of C.R. 40 ROW from C.R. 40 and C.R. 7 intersection, looking east.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

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41. View of C.R. 40 ROW from C.R. 40 and C.R. 7 intersection, looking southeast.



42. View of C.R. 7 ROW from C.R. 40 and C.R. 7 intersection, looking southeast.



43. View of C.R. 7 ROW from C.R. 40 and C.R. 7 intersection, looking southwest.



44. View of C.R. 40 ROW from C.R. 40 and C.R. 7 intersection, looking west.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

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45. View of C.R. 7 ROW from southern PSL, looking northwest.



46. View of C.R. 7 ROW from southern PSL, looking northeast.



47. View of C.R. 40 ROW from eastern PSL, looking northwest.



48. View of C.R. 40 ROW from eastern PSL, looking southwest.

SITE PHOTOGRAPHS—9/12/2019

County Road 40 / Waterford Street

Road Improvement

Harrison Township, Elkhart County, Indiana

Des. No. 1702848



WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1702848 - County Road 40 / Waterford Street City/County: Wakarusa / Elkhart County Sampling Date: 9/12/2019
 Applicant/Owner: INDOT State: IN Sampling Point: SP-A1
 Investigator(s): Cory Shumate & Zachary Root Section, Township, Range: Section 31; Range 5 E; Township 36 N
 Landform (hillslope, terrace, etc.): Toe of Hillslope Local relief (concave, convex, none): Concave
 Slope (%): 1% Lat: 41.53615 Long: -85.98922 Datum: NAD83
 Soil Map Unit Name: Brookston loam, 0 to 1 percent slopes (BuuA) - Hydric (92%) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>x</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			

Remarks:
 Wetland A (PEM1A) Sampling Point. Area had received approximately 0.1 inch of precipitation 9/11/2019. The soil was significantly disturbed due to the presence of agricultural drainage tiles and a restrictive layer of gravel at an 11 in. depth. Under normal circumstances, it would meet the criteria for hydric soil.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>5%</u></td> <td>x1 = <u>0.05</u></td> </tr> <tr> <td>FACW species <u>90%</u></td> <td>x2 = <u>1.8</u></td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species <u>5%</u></td> <td>x4 = <u>0.2</u></td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: <u>1.00</u> (A)</td> <td><u>2.05</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5%</u>	x1 = <u>0.05</u>	FACW species <u>90%</u>	x2 = <u>1.8</u>	FAC species _____	x3 = _____	FACU species <u>5%</u>	x4 = <u>0.2</u>	UPL species _____	x5 = _____	Column Totals: <u>1.00</u> (A)	<u>2.05</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5%</u>	x1 = <u>0.05</u>																			
FACW species <u>90%</u>	x2 = <u>1.8</u>																			
FAC species _____	x3 = _____																			
FACU species <u>5%</u>	x4 = <u>0.2</u>																			
UPL species _____	x5 = _____																			
Column Totals: <u>1.00</u> (A)	<u>2.05</u> (B)																			
Prevalence Index = B/A = <u>2.05</u>																				
0% = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
0% = Total Cover																				
Herb Stratum (Plot size: <u>5' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Phalaris arundinacea</u>	<u>90%</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Asclepias syriaca</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Boehmeria cylindrica</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
13. _____	_____	_____	_____																	
14. _____	_____	_____	_____																	
15. _____	_____	_____	_____																	
16. _____	_____	_____	_____																	
17. _____	_____	_____	_____																	
18. _____	_____	_____	_____																	
19. _____	_____	_____	_____																	
20. _____	_____	_____	_____																	
100% = Total Cover																				
Woody Vine Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
0% = Total Cover																				

Hydrophytic Vegetation Indicators:

X 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
X 3-Prevalence Index is ≤3.0¹
 _____ 4-Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100					SL	Organic matter present
8-11	10YR 4/1	85	10YR 5/8	15	C	M	SL	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 11

Hydric Soil Present? Yes x No

Remarks:
Based on information given by the client, there are drainage tiles present within the drainage ditch to the south of C.R. 40. A restrictive layer of gravel was also observed based at an 11 in. depth. The criteria for hydrophytic vegetation and wetland hydrology were also met. Based off of the project description and field observations, it can be deduced that the 8-11 in. layer in the test pit would extend deeper and would meet the 6-in. starting within 10 in. of the soil surface criteria of depleted matrix (F3) in the absence of the drainage tiles and the restrictive layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:	Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0.5</u>	Wetland Hydrology Present? Yes <u>x</u> No <u> </u>
Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u>	
Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Sampling point was located at the toe of a hillslope with concave local relief. It therefore meets the criteria for geomorphic position (D2).

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1702848 - County Road 40 / Waterford Street City/County: Wakarusa / Elkhart County Sampling Date: 9/12/2019
 Applicant/Owner: INDOT State: IN Sampling Point: SP-A2
 Investigator(s): Cory Shumate & Zachary Root Section, Township, Range: Section 31; Range 5 E; Township 36 N
 Landform (hillslope, terrace, etc.): Old field Local relief (concave, convex, none): None
 Slope (%): 0% Lat: 41.53611 Long: -85.98938 Datum: NAD83
 Soil Map Unit Name: Brookston loam, 0 to 1 percent slopes (BuuA) - Hydric (92%) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u>x</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>			
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>			

Remarks:
 Wetland A Upland Sampling Point. Area had received approximately 0.1 inch of precipitation 9/11/2019.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: <u>30' radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																																
1. _____	_____	_____	_____		Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																															
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3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
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3. _____	_____	_____	_____																																	
0% = Total Cover				<table border="0"> <tr> <td colspan="2">Total % Cover of:</td> <td colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td>_____</td> <td>x1 =</td> <td>_____</td> </tr> <tr> <td>FACW species</td> <td><u>100%</u></td> <td>x2 =</td> <td><u>2</u></td> </tr> <tr> <td>FAC species</td> <td>_____</td> <td>x3 =</td> <td>_____</td> </tr> <tr> <td>FACU species</td> <td>_____</td> <td>x4 =</td> <td>_____</td> </tr> <tr> <td>UPL species</td> <td>_____</td> <td>x5 =</td> <td>_____</td> </tr> <tr> <td>Column Totals:</td> <td><u>1.00</u> (A)</td> <td></td> <td><u>2</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = <u>2.00</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	_____	x1 =	_____	FACW species	<u>100%</u>	x2 =	<u>2</u>	FAC species	_____	x3 =	_____	FACU species	_____	x4 =	_____	UPL species	_____	x5 =	_____	Column Totals:	<u>1.00</u> (A)		<u>2</u> (B)	Prevalence Index = B/A = <u>2.00</u>			
Total % Cover of:		Multiply by:																																		
OBL species	_____	x1 =	_____																																	
FACW species	<u>100%</u>	x2 =	<u>2</u>																																	
FAC species	_____	x3 =	_____																																	
FACU species	_____	x4 =	_____																																	
UPL species	_____	x5 =	_____																																	
Column Totals:	<u>1.00</u> (A)		<u>2</u> (B)																																	
Prevalence Index = B/A = <u>2.00</u>																																				
Herb Stratum (Plot size: <u>5' radius</u>)																																				
1. <u>Phalaris arundinacea</u>	<u>100%</u>	<u>Yes</u>	<u>FACW</u>																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
12. _____	_____	_____	_____																																	
13. _____	_____	_____	_____																																	
14. _____	_____	_____	_____																																	
15. _____	_____	_____	_____																																	
16. _____	_____	_____	_____																																	
17. _____	_____	_____	_____																																	
18. _____	_____	_____	_____																																	
19. _____	_____	_____	_____																																	
20. _____	_____	_____	_____																																	
100% = Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1-Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2-Dominance Test is >50% <input checked="" type="checkbox"/> 3-Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4-Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																																
Woody Vine Stratum (Plot size: <u>30' radius</u>)																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
0% = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	100					SiL	Organic matter present
4-15	10YR 3/3	100					SiL	
15-20	10YR 4/2	95	7.5YR 3/3	5	C	M	SiL	Faint redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required: check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: December 18, 2019

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Cory Shumate
Metric Environmental, LLC
6971 Hillsdale Court
Indianapolis, IN 46250

317-350-4896
corys@metricenv.com

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The proposed project (Des. 1702848) includes road improvements along County Road (C.R.) 40. Work is to include widening along the entire project length, for a total length of approximately 1.0 mi. The lane widths will be increased to 12 ft. with 8 ft. paved shoulders. A 36-in. culvert, drainage tiles, and stand pipes will be extended along the south side of C.R. 40. The project begins at the Wakarusa town limits and extends approximately one mile east and terminates at C.R. 7.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: IN County/parish/borough: Elkhart County City: Wakarusa

Center coordinates of site (lat/long in degree decimal format):

Lat.: 41.53622°

Long.: -85.9901°

Universal Transverse Mercator: 16 S 584242.61 E 4598777.68 N

Name of nearest waterbody: Werntz Ditch

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.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource “may be” subject (i.e., Section 404 or Section 10/404)
Wetland A	41.536105	-85.989234	0.053 acre	Wetland	Section 404
UNT to Anglemyer Loucke Ditch	41.536332	-85.989266	16.8	Non-wetland Waters	Section 404

- 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: _____ Dated 9/6/2019 & 11/19/2019
 - 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: Foraker, IN 7.5-min, 1996

- Natural Resources Conservation Service Soil Survey. Citation: SSURGO Elkhart County

- National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/
- State/local wetland inventory map(s): _____
- FEMA/FIRM maps: ; Effective _____

- 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Indiana Aerial Photograph, 2016
or Other (Name & Date): Site Photographs, 9/12/19
- 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

 12/18/2019

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.



APPENDIX G
PUBLIC INVOLVEMENT



PAUL A. HUMMEL, P.E.
PIPER C. TITTLE, P.E.
MICHAEL J. GUZIK, P.E.

9031.27

December 21, 2018

Mr. Arthur M. and Mary Ann Martin
66233 C.R. 7
Wakarusa, Indiana 46573

RE: INDOT Des. No. 1702848
C.R. 40 Reconstruction Project and Added Buggy Lane
From S.R. 19 to C.R. 7
Elkhart County, Indiana
Notice of Survey
Property Address: C.R. 7, Wakarusa, Indiana
State Parcel ID No.: 20-10-31-200-006.000-016

GREGORY L. HOLDEN, P.E.
JON E. RIEMKE, P.E.
JEFFREY L. McKEAN, P.E.
RANDOLPH J. LINDLEY, P.E.
CHRISTOPHER J. JETER, P.E.
DENNIS A. ZEBELL, P.E.
BENJAMIN P. HOLDEN, P.E.
DAN G. DELGADO, P.E.
MICHAEL F. JOHNSTON, P.E.
JEFFREY M. BYRD, P.E.
JARED M. HUSS, P.E.
SKY K. MEDORS, P.E.
AARON W. BLANK, P.L.S., P.E.
BREAGAN P. EICHER, P.E.
THOMAS J. McNICHOLAS, P.E.
KEVIN J. SIEDLECKI, P.E.
CHRISTOPHER M. VANHULLE, P.E.
MICHELLE M.G. SLACK, P.L.S.
MAX WATKINS, P.E., S.E.
DMITRI G. ADAMS, P.E.
AMANDA R. BUDREAU, P.E.
FAITH R. MORRISON, P.E.

Dear Property Owner:

Lawson-Fisher Associates P.C. has been retained by Elkhart County to perform a survey for a proposed roadway reconstruction project on C.R. 40 from S.R. 19 to C.R. 7 in Elkhart County, Indiana.

Our information indicates that you own or occupy property near the subject roadway project. Our employees will be conducting a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by law by 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 affect, if any, our project can eventually have on your property. If we determine that your property is involved, we will contact you with additional information.

The survey work will include mapping the location of features such as trees, fences, drainage features, existing driveways, intersection improvements, utilities, and obtaining ground elevations. The survey is needed for the proper planning and design of this roadway improvement project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If problems do occur, please contact our field crew or contact me at the phone number or address shown below.

Very truly yours,

LAWSON-FISHER ASSOCIATES P.C.


Aaron W. Blank, P.L.S., P.E.
Survey Manager / Civil Engineer

AWB/ael
c: Kent P. Schumacher, P.E., Elkhart County Engineer
Jeffrey M. Byrd, P.E.

Jan 4, 2018

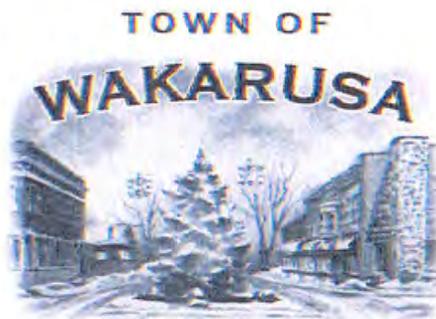
To Whom It May Concern;

The Old order Horse and buggy community of Wakarusa IN. Would be in favor of the construction of buggy lanes along the edge of CR 40 Between SR 19 And SR 119.

This road is heavily travel by trucks and the RV industry. Also it is one of the main thoroughfares for the horse and buggy community. The horse and buggy drivers do not wish to be a hindrance to the motor vehicles but at the same token our life style limits our transportation to the horse and buggy. Also this route was the scene of several fatal car /bicycle accidents in the past years. In our opinion a width 6 ft probably would be adequate for our purpose.

Amos H Ramer
Carlyle Martins
Samuel Oberholzer
Leander Martin.

TOWN MANAGER
PH: 574.862.2245
F: 574.862.2245



CLERK TREASURER
PH: 574.862.4314
F: 574.862.2245

100 WEST WATERFORD • P.O. BOX 474 • WAKARUSA, IN 46573

January 5, 2018

MACOG
227 West Jefferson Blvd.
1120 County City Building
South Bend, Indiana. 46601
Phone: 574-287-1829

Re: Elkhart County Highway Project

This letter is to advise you of the Town of Wakarusa's support for Elkhart County's proposed project along CR 40 between SR 119 and the Town of Wakarusa.

As we understand the project, CR 40 would be widened creating buggy lanes on both sides of CR 40. This project is needed as we have a large Amish population around Wakarusa. Having these buggy lanes would not only make it safer for buggy traffic but also for the Amish population that uses bicycles in their travels to and from Wakarusa. Moving the slower moving traffic into their own lanes will also keep a smooth flow for motorized traffic along 40 without having to slow and pass or slow to almost a complete stop until it is safe to pass, which can also be a safety issue.

MACOG has been looking at transportation and bike paths for several years. This is an improvement for both. The Town of Wakarusa is encouraging MACOG to support this proposed project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Troxel", written in a cursive style.

Jeff Troxel
Town Manager



January 8th, 2018

RE: County Road 40 Improvements

To Whom It May Concern,

Thank you in advance for the thought and consideration you will give this letter. We appreciate the opportunity to offer input concerning potential local projects that will impact the safety and commerce of our community.

On behalf of the Wakarusa Chamber of Commerce Board of Directors, the intent of this letter is to offer our endorsement of The Elkhart County Highway Department in their pursuit of an additional lane for horse-drawn buggies and bicycles on County Road 40 between State Road 19 and State Road 119. As a road commonly shared between all types of transportation vehicles, we experience a daily balancing act between everyone on the road to accommodate each other. A designated lane for non-motorized vehicles would vastly improve the safety and risk of incident and has the full support of the Wakarusa Chamber of Commerce Board of Directors.

Please do not hesitate to contact us should you have any additional questions.

Jay Kinney, President
Wakarusa Chamber of Commerce

Deb Shively, Executive Secretary
Wakarusa Chamber of Commerce



APPENDIX H

AIR QUALITY

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Indiana Department of Transportation	41109 / 1800617	Init.	SR 15	Bridge Deck Overlay	Bridge Over Little Elkhart River, 0.11 Miles North of SR 120 East Jct.	Fort Wayne	0	NHPP		Bridge Construction	CN	\$495,860.00	\$123,965.00		\$619,825.00			
Indiana Department of Transportation	41111 / 1600978	Init.	SR 13	HMA Overlay Minor Structural	From US 33 to SR 4	Fort Wayne	10.516	STPBG		Bridge Construction	CN	\$715,952.00	\$178,988.00		\$894,940.00			
										Bridge ROW	RW	\$24,000.00	\$6,000.00	\$30,000.00				
										Road Construction	CN	\$3,251,996.80	\$812,999.20		\$4,064,996.00			
Indiana Department of Transportation	41112 / 1800612	Init.	SR 120	Bridge Thin Deck Overlay	Bridge Over Little Elkhart River, 1.04 Miles East of SR 15.	Fort Wayne	0	STPBG		Bridge Construction	CN	\$405,428.00	\$101,357.00		\$506,785.00			
										Bridge ROW	RW	\$40,000.00	\$10,000.00	\$35,000.00	\$15,000.00			
Indiana Department of Transportation	41117 / 1800618	Init.	SR 13	Bridge Thin Deck Overlay	Bridge Over Elkhart River, 4.09 Miles North of US 33.	Fort Wayne	0	STPBG		Bridge Construction	CN	\$215,224.00	\$53,806.00		\$269,030.00			
Elkhart County	41142 / 1702848	Init.	IR 1042	Road Reconstruction (3R/4R Standards)	CR 40: from SR 19 to CR 7	Fort Wayne	1	STPBG		Group IV Program	CN	\$1,201,448.00	\$0.00				\$1,201,448.00	
										Local Funds	CN	\$0.00	\$300,362.00				\$300,362.00	
Elkhart County	41142 / 1702848	A 07	IR 1042	Road Reconstruction (3R/4R Standards)	CR 40: from SR 19 to CR 7	Fort Wayne	1	STBG	\$1,588,000.00	Group IV Program	RW	\$68,916.00	\$0.00		\$68,916.00			
										Local Funds	RW	\$0.00	\$17,229.00		\$17,229.00			
Comments:Adding ROW to STIP: MACOG resolution 38-19																		
Nappanee	41150 / 1702862	Init.	ST 1043	Road Rehabilitation (3 R/4R Standards)	Woodview Dr. from N. Main St. (SR 19) to Oakland Ave. (Co Rd 7)	Fort Wayne	.92	STPBG		Group III Program	CN	\$2,330,400.00	\$0.00				\$2,330,400.00	
										Local Funds	CN	\$0.00	\$582,600.00			\$76,000.00	\$506,600.00	
Nappanee	41150 / 1702862	A 07	ST 1043	Road Rehabilitation (3 R/4R Standards)	Woodview Dr. from N. Main St. (SR 19) to Oakland Ave. (Co Rd 7)	Fort Wayne	.92	STBG	\$2,963,000.00	Group III Program	RW	\$40,000.00	\$0.00		\$40,000.00			
										Local Funds	RW	\$0.00	\$10,000.00		\$10,000.00			
Comments:Adding ROW to STIP: MACOG resolution 38-19																		
Elkhart	41395 / 1801611	Init.	ST 1022	Added Travel Lanes	Bristol St: from Jeanwood Dr. to CR 15	Fort Wayne	1.2	STPBG		Local Funds	RW	\$0.00	\$120,000.00		\$120,000.00			
										Elkhart-Goshen MPO	RW	\$480,000.00	\$0.00		\$480,000.00			
Indiana Department of Transportation	41560 / 1800039	Init.	SR 15	Intersect. Improv. W/ Added Turn Lanes	1.03 miles S of US 20 (at CR 18)	Fort Wayne	.43	STPBG		Safety Construction	CN	\$954,660.00	\$238,665.00			\$15,000.00	\$1,178,325.00	

Locally Sponsored Projects

DES	Location	Work Type	Fund Type	Phase	Federal	Match	Total	Estimated to Complete	Fiscal Year
1702848	CR 40: from SR 19 to CR 7	Road Reconstruction	STBG	CN	\$1,201,448	\$300,362	\$1,501,810	\$1,758,606	2023
1801913	Sunnyside Ave/ Mall Dr at US 33 (Main St) over NS Railroad	New Bridge	ST STBG	PE	\$1,920,000	\$480,000	\$2,400,000	\$16,488,000	2022
1801913	Sunnyside Ave/ Mall Dr at US 33 (Main St) over NS Railroad	New Bridge	ST STBG	RW	\$1,328,000	\$332,000	\$1,660,000	\$16,488,000	2021
1801913	Sunnyside Ave/ Mall Dr at US 33 (Main St) over NS Railroad	New Bridge	ST STBG	CN	\$9,942,400	\$2,485,600	\$12,428,000	\$16,488,000	2022
1900486	CR 17 Phase I: from CR 142 to CR 38	New Road Construction	STBG	PE	\$2,090,400	\$2,403,960	\$4,494,360	\$25,944,000	2020
1900486	CR 17 Phase I: from CR 142 to CR 38	New Road Construction	STBG	RW	\$100,000	\$25,000	\$125,000	\$25,944,000	2023
City of Goshen									
1400715	Wilden Ave from Rock Run Creek to 6th St	Road Reconstruction	STBG	CN	\$4,343,920	\$1,085,980	\$5,429,900	\$5,429,900	2020
1801613	US 33: from Fairfield to Plymouth Ave	Auxiliary Lanes	CMAQ	PE	\$165,040	\$41,260	\$206,300	\$1,031,450	2020
1801613	US 33: from Fairfield to Plymouth Ave	Auxiliary Lanes	CMAQ	CN	\$660,160	\$165,040	\$825,200	\$1,031,450	2021
1900391	Madison St at NS RR, DOT 510039L	Railroad Projection	ST STBG	PE	\$18,000	\$2,000	\$20,000	\$405,000	2020
1900391	Madison St at NS rr, DOT 510039L	Railroad Project	ST STBG	CN	\$346,500	\$38,500	\$385,000	\$405,000	2020
1900739	College Ave from US 33 to NS Railroad Line (East Entrance of parking lot)	Added Travel Lanes	STBG	PE	\$300,000	\$75,000	\$375,000	\$5,107,000	2020
1900739	College Ave from US 33 to NS Railroad Line (East Entrance of parking lot)	Added Travel Lanes	STBG	RW	\$685,600	\$171,400	\$857,000	\$5,107,000	2022 2023



APPENDIX I
ADDITIONAL STUDIES

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated July 2020)

ProjectNumber	SubProjectCode	County	Property
1800054	1800054	Elkhart	Oxbow County Park
1800064	1800064	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800074	1800074	Elkhart	Oxbow County Park
1800099	1800099	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800257	1800257A	Elkhart	Elliott Park
1800257	1800257B	Elkhart	Lundquist Bicentennial Park
1800257	1800257C	Elkhart	Pinewood Park
1800283	1800283	Elkhart	High Dive Park
1800310	1800310	Elkhart	McNaughton Park
1800337	1800337	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800339	1800339	Elkhart	Shoup-Parsons Woods Park
1800340	1800340	Elkhart	Reith Park
1800354	1800354	Elkhart	Pierre Moran Park
1800441	1800441	Elkhart	High Dive Park
1800450	1800450	Elkhart	Stauffer Park, Derksen Park & McCormicks Creek G.C.
1800470	1800470	Elkhart	Studebaker Park
1800542	1800542	Elkhart	Boot Lake Nature Preserve
1800554	1800554	Elkhart	Cobus Creek County Park
1800628	1800628	Elkhart	Corson Riverwoods County Park
1800631	1800631	Elkhart	South Park

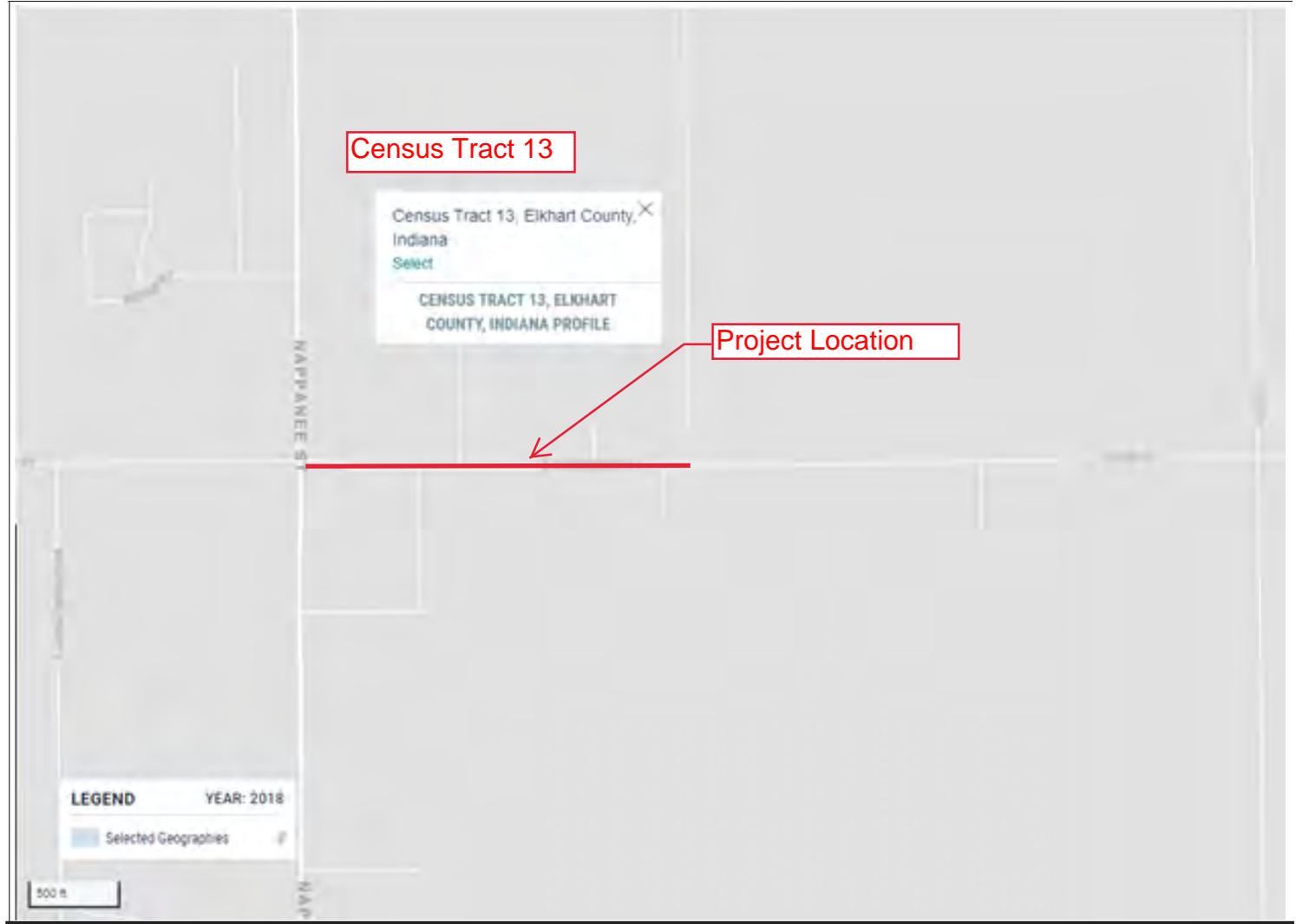


Figure 1: Analysis of Census Tract in Harrison Township, Elkhart County, Indiana

	COC	AC	
	Harrison Township, Elkhart County, Indiana	Census Tract 13, Elkhart County, Indiana	
LOW-INCOME			
B17001001	Population for whom poverty status is determined: Total	3502.00	6628.00
B17001002	Population for whom poverty status is determined: Income in past 12 months below poverty level	405.00	596.00
	Percent Low-Income	11.56%	8.99%
	125 Percent of COC	14.46%	AC <125% COC
	Potential Low-Income EJ Impact?		No
MINORITY			
B03002_001E	Estimate: Total	3578	6833
B03002_002E	Estimate: Total: Not Hispanic or Latino	3253	6447
B03002_003E	Estimate: Total: Not Hispanic or Latino: White alone	3208	6255
B03002_004E	Estimate: Total: Not Hispanic or Latino: Black or African American alone	32	63
B03002_005E	Estimate: Total: Not Hispanic or Latino: American Indian and Alaska Native alone	13	13
B03002_006E	Estimate: Total: Not Hispanic or Latino: Asian alone	0	69
B03002_007E	Estimate: Total: Not Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	0	0
B03002_008E	Estimate: Total: Not Hispanic or Latino: Some other race alone	0	0
B03002_009E	Estimate: Total: Not Hispanic or Latino: Two or more races	0	47
B03002_010E	Estimate: Total: Not Hispanic or Latino: Two or more races: Two races including Some other race	0	0
B03002_011E	Estimate: Total: Not Hispanic or Latino: Two or more races: Two races excluding Some other race, and three or more races	0	47
B03002_012E	Estimate: Total: Hispanic or Latino	325	386
B03002_013E	Estimate: Total: Hispanic or Latino: White alone	292	350
B03002_014E	Estimate: Total: Hispanic or Latino: Black or African American alone	0	0
B03002_015E	Estimate: Total: Hispanic or Latino: American Indian and Alaska Native alone	0	0
B03002_016E	Estimate: Total: Hispanic or Latino: Asian alone	0	0
B03002_017E	Estimate: Total: Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	33	33
B03002_018E	Estimate: Total: Hispanic or Latino: Some other race alone	0	3
B03002_019E	Estimate: Total: Hispanic or Latino: Two or more races	0	0
B03002_020E	Estimate: Total: Hispanic or Latino: Two or more races: Two races including Some other race	0	0
B03002_021E	Estimate: Total: Hispanic or Latino: Two or more races: Two races excluding Some other race, and three or more races	0	0
	Number Non-White/Minority	370	578
	Percent Non-White/Minority	10.34%	8.46%
	125 Percent of COC	12.93%	AC <125% COC
	Potential Minority EJ Impact?		No