FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	State Road (SR) 43 / White County
Designation Number(s):	2100235 and 2100171
Project Description/Termini:	Hot Mix Asphalt (HMA) Overlay / 100 feet (ft) south of SR 18 to 130 ft south of US 24/421

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

Approval

INDOT DE Signature and Date

INDOT ESD Signature and Date

FHWA Signature and Date

Release for Public Involvement

SFM 03/22/2024
INDOT DE Initials and Date

INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date:

Name and Organization of CE/EA Preparer: Bridgette Murray H.W. Lochner, Inc.

Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

Part I – Public Involvement

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

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?		X
If No, then:		
Opportunity for a Public Hearing Required?	X	

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

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

Notice of Entry letters were mailed to potentially affected property owners near the project area on September 8, 2022 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.

Project Does Meet

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

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

No controversy

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

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

Sponsor of the Project: Indiana Department of Transportation (INDOT) INDOT District: LaPorte

Local Name of the Facility: SR 43 within the Town of Reynolds is Kenton Street, within the Towns of Chalmers and Brookston it is Prairie Street

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

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

PURPOSE AND NEED:

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

Need:

This project is needed to address the deteriorated roadway condition of SR 43 within the project limits. As detailed in the May 21, 2021 and June 8, 2021 Pavement Scoping Application Reports (Appendix I, pages 2 and 7), the condition of this portion of SR 43 is in a deteriorated state as evidenced by severe block cracking and transverse cracking, longitudinal joint damage, stripping within the wheel paths, and rutting. The International Roughness Index (IRI) is a measurement of the smoothness of a pavement surface; a

lower IRI indicates smoother pavement. The IRI for these portions of SR 43 is above 70 (fair to poor condition) (Appendix I, pages 2 and 7). The secondary needs for this project are based on the September 22, 2022 addendums (Appendix I, pages 4-5 and 9-30) regarding the condition of drainage structures associated with the SR 43 roadway and sidewalk and curb ramps within the Town of Reynolds. Inlets and small culverts were inspected and rated on a numerical scale from 9 (excellent/new condition) to 1 (critical condition). Eleven small culverts are rated as 5 (fair condition) or lower. Additionally, select sidewalks are deteriorated and do not facilitate proper drainage and associated curb ramps lack compliance with the Americans with Disabilities Act (ADA).

Purpose:
The purpose of this project is to improve the roadway to a good condition (IRI <70). Secondary purposes include improving drainage structures along SR 43 to a structure rating of 7 (good condition) or greater and improving accessibility within the project area by improving the select areas of sidewalk and bringing associated curb ramps into compliance with current ADA standards.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: White Municipality: 2100235 – Town of Brookston, Town of Chalmers
2100171 – Town of Reynolds

Limits of Proposed Work: from 100-ft south of the SR 43 and SR 18 intersection to 130-ft south of the SR 43 and US 24/421 intersection

Total Work Length: 9.956 Mile(s) Total Work Area: 55 Acre(s)

	Yes[1]	No
Is an Interstate Access Document (IAD)[1] required?		X
If yes, when did the FHWA provide a Determination of Engineering and Operational Acceptability?	Date:	

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

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

INDOT LaPorte District, with funding from the Federal Highway Administration (FHWA), intends to proceed with two projects along SR 43, Des. No. 2100235 and Des. No. 2100171. Both projects are Minor Structural HMA Overlays within construction contract R-43897. The two projects are designed as a single project and all environmental impacts for both will be evaluated in this CE document.

Location
The proposed project is located on SR 43, beginning at the north junction of SR 18 within the Town of Brookston and continuing northward, through the Town of Chalmers, to the US 24/421 intersection, within the Town of Reynolds. More specifically, it is located in Prairie Township (Sections 3,10, and 15/Township 25 North/Range 4 West), Big Creek Township (Sections 4,9,16,21,22,27,28,33, and 34/Township 26 North/Range 4 West), and Honey Creek Township (Section 33/Township 27 North/Range 4 West) in White County, Indiana. See Appendix B, pages 1-3 for project location maps.

Existing Conditions
Throughout the majority of the project area, SR 43 is a two-lane undivided highway consisting of 11 to 12-ft travel lanes (one northbound and one southbound) with variable width paved shoulders. Within the Town of Reynolds, some areas of the roadway are bordered by sidewalk and/or curb and gutter. SR 43 is classified as Rural Principal Arterial from the Town of Brookston to the Town of Reynolds and Urban (Suburban) Principal Arterial within the Town of Reynolds. Existing right-of-way widths along both sides of SR 43 vary, widening where sidewalks, bridges, and intersecting roads are present. The posted speed limit throughout the project area varies from 25 to 55 miles per hour (mph). Guardrail is present where SR 43 crosses over Spring Creek, Big Creek, and Dieter/Rosen Treter Ditch. The pavement condition along this portion of SR 43 exhibits severe block cracking and transverse cracking, longitudinal joint damage, stripping within the wheel paths, and rutting as documented in the Pavement Scoping Application Reports (Appendix I, pages 1-3 and 6-8). These reports also note deteriorated curbing and evidence of poor drainage. Drainage structures within the project area were inspected and the conditions documented in addendums to the original reports (Appendix I, pages 4-5 and 9-30). Eleven culverts show signs of severe deterioration such as section loss, spalling, exposed rebar, and debris fill and do not facilitate proper drainage. Existing sidewalks with the Town of Reynolds are deteriorated and overgrown (Appendix I, page 5).

The surrounding landscape consists of maintained roadside vegetation and agricultural lands throughout the majority of the project area. Approaching and within the Towns of Brookston, Chalmers, and Reynolds there are residential and commercial areas. The CSX Railroad runs parallel to SR 43 on the east side for the majority of the project area.

Preferred Alternative

The preferred alternative for the project will consist of milling the existing asphalt of SR 43 to four inches in depth and repaving with four inches of HMA from 100-ft south of SR 18 to 130-ft south of US 24/421. Paving exceptions will occur at the structures crossing Spring Creek and Big Creek. Guardrail will be upgraded where present at Spring Creek, Big Creek, and Dieter/Rosen Treter Ditch. Guardrail at Dieter/Rosen Treter Ditch will be extended by 85-feet on the west side of SR 43. The existing public road approaches, private drives, commercial development drives, agricultural field entrances, and mailbox approaches will be milled and paved within the existing right of way in accordance with current INDOT standards.

Eleven small culverts will be replaced. All culvert replacements will be in-kind with the exceptions of Structure 20 (CLV-64400) and Structure 120 (CLV-64409), which will be upsized. Select inlets within the Town of Reynolds will be replaced and a new catch basin will be added. Upgraded sidewalk will be installed along both sides of SR 43 within the Town of Reynolds, beginning 150 feet north of 3rd Street and ending 110 feet south of 4th Street on the west side and 207 feet south on the east side. New curb will be added to SR 43 as part of the sidewalk construction. A total of eight curb ramps will be installed at the intersections of SR 43 with 3rd and 4th Street. Details can be found in the Bridges and Small Structures section of this document and the project plans (Appendix B, pages 16-95).

Impacts from culvert replacements, riprap placement, shoulder grading, guardrail installation, and sidewalk construction are anticipated. Permanent impacts to wetlands will occur due to the culvert replacements and associated riprap placement. Terrestrial impacts will occur due to shoulder grading, guardrail installation, and sidewalk construction. Impacts were minimized during the design phase and mitigation is not anticipated.

Maintenance of traffic (MOT) will vary based on work type. Small culvert replacements will require short-term full closures of SR 43 with detours. The detours will utilize SR 18, US 421, and US 24. MOT for milling and paving operations will be accomplished with single-lane closures and flaggers. Sidewalk and curb work within the Town of Reynolds will require full closure of SR 43 with pedestrian MOT shown on the plans. Please see the MOT section of this document for details. MOT plan sheets can be found in Appendix B, page 19-29.

The preferred alternative will meet the purpose and need of the project by improving the roadway condition to a good condition (IRI <70) and improving the drainage structures to a structure rating of 7 (good condition) or greater and improving accessibility by replacing select sidewalks and curb ramps. The project demonstrates independent utility because it will correct the deficiencies to improve condition ratings and accessibility without being reliant on other projects that could result in additional impacts. The total project length will be approximately 9.956 miles, from approximately SR 18 to US 24/421. These termini are logical, limited to the area necessary to allow for roadway, drainage structure, guardrail, sidewalk, and curb ramp work and adjacent incidental construction.

OTHER ALTERNATIVES CONSIDERED:

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

No Build Alternative

The No Build alternative would allow the existing roadway and small structures to remain in place and deterioration would continue. There would be no environmental or social impacts and no cost would be incurred. This alternative does not meet the purpose and need; therefore, it was eliminated from consideration.

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

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

ROADWAY CHARACTER:

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

Name of Roadway: SR 43 – Town of Brookston to Town of Chalmers
Functional Classification: Rural Principal Arterial - Other
Current ADT: 5684 VPD (2026) Design Year ADT: 6273 VPD (2046)
Design Hour Volume (DHV): 685 Truck Percentage (%) 7.84
Designed Speed (mph): 35,40,55 Legal Speed (mph): 35,40,55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	asphalt through lanes		asphalt through lanes	
Pavement Width:	11-12	ft.	12	ft.
Shoulder Width:	2	ft.	2	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting:		Urban		Suburban	X	Rural
Topography:	X	Level		Rolling		Hilly

Name of Roadway: SR 43 – Town of Chalmers to Town of Reynolds
Functional Classification: Rural Principal Arterial - Other
Current ADT: 4163 VPD (2026) Design Year ADT: 4595 VPD (2046)
Design Hour Volume (DHV): 445 Truck Percentage (%) 11.81
Designed Speed (mph): 45,55 Legal Speed (mph): 45,55

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	asphalt through lanes		asphalt through lanes	
Pavement Width:	11-12	ft.	12	ft.
Shoulder Width:	2	ft.	2	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting:		Urban		Suburban	X	Rural
Topography:	X	Level		Rolling		Hilly

Name of Roadway: SR 43 – Town of Reynolds
Functional Classification: Urban (Suburban) Principal Arterial - Other
Current ADT: 4024 VPD (2026) Design Year ADT: 4441 VPD (2046)
Design Hour Volume (DHV): 455 Truck Percentage (%) 19.90
Designed Speed (mph): 25,35 Legal Speed (mph): 25,35

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	asphalt through lanes		asphalt through lanes	
Pavement Width:	12	ft.	12	ft.
Shoulder Width:	2.6	ft.	2.6	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	5	ft.	5	ft.

Setting:	X	Urban	X	Suburban		Rural
Topography:	X	Level		Rolling		Hilly

BRIDGES AND/OR SMALL STRUCTURE(S):

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

Structure/NBI Number(s): see table below Sufficiency Rating: see table below
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	see table below		see table below	
Number of Spans:	1		1	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	N/A	ft.	N/A	ft.
Outside to Outside Width:	14.6	ft.	14.6	ft.
Shoulder Width:	N/A	ft.	N/A	ft.

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

Structure #	Asset #	Size (inches) diameter or span/rise	Type	Location lat/long	Water Impacts	Rating	Replacement Size diameter x length or span/rise x length
10	CLV-64399	18	corrugated metal pipe (CMP)	40.612/-86.868	N/A	4	24 in x 44.5 ft
20	CLV-64400	36/24	reinforced concrete box culvert (RCB)	40.626/-86.869	yes	3	7 ft/4 ft x 57 ft RCB
30	CLV-64401	15	concrete cylinder pipe (CCP)	40.633/-86.869	N/A	5	18 in x 52 ft
40	CLV-64402	15	CMP	40.642/-86.869	N/A	3	24 in x 42.5 ft
50	CLV-64403	15	CCP	40.649/-86.870	N/A	5	24 in x 51 ft
60	CLV-64404	15	CCP	40.656/-86.870	N/A	7	24 in x 45.5 ft
80	CLV-64405	12	CMP	40.671/-86.870	yes	4	21 in/15 in x 39 ft
90	CLV-64406	15	CCP	40.673/-86.870	N/A	5	21 in/15 in x 40.5 ft
100	CLV-64407	15	CCP	40.694/-86.871	N/A	3	21 in/15 in x 40 ft
110	CLV-64408	24	CCP with liner	40.700/-86.872	N/A	5	30 in x 39 ft
120	CLV-64409	36/15	RCB	40.729/-86.873	N/A	4	4 ft/4 ft x 57 ft RCB
130	INCB-54959	N/A	storm sewer inlet	40.748/-86.875	N/A	N/A	In-kind
140	INCB-54958	N/A	storm sewer inlet	40.749/-86.875	N/A	N/A	In-kind
141	INCB-54957	N/A	storm sewer inlet	40.749/-86.875	N/A	N/A	In-kind
143	INCB-54956	N/A	storm sewer inlet	40.749/-86.875	N/A	N/A	In-kind
150	N/A	N/A	catch basin	40.749/-86.875	N/A	N/A	N/A

Small culverts and inlets will be replaced as noted in the above table and in the project plans (Appendix B, pages 16-95). Replacement type is Type 1 pipe with end sections unless otherwise noted in table. Revetment riprap over geotextiles will be placed at the inlet and outlet of all eleven culverts. The culverts run east-west beneath SR 43 with the exception of Structure 110, which runs north-south beneath East 350 South, parallel to SR 43. The inlets being replaced, and the new catch basin, are located at the intersection of SR 43 and East 3rd Street within the Town of Reynolds. All small culverts and inlets are non-historic. Impacts to

wetlands will occur as a result of the proposed replacements of Structure 20 and Structure 80. The anticipated permanent impacts to wetlands total 0.05707 acre. See the Wetlands portion in Section B – Ecological Resources of this document for details.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

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

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

Culvert replacements will require a full closure of SR 43 with detours utilizing SR 18, US 421, and US 24. Length of the detour and added travel time will vary based on the exact closure locations on SR 43 but is not expected to exceed 35 miles or add more than 45 minutes of travel time. Only culverts with no private or public access between them may be simultaneously replaced. Portable Changeable Message Signs will be used to inform motorists if access to the Town of Chalmers is open or closed, dependent upon the location of the road closure. When culvert replacements are complete the detour signage and portable message signs will be removed in preparation for milling and paving operations. MOT during milling and paving will be accomplished with single-lane closures and flaggers. Sidewalk and curb work within the Town of Reynolds will require full closure of SR 43 with a local detour and pedestrian MOT. To limit pedestrian traffic disruptions, sidewalk closures will be limited to seven days and curb ramps will be replaced at one corner of an intersection at a time. This MOT plan is anticipated to remain in place for one construction season. See Appendix B, pages 19-29 for MOT plan details.

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

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 1,552,580 (2023) Right-of-Way: $ 859,000 (2024) Construction: $ 8,510,000 (2025)

Anticipated Start Date of Construction: Quarter 3 (Q3) 2025

RIGHT OF WAY (ROW):

Land Use Impacts	Amount (acres) Permanent	Temporary
Residential	0.15	0.03
Commercial	0	0.03
Agricultural	1.38	0
Forest	0	0
Wetlands	0	0
Other: CSX railroad easement	0	0.16
Other:	0	0
TOTAL	1.53	0.22

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

The apparent existing ROW limits vary from approximately 23 feet to 131 feet east and west of the centerline of SR 43 through the project alignment. The typical existing ROW is approximately 25 feet west of the centerline and 35 feet east of the centerline. Within the Towns of Reynolds, Chalmers, and Brookston the existing ROW consists of maintained lawn vegetation, sidewalks, and driveway entries to residential and commercial properties. Between the towns, the existing SR 43 ROW consists of maintained roadside vegetation with occasional driveway entries. The maximum proposed ROW width is 55 feet from the centerline of SR 43.

Right-of-way required

The project requires approximately 1.53 acres of permanent ROW from ten agricultural parcels and one residential parcel on the west side of SR 43 for culvert replacements. Acquisition of ROW on the east side of SR 43 is not planned for culvert replacements although construction limits may exceed the existing ROW. Instead, an agreement with CSX Railroad will be coordinated for temporary easements totaling 0.16 acre to facilitate construction of Structure 20 (0.02 acre)(Appendix B, page 36), Structure 110 (0.06 acre) (Appendix B, page 54), Structure 120 (0.02 acre)(Appendix B, page 61) and new guardrail (0.06 acre)(Appendix B, page 59). The project also requires approximately 0.06 acre of temporary ROW from three residential parcels and one commercial parcel on the east side of SR 43 within the Town of Reynolds for work associated with sidewalk construction. Proposed ROW acquisition locations are included in the plan sheets (Appendix B, pages 32, 36-37, 39-43, 47, 52, 61, 65, 66, and 69). ROW acquisition for this project is 100% state funded (Appendix C, page 6).

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.

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

SECTION A - EARLY COORDINATION:

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

Early coordination letters were sent on May 31, 2023, June 22, 2023, July 27, 2023, and September 20, 2023. (Appendix C, page 1)

Agency	Date Sent	Response Date	Appendix Page
FHWA	May 31, 2023	no response	N/A
INDOT LaPorte District Project Manager	May 31, 2023	no response	N/A
INDOT LaPorte District Environmental	May 31, 2023	June 12, 2023 November 28, 2023	C6
INDOT Utilities and Railroad	May 31, 2023	no response	N/A
U.S. Department of Housing and Urban Development, Chicago Regional Office	May 31, 2023	no response	N/A

National Park Service (NPS) – Midwest Office	May 31, 2023	no response	N/A
Natural Resources Conservation Service (NRCS)	May 31, 2023	June 28, 2023	C7
Indiana Department of Natural Resources Division of Fish and Wildlife (IDNR-DFW)	May 31, 2023	June 29, 2023	C11
Indiana Geological and Water Survey (IGWS)	July 27, 2023	July 27, 2023	C14
Indiana Department of Environmental Management (IDEM) - Wetlands and Stormwater Programs	May 31, 2023	no response	N/A
IDEM – Groundwater Section	May 31, 2023	June 8, 2023	C9
IDEM – Institutional Controls	May 31, 2023	no response	N/A
U.S. Army Corps of Engineers (USACE) Louisville District	May 31, 2023	no response	N/A
Reynolds Town Clerk	May 31, 2023	no response	N/A
Chalmers Town Clerk	May 31, 2023	June 2, 2023	C17
Brookston Town Clerk	May 31, 2023	no response	N/A
Honey Creek Volunteer Fire Department (VFD)	May 31, 2023	no response	N/A
Chalmers Community VFD	May 31, 2023	no response	N/A
Prairie Township VFD	May 31, 2023	no response	N/A
Kankakee-Iroquois Regional Planning Commission	May 31, 2023	no response	N/A
White County Drainage Board	May 31, 2023	no response	N/A
White County Highway Department	May 31, 2023	no response	N/A
White County Soil & Water Conservation District	May 31, 2023	no response	N/A
White County Environmental Officer	May 31, 2023	no response	N/A
White County Emergency Management	May 31, 2023	no response	N/A
Reynolds Water Works	June 22, 2023	no response	N/A
Brookston Water Department	June 22, 2023	no response	N/A
Chalmers Water Works	May 31, 2023	no response	N/A
Monticello Fire Department	May 31, 2023	no response	N/A
White County Council	May 31, 2023	no response	N/A
White County Commissioners	May 31, 2023	no response	N/A
Frontier Schools Transportation Director	May 31, 2023	no response	N/A
North White Schools Transportation Director	May 31, 2023	no response	N/A
White County Area Plan Office	September 20, 2023	September 21, 2023	C46
White County Floodplain Administrator	September 20, 2023	no response	N/A

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

SECTION B – ECOLOGICAL RESOURCES:

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

Total stream(s) in project area: N/A Linear feet Total impacted stream(s): N/A Linear feet

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

No presence, no impact

Based on the desktop review, the aerial map of the project area, and the Red Flag Investigation (RFI) report (Appendix E, page 5) there are seventeen streams, rivers, watercourse, or other jurisdictional features within the 0.5-mile search radius. There are no

streams, rivers, watercourse, or other jurisdictional features within or adjacent to the investigated areas, which was confirmed by the site visit on September 20, 2022 by Compliance Field Services, Inc. Therefore, no impacts are expected.

Waters Report

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on May 1, 2023. The waters report was limited to areas where culvert replacement is planned. Please refer to Appendix F, page 14 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no jurisdictional streams are present in the investigated areas. The USACE makes all final determinations regarding jurisdiction.

Open Water Feature(s)	Presence	Impacts Yes	Impacts No
Reservoirs			
Lakes			
Farm Ponds			
Retention/Detention Basin			
Storm Water Management Facilities			
Other:			

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

No presence, no impact

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page 5) there are six open water features within the 0.5-mile search radius. There are no open water features within or adjacent to the project area, which was confirmed by the site visit on September 20, 2022 by Compliance Field Services, Inc. Therefore, no impacts are expected.

Waters Report

A *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on May 1, 2023. The waters report was limited to areas where culvert replacement is planned. Please refer to Appendix F, page 14 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that no jurisdictional open water features are present in the investigated areas. The USACE makes all final determinations regarding jurisdiction.

	Presence	Impacts Yes	Impacts No
Wetlands	X	X	

Total wetland area: 0.15913 Acre(s) Total wetland area impacted: 0.05707 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 (i.e. location, likely Water of the US, appendix reference)
Wetland A	Emergent	0.05823	0.02174	West side of SR 43, approximately 10 feet from edge of pavement at Structure 20; average quality; likely Waters of the State (Appendix F, page 42)
Wetland B	Emergent	0.03549	0.02252	East side of SR 43, approximately 9 feet from edge of pavement at Structure 20; poor quality; likely Waters of the State (Appendix F, page 42)
Wetland C	Emergent	0.04085	0.01281	West side of SR 43 at outfall of Structure 80; poor quality; likely Waters of the State (Appendix F, page 170)
Wetland D	Emergent	0.02456	0	East side of SR 43 between inlet of Structure 80 and CSX RR; poor quality; likely Waters of the State (Appendix F, page 170)

Wetlands (*Mark all that apply*)	**Documentation**	**ESD Approval Dates**
Wetland Determination	X	May 1, 2023
Wetland Delineation	X	May 1, 2023
USACE Isolated Waters Determination		

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

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

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

Presence, with impacts less than one acre

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page 5), there are fifty-one wetlands within the 0.5-mile search radius. There are four wetlands present within or adjacent to the investigated areas. That number was confirmed by site visits on September 20, 2022 and October 18, 2022 for the *Waters of the U.S. Determination / Wetland Delineation Report* completed by Compliance Field Services, Inc.

The *Waters of the U.S. Determination / Wetland Delineation Report* was approved by INDOT Ecology and Waterway Permitting Office on May 1, 2023. The waters report was limited to areas where culvert replacement is planned. It was determined that four wetlands were present within the investigated areas (Appendix F, page 303). The USACE makes all final determinations regarding jurisdiction.

Wetland A is likely an isolated, palustrine emergent wetland that has formed within a depression that has been left fallow at the edge of an active agricultural field on the west side of SR 43. Wetland A is approximately 0.05823 acre and has a moderate prevalence of native species, despite the dominance of reed canary grass (*Phalaris arundinacea*) and lady's thumb (*Persicaria maculosa*). Native species include bristly sedge (*Carex comosa*) and soft rush (*Juncus effusus*). Wetland A would be considered average quality due to moderate diversity of native wetland species with interspersed alien and invasive species, and moderate habitat presence. Approximately 0.02174 acre of permanent impacts to Wetland A are anticipated for the installation of Structure 20. No temporary impacts will occur.

Wetland B is an approximately 0.03549 acre palustrine emergent wetland that has formed within a depression along the roadside ditch on the east side of SR 43. As Wetland B is dominated by reed canary grass (*Phalaris arundinacea*), an invasive species, and the functionality of Wetland B for filtering runoff and habitat value are minimal, it would be considered poor quality. Approximately 0.02252 acre of permanent impacts to Wetland B are anticipated for the installation of Structure 20. No temporary impacts will occur.

Wetland C is an approximately 0.04085 acre emergent wetland located to the west of SR 43 at the outfall of Structure 80. The vegetation and natural hydrology of this wetland are disturbed by agricultural activities. Additionally, Wetland C supports minimal wildlife or aquatic habitat and does not contribute significant hydrologic function. For these reasons, Wetland C would be considered poor quality. Approximately 0.01281 acre of permanent impacts to Wetland C are anticipated for the installation of Structure 80. No temporary impacts will occur.

Wetland D is an approximately 0.02456 acre emergent wetland located on the east side of SR 43 between the inlet of Structure 80 and the CSX railroad. The dominant vegetation is reed canary grass (*Phalaris arundinacea*). It would be considered poor quality due to the dominance of nonnative invasive vegetation, minimal wildlife or aquatic habitat, and limited hydrologic function. No permanent or temporary impacts to Wetland D are anticipated. Wetland D is labeled as Do Not Disturb on the project plans (Appendix B, page 47).

The wetland delineation report determined that all four wetlands are likely isolated/exempt Waters of the State. However, INDOT is requesting that USACE take jurisdiction of these wetlands. Impacts will occur to Wetlands A and B during the replacement of Structure 20 and to Wetland C during the replacement of Structure 80. A total of approximately 0.05707 acre of permanent impacts will occur. Complete avoidance of these impacts would result in the purpose and need of the project not being met.

A Nationwide Permit 14 is likely required due to wetland impacts. Mitigation is not likely to be required but will be determined during the permitting process.

No early coordination responses pertaining to wetlands were received.

	Presence	Impacts	
		Yes	NO
Terrestrial Habitat	X	X	

Total terrestrial habitat in project area: 5.50 Acre(s) Total tree clearing: N/A Acre(s)

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

Presence, with impacts

Based on a desktop review and the aerial map of the project area (Appendix B, page 3), there is terrestrial habitat within the project area consisting primarily of maintained roadside vegetation, unmaintained roadside vegetation, agricultural land, and maintained residential lawns. Plant species generally include but are not limited to: red fescue (*Festuca rubra*), perennial ryegrass (*Lolium perenne*), Kentucky bluegrass (*Poa pratensis*), Bermuda grass (*Cynodon dactylon*), reed canary grass (*Phalaris arundinacea*), poison hemlock (*Conium maculatum*), and Queen Anne's Lace (*Dacaus carota*).

Approximately 1.189 acres of terrestrial habitat will be impacted by culvert replacement, riprap placement, shoulder grading, and sidewalk construction. No tree clearing will occur. Impacts to terrestrial habitat were minimized during the design phase and will be avoided and minimized where possible while fulfilling the purpose and need of the project. Mitigation for these impacts is not anticipated.

Early Coordination

The NRCS responded on June 28, 2023 stating that the project will cause a conversion of prime farmland (Appendix C, page 7). See the "Farmland" portion in Section C – Other Resources of this document for details. The IDNR-DFW responded on June 29, 2023 (Appendix C, page 11) with recommendations to revegetate disturbed areas and implement erosion and sediment control measures. All applicable recommendations are included in the Environmental Commitments Section of this CE document.

Protected Species

Federally Listed Bats	Yes	No
Information for Planning and Consultation (IPaC) determination key completed	X	
Section 7 informal consultation completed (IPaC cannot be completed)		X
Section 7 formal consultation Biological Assessment (BA) required		X

Determination Received for Listed Bats from USFWS: NE [ ] NLAA [X] LAA [ ]

Other Species not included in IPaC	Yes	No
Additional federal species found in project area (based on IPaC species list)	X	
State species (not bird) found in project area (based upon consultation with IDNR)		X

Migratory Birds	Yes	No
Known usage or presence of birds (i.e. nests)		X
State bird species based upon coordination with IDNR	X	

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

Based on a desktop review and the RFI report (Appendix E), completed by H.W. Lochner, Inc. and approved by INDOT Site Assessment & Management (SAM) on May 18, 2023, the IDNR White County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter date June 29, 2023 (Appendix C, page 11), the Natural Heritage Program's Database has been checked and the Upland Sandpiper (*Bartramia longicauda*) and the Black Tern (*Chlidonias niger*), state endangered bird species, have been documented within 0.5 mile of the project area. However, IDNR states that there is no suitable habitat for these species within the project area and that no significant negative impacts are expected. No other plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. An INDOT 0.5-mile bat review of the United States Fish and Wildlife Service (USFWS) database, completed on November 9, 2022, did not indicate the presence of endangered bat species within 0.5-mile of the project area.

Bats, Programmatic Informal Consultation (i.e. IPaC) – 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 19). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally endangered northern long-eared bat (NLEB) (*Myotis septentrionalis*).

The official species list generated from IPaC indicated four other species present within the project area:

- proposed federally endangered Tricolored Bat (*Perimyotis subflavus*)
- non-essential, experimental population of Whooping Cranes (*Grus americana*)
- federally threatened Round Hickorynut (*Obovaria subrotunda*) clam
- candidate species Monarch Butterfly (*Danaus plexippus*)

This project does not include tree clearing or stream impacts and all work will occur within 100-feet of the roadway footprint. There are no critical habitats for any of these species within or near the project area. The project will not jeopardize the continued existence of the candidate species Monarch Butterfly, the proposed endangered Tricolored Bat, or the non-essential, experimental Whooping Crane population. There is no suitable habitat for the Round Hickorynut within the project area. Therefore, no negative impacts are expected to the above-mentioned species. No further coordination with USFWS is required.

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. On September 20, 2022 and October 18, 2022 it was determined that all culverts and inlets are more than 1,000 feet from suitable bat habitat and therefore structure inspections are not required. An effect determination key was completed on July 10, 2023, and based on the responses provided, the project was found to "may affect – not likely to adversely affect" the Indiana bat and/or the NLEB (Appendix C, page 35). INDOT reviewed and verified the effect finding on July 11, 2023 and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Minimization Measures (AMMs) generated during this review included notification to all workers of commitments and temporary lighting guidelines. These AMMs and/or commitments are included as firm commitments in the *Environmental Commitments* section of this document.

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

Geological and Mineral Resources	**Yes**	**No**
Project located within the Indiana Karst Region		X
Karst features identified within or adjacent to the project area		X
Oil/gas or exploration/abandoned wells identified in the project area	X	

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): N/A

Discuss if project is located in the Indiana Karst Region and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Protection of Karst Features during Planning and Construction guidance and coordinated and reviewed by INDOT EWPO)

Outside karst area

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the most current *Protection of Karst Features during Project Development and Construction*. According to the topo map of the project area (Appendix B, page 2) and the RFI report (Appendix E) there are no karst features identified within or adjacent to the

project area. In the early coordination response dated July 27, 2023, the IGWS did not indicate that karst features exist in the project area (Appendix C, page 14). The IGWS Environmental Assessment Report identified the following features within the 0.5-mile search radius:

- Geological Hazards – high liquefaction potential
- Mineral Resources – high potential bedrock resource and high potential sand/gravel resource
- Active or Abandoned Mineral Resource Extraction Sites – petroleum exploration wells

The RFI report (Appendix E, page 5) states that no petroleum wells were identified within or adjacent to areas where excavation will occur . Response from IGWS was communicated to the designer on July 28, 2023. No impacts are expected.

SECTION C – OTHER RESOURCES

	Presence	Impacts	
Drinking Water Resources		**Yes**	**No**
Wellhead Protection Area(s)	X		X
Source Water Protection Area(s)			
Water Well(s)	X		X
Urbanized Area Boundary			
Public Water System(s)	X		X

	Yes	No
Is the project located in the St. Joseph Sole Source Aquifer (SSA):		X
If Yes, is the FHWA/EPA SSA MOU Applicable?		
If Yes, is a Groundwater Assessment Required?		

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

Outside of Sole Source Aquifer (SSA)

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

Located in a Wellhead Protection Area and/or Source Water Area

This project is located within Wellhead Protection Areas. In an early coordination letter dated June 8, 2023, IDEM stated that the project area is located within Wellhead Protection Areas and is not located in any Source Water Assessment Areas (Appendix C, page 9). Early coordination letters were sent to Chalmers Water Works on May 31, 2023 and to Reynolds Water Works and Brookston Water Department on June 22, 2023. No response was received from these entities. The features will not be affected because the project will largely be limited to the existing roadway footprint, except in the areas where drainage structures will be replaced. Work in those areas will occur within 100 feet of the existing roadway. Avoidance alternatives would not be practicable because the purpose of the project is to improve the existing roadway and to improve drainage structures beneath the roadway. This work must be completed within the defined project area, which was minimized during the design phase, to meet the stated purpose and need.

Wells present, no impacts

The Indiana Department of Natural Resources Water Well Record Database website (https://www.in.gov/dnr/water/3595.htm) was accessed on September 12, 2023 by H.W. Lochner, Inc. There are approximately eight wells adjacent to the project area along the SR 43 alignment. The nearest is a field located, unconsolidated well associated with a business located on the west side of SR 43, adjacent to the southwest portion of the project area. The features will not be affected due to the limited amount of excavation and the planned scope of work. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that these wells will be affected, a cost to cure will likely be included in the appraisal to restore the wells.

Not in an Urban Area Boundary Location

Based on a desktop review of https://entapps.indot.in.gov/MS4/ by H.W. Lochner, Inc. on September 12, 2023 this project is not

located in an Urban Area Boundary. No impacts are expected.

In a Public Water System Location
Based on a desktop review, a site visit on December 16, 2022 by H.W. Lochner, Inc., and the aerial map of the project area (Appendix B, page 3), this project is located where there are public water systems. The public water systems within the Towns of Chalmers and Brookston will not be affected because no excavation work will occur in the areas serviced by their water departments. The public water system within the Town of Reynolds will not be affected by the limited excavation needed for sidewalk and curb ramp work. Early coordination letters were sent to Chalmers Water Works on May 31, 2023 and to Reynolds Water Works and Brookston Water Department on June 22, 2023. No response was received from these entities.

Floodplains	**Presence**	**Impacts** Yes	No
Project located within a regulated floodplain	X		X
Longitudinal encroachment			
Transverse encroachment			
Homes located in floodplain within 1000' up/downstream from project	X		X

If applicable, indicate the Floodplain Level?

Level 1 [X] Level 2 [ ] Level 3 [ ] Level 4 [ ] Level 5 [ ]

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

Based on a desktop review of the IDNR Floodway Information Portal website (https://www.in.gov/dnr/water/surface-water/indiana-floodplain-mapping/indiana-floodplain-information-portal/) by H.W. Lochner, Inc. on December 13, 2023 and the RFI report, this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, pages 1-13). An early coordination letter was sent on September 23, 2023 to the White County Floodplain Administrator. The floodplain administrator did not respond within the 30-day time frame. This project qualifies as a Category 1 per the current INDOT CE Manual, which states:

Category 1 - Although this project involves work within the horizontal limits of the 100-year floodplain, no work is being performed below the 100-year flood elevation and as a result this project does not encroach upon the base floodplain.

Farmland	**Presence**	**Impacts** Yes	No
Agricultural Lands	X	X	
Prime Farmland (per NRCS)	X	X	

Total Points (from Section VII of CPA-106/AD-1006*) **149**
**If 160 or greater, see CE Manual for guidance.*

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

Presence, score under 160
Based on a desktop review, a site visit on December 16, 2022 by H.W. Lochner, Inc., and the aerial map of the project area (Appendix B, page 3), the project will convert 0.77 acre of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on May 31, 2023 to NRCS. Coordination with NRCS resulted in a score of 149 on the AD-1006 form (Appendix C, page 8). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION D – CULTURAL RESOURCES

	Category(ies) and Type(s)	INDOT Approval Date(s)	N/A
Minor Projects PA	B1, B4, B9	March 4, 2024	

Full 106 Effect Finding

No Historic Properties Affected [ ] No Adverse Effect [ ] Adverse Effect [ ]

Eligible and/or Listed Resources Present

NRHP Building/Site/District(s) [ ] Archaeology [ ] NRHP Bridge(s) [ ]

Documentation Prepared (mark all that apply)		**ESD Approval Date(s)**	**SHPO Approval Date(s)**
APE, Eligibility and Effect Determination			
800.11 Documentation			
Historic Properties Report or Short Report			
Archaeological Records Check and Assessment	X	March 20, 2023	N/A
Archaeological Phase Ia Survey Report	X	April 14, 2023	N/A
Archaeological Phase Ic Survey Report			
Other:			

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

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

On March 4, 2024 the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Types 1, 4, and 9 under the Minor Projects Programmatic Agreement (MPPA) (Appendix D, page 1). The following are the MPPA categories and conditions applicable to this project:

B-1 Replacement, repair, or installation of curbs, curb ramps, or sidewalks, including when such projects are associated with roadway work such as surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking, under the following conditions: Ai, work occurs in previously disturbed soils and Bi, work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

B-4 Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators, under the following conditions: Aii, Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT CRO determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area and B, 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 following conditions: Aii, described above and Bia, 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 where the structure exhibits no wood, stone, or brick structures or parts therein.

A Phase 1a archaeological survey was required due to purchasing ROW and portions of the project work taking place within undisturbed soils. Fieldwork occurred on March 22, 2023 and the archaeological short report was completed on April 14, 2023. The fieldwork examined 80.1 acres through a combination of visual examination, pedestrian survey, and shovel probing. No new or

previously recorded archaeological resources were found within the surveyed area. No additional investigation is recommended. The archaeological short report can be found in Appendix D, page 14.

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

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

	Presence	Use	
Parks and Other Recreational Land		**Yes**	**No**
Publicly owned park	☐	☐	☐
Publicly owned recreation area	☐	☐	☐
Other (school, state/national forest, bikeway, etc.)	☐	☐	☐
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	☐	☐	☐
National Natural Landmark	☐	☐	☐
State Wildlife Area	☐	☐	☐
State Nature Preserve	☐	☐	☐
Historic Properties			
Site eligible and/or listed on the NRHP	☐	☐	☐

	Evaluations Prepared
Programmatic Section 4(f)	☐
"De minimis" Impact	☐
Individual Section 4(f)	☐
Any exception included in 23 CFR 774.13	☐

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

No presence, no impact

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

Based on a desktop review, the aerial map of the project area (Appendix B, page 3), and the RFI report (Appendix E, page 3) there are eight potential 4(f) resources located within the 0.5-mile search radius: seven recreational facilities and one trail. Site visits, on September 8, 2022 by Hanson, confirmed 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 Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

No presence, no impact
The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the INDOT ESD website revealed a total of two properties in White County (Appendix I, page 31), Altherr Park and Monon Park. Neither of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project	**Yes**	**No**
Is the project in the most current STIP/TIP?	X	
Is the project located in an MPO Area?		X
Is the project in an air quality non-attainment or maintenance area?		X
If Yes, then:		
Is the project in the most current MPO TIP?		
Is the project exempt from conformity?		
If No, then:		
Is the project in the Transportation Plan (TP)?		
Is a hot spot analysis required (CO/PM)?		

Location in STIP: FY 2024-2028 Contract R-43897 (page 258)

Name of MPO (if applicable): N/A

Location in TIP (if applicable): N/A

Level of MSAT Analysis required?

Level 1a [X] Level 1b [ ] Level 2 [ ] Level 3 [ ] Level 4 [ ] Level 5 [ ]

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

Standalone Project or Lead DES number
This project is included in the Fiscal Year (FY) 2024-2028 Statewide Transportation Improvement Program (STIP) (Appendix H, page 1).

Attainment area
This project is located in White County, which is currently in attainment for all criteria pollutants according to the Environmental Protection Agency Green Book (https://www3.epa.gov/airquality/greenbook/anayo_in.html). Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

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

SECTION G - NOISE

Noise	Yes	No
Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?		X

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

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

Type III Project
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 H – COMMUNITY IMPACTS

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

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

The project will comply with local and regional development patterns in the area. It will result in a net positive effect on the communities due to the improved roadway surface and drainage of SR 43 upon completion.

According to the White County Tourism website (www.enjoywhitecounty.com), accessed on September 5, 2023 by H.W. Lochner, Inc., two events in the vicinity of the project may overlap with the timing of construction; the White County Fair held annually during July in the Town of Reynolds and the Brookston Apple Popcorn Festival held annually in September. The White County Fairgrounds are located approximately 0.6 mile from the northern terminus of the project area and will be accessible via an official detour utilizing US 421 and via local roads. The festival in the Town of Brookston occurs within the downtown area, approximately 0.1 mile from the southern terminus of the project area and will be accessible via an official detour utilizing SR 18 and via local roads.

White County has an approved ADA Transition Plan (https://www.in.gov/counties/white/files/White-County-ADA-Transition-Plan-07-05-22.pdf). The plan ensures that White County is aware of the state of ADA compliance in the facilities it manages and commits to the guidelines set forth in the plan for current and future facilities. This project complies with the White County ADA Transition Plan for Public Facilities because the completed project will not restrict access to any facilities. Improvements to curb ramps at all quadrants of the SR 43/3rd Street and SR 43/4th Street intersections within the Town of Reynolds are planned to comply with current ADA standards (Appendix B, pages 70-73).

Public Facilities and Services

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

No presence, no impact
Based on a desktop review, the aerial map of the project area (Appendix B, page 3), and the RFI report (Appendix E, page 3) there are public facilities within the 0.5-mile search radius: four religious facilities, five cemeteries, two schools, seven recreational facilities, and one trail. There are no public facilities within or adjacent to the project area, which was confirmed by the site visit on

September 8, 2022 by Hanson. Therefore, no impacts are expected. Access to all properties will be maintained during construction.

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

Environmental Justice (EJ) (Presidential EO 12898)	**Yes**	**No**
During the development of the project were EJ issues identified?		X
Does the project require an EJ analysis?	X	
If YES, then:		
Are any EJ populations located within the project area?		X
Will the project result in adversely high and disproportionate impacts to EJ populations?		X

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

EJ Analysis, No EJ Populations

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 approximately 1.53 acres of permanent right-of-way and approximately 0.06 acre of temporary 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 concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is White County. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tracts 9584 and 9588 in White County. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the American Community Survey 5-year estimates was obtained from the US Census website on June 22, 2023 by H. W. Lochner, Inc. The data for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (US Census, 2023)

	COC – White County, IN	AC-1 – Census Tract 9584, White County, IN	AC-2 – Census Tract 9588, White County, IN
Percent Minority	11.4%	6.5%	4.9%
125% of COC	14.3%	AC < 125% COC	AC < 125% COC
EJ Population of Concern?	--	No	No
Percent Low-Income	8.6%	4.8%	5.2%
125% of COC	10.8%	AC < 125% COC	AC < 125% COC
EJ Population of Concern?	--	No	No

AC-1, Census Tract 9584, has a percent minority of 6.5% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC-2, Census Tract 9588, has a percent minority 4.9%, which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain minority populations of EJ concern.

AC-1, Census Tract 9584, has a percent low-income of 4.8% which is below 50% and is below the 125% COC threshold. Therefore, the AC does not contain low-income populations of EJ concern.

AC-2, Census Tract 9588, has a percent low-income of 5.2% 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, maps, and calculations can be found in Appendix I, pages 33-45. Neither AC was found to not have minority or low-income populations of EJ concern. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms	**Yes**	**No**
Will the proposed action result in the relocation of people, businesses or farms?		X
Is a BIS or CSRS required?		X

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

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

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

SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Hazardous Materials & Regulated Substances (Mark all that apply)	**Documentation**
Red Flag Investigation (RFI)	X
Phase I Environmental Site Assessment (Phase I ESA)	
Phase II Environmental Site Assessment (Phase II ESA)	
Design/Specifications for Remediation required?	

Date RFI concurrence by INDOT SAM (if applicable): May 18, 2023

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

Presence, with impact or potential impact

Based on a review of geographic information systems (GIS) and available public records, the RFI was completed by H.W. Lochner, Inc. and INDOT SAM provided their concurrence on May 18, 2023 (Appendix E, page 10). The following hazardous material resources are located within 0.5 mile of the project area: eight underground storage tank (UST) sites, seven leaking underground storage tank (LUST) sites, one brownfield site, three institutional controls sites, nine National Pollution Discharge Elimination System (NPDES) facilities, two NPDES pipe locations, and one notice of contamination site.

One business located within the project area is a LUST site, institutional controls site, and a notice of contamination site. Union 76 Reynolds Hoovers Self-Serve Mart (also known as Hoovers Self-Serve Mart), 102 N Kenton St., Agency ID 54430, is the site of an active gas station and is located on the northwest corner of the intersection. According to the No Further Action (NFA) Approval Pursuant to Remediation Closure Guide letter issued by IDEM on June 24, 2021, contamination remains in the area surrounding the site and exists within the ROW. An Environmental Restrictive Covenant (ERC) was recorded on June 25, 2020, and placed restrictions on land and groundwater uses. An ERC was proposed for the site at the southwest corner of the intersection at 204 South Kenton; however, the owner of that property declined to sign the ERC. A Notice of Contamination within Right-of-Way was submitted to INDOT on March 3, 2020, informing INDOT of petroleum-related impacts in the ROW along US 24 adjacent to the site. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Institutional Controls (institutionalcontrols@idem.IN.gov) section before RFC. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination.

One NPDES facility, INDOT Des 1383600 Road Reconstruction, permit number INRA10600, is located adjacent to the western edge of the project area. The permit is associated with construction stormwater and is effective through September 27, 2027. Coordination will occur with Jason Kruger, LaPorte District Construction Director, INDOT, and Regina Session, Project Engineer, American Structurepoint.

One UST site is located within the project area. The site, Dennis J Reisert, SR 43 & W Main St, Agency ID 54873, is located within and adjacent to areas where excavation will occur. Based on a Notification for Underground Storage Tanks report dated September

30, 1991, all tanks at this location were removed earlier that month. No maps of soil sample locations were provided, and even though total petroleum hydrocarbons (TPH) levels were non-detect at 10 ppm, three (3) soil samples collected at an unknown depth are insufficient to determine the presence or absence of contamination. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report
contamination.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)	**Likely Required**
Army Corps of Engineers (404/Section10 Permit)	
Nationwide Permit (NWP)	X
Regional General Permit (RGP)	
Individual Permit (IP)	
Other	
IN Department of Environmental Management (401/Rule 5)	
Nationwide Permit (NWP)	X
Regional General Permit (RGP)	
Individual Permit (IP)	
Isolated Wetlands	
Rule 5	X
Other	
IN Department of Natural Resources	
Construction in a Floodway	
Navigable Waterway Permit	
Other	
Mitigation Required	
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the discussion below)	

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

Due to 0.05707 acre of permanent wetland impacts a USACE 404 Nationwide Permit 14 and an IDEM Section 401 Nationwide Permit will likely be required.

Due to ground disturbance in excess of one acre, an IDEM Construction Stormwater General Permit (formerly known as a Rule 5 Permit) will likely be required.

In their June 29, 2023 early coordination response (Appendix C, page 11) the IDNR-DFW stated the project may require formal approval for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody with a drainage area of greater than one square mile. It was determined during the design phase that this is not required.

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

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

ENVIRONMENTAL COMMITMENTS

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

Firm:

1. If the scope of work or permanent or temporary 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. Any work in a wetland area within right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S. Army corps of Engineers or IDEM permit. (INDOT EWPSO)
4. GENERAL AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
5. LIGHTING AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
6. One LUST/Institutional Controls/Notice of Contamination Site is located adjacent to the project area. Union 76 Reynolds Hoovers Self-Serve Mart (also known as Hoovers Self-Serve Mart), 102 N Kenton St., Agency ID 54430, is the site of an active gas station and is located on the northwest corner of the intersection. According to the No Further Action (NFA) Approval Pursuant to Remediation Closure Guide letter issued by IDEM on June 24, 2021, contamination remains in the area surrounding the site and exists within the ROW. An Environmental Restrictive Covenant was recorded on June 25, 2020, and placed restrictions on land and groundwater uses. An ERC was proposed for the site at the southwest corner of the intersection at 204 South Kenton; however, the owner of that property declined to sign the ERC. A Notice of Contamination within Right-of-Way was submitted to INDOT on March 3, 2020, informing INDOT of petroleum-related impacts in the ROW along US 24 adjacent to the site. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Institutional Controls (institutionalcontrols@idem.IN.gov) section before RFC. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination. (INDOT SAM)
7. One NPDES facility, INDOT Des 1383600 Road Reconstruction, permit number INRA10600, is located adjacent to the western edge of the project area. The permit is associated with construction stormwater and is effective through September 27, 2027. Coordination will occur with Jason Kruger, LaPorte District Construction Director, INDOT, and Regina Session, Project Engineer, American Structurepoint. (INDOT SAM)
8. One UST site is located within the project area. The site, Dennis J Reisert, SR 43 & W Main St, Agency ID 54873, is located within and adjacent to areas where excavation will occur. Based on a Notification for Underground Storage Tanks report dated September 30, 1991, all tanks at this location were removed earlier that month. No maps of soil sample locations were provided, and even though TPH levels were non-detect at 10 ppm, three (3) soil samples collected at an unknown depth are insufficient to determine the presence or absence of contamination. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination. (INDOT SAM)
9. USFWS Bridge/Structure Assessment shall take place no earlier than two years prior to the start of construction. If construction will begin after September 20, 2024, an inspection of the structure(s) by a qualified individual must be performed. Inspection of the structure(s) should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT District)
10. Wetland D will be labeled as “Do Not Disturb” on the project plans. (INDOT District)

For Further Consideration:

11. It is recommended to use more sustainable approaches to stormwater management, such as retention basins, constructed wetlands, rain gardens, and infiltration basins or trenches, and pervious pavement. (IDNR-DFW)
12. It is recommended to use BMPs to limit the migration of polycyclic aromatic hydrocarbons (PAHs) into waterways. The use of sealants that are free of petroleum and coal tar-based sealants in encouraged. (IDNR-DFW)
13. Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM) with the exception of areas directly under bridges for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. For streambed stabilization or scour protection, riprap or other stabilization materials should not be placed in the active stream channel above the existing streambed or flowline elevation unless specifically designed and installed for grade control and aquatic organism passage. This is to prevent obstructions to the movement of aquatic organisms upstream and downstream. (IDNR-DFW)

Table of Contents - Appendices

A: INDOT Supporting Documentation
Categorical Exclusion Threshold Table A-1

B: Graphics
Project Location Map B-1
USGS Topographic Map B-2
Aerial Map B-3
Site Photographs B-4
Project Plans B-16

C: Early Coordination
Sample Early Coordination Letter C-1
Early Coordination Recipient List C-3
Agency Response – INDOT Environmental C-6
Agency Response – NRCS C-7
Agency Response – IDEM Groundwater C-9
Agency Response – IDNR C-11
Agency Response – IGWS Automated Response C-14
Agency Response – Chalmers Clerk-Treasurer C-17
IPaC Species List C-19
IPaC Concurrence Letter C-35
Agency Response – White County Area Plan Commission C-46

D: Section 106 of the NHPA
MPPA Assessment Form D-1
Archaeological Short Report D-14

E: Red Flag and Hazardous Materials
Red Flag Investigation E-1

F: Water Resources
IDNR Floodplain Maps F-1
Waters of the US Report F-14

G: Public Involvement
Notice of Entry Letter G-1

H: Air Quality
Indiana STIP FY 2024-2028 ..... H-1

I: Additional Studies/Reports
Pavement Scoping Report 1 ..... I-1
Addendum 1 ..... I-4
Pavement Scoping Report 2 ..... I-6
Addendum 2 ..... I-9
Land & Water Conservation Fund Properties I-31
Environmental Justice Analysis I-32

Appendix A

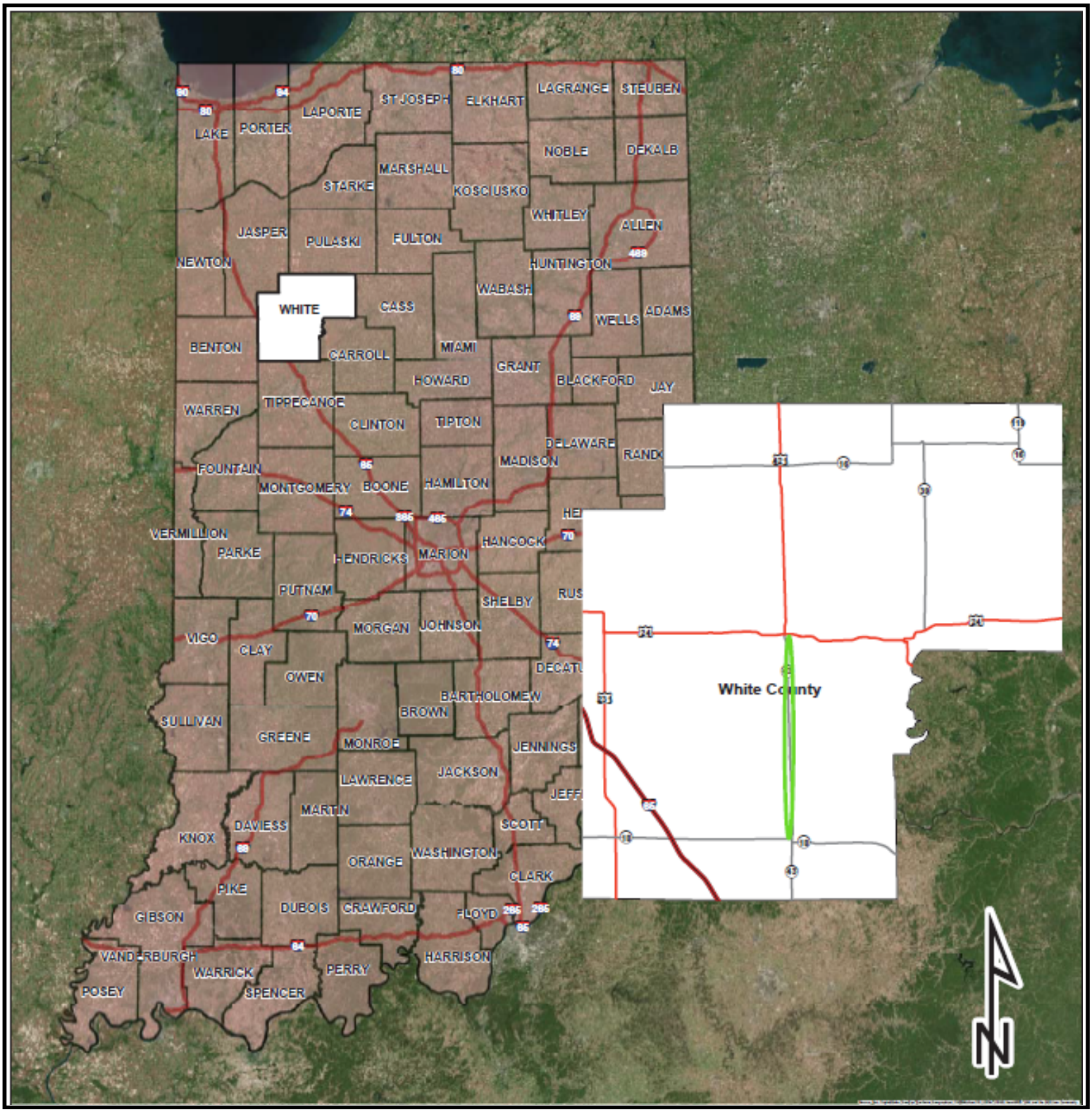
INDOT Supporting Documentation

Categorical Exclusion Level Thresholds

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

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

Appendix B
Graphics



PROJECT

Des. No. 2100235 (lead) & 2100171

HMA Overlay, Small Structure Replacement
SR 43, N. Junction of SR 18 to US 24/421

White County, Indiana

LEGEND

State Route

US Route

Interstate

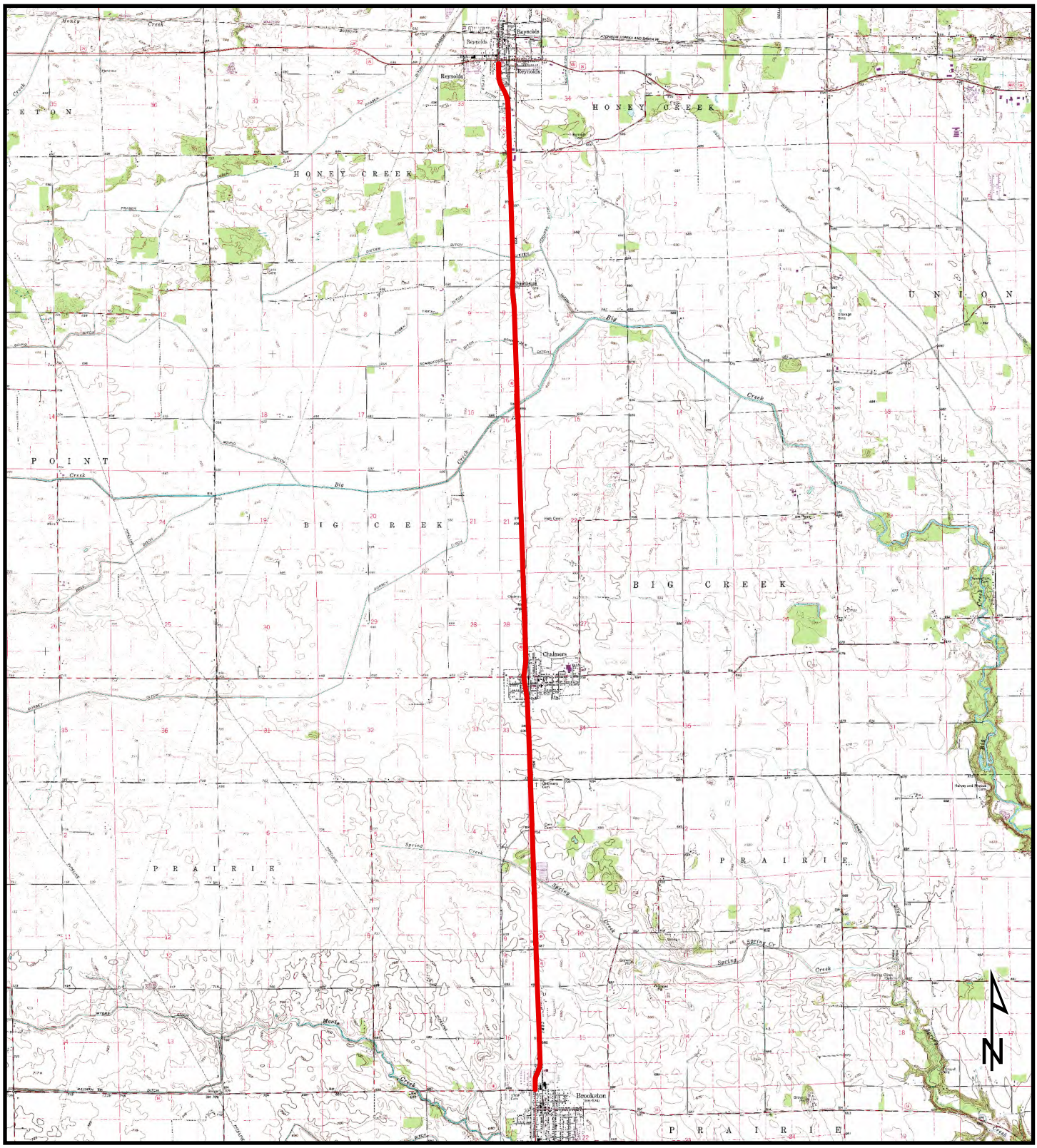
Project Area

County Boundary

Project Location

SCALE

0 1.5 3 6 9 12 Miles



PROJECT

Des. No. 2100235 (lead) & 2100171
HMA Overlay, Small Structure Replacement
SR 43, N. Junction of SR 18 to US 24/421

White County, Indiana

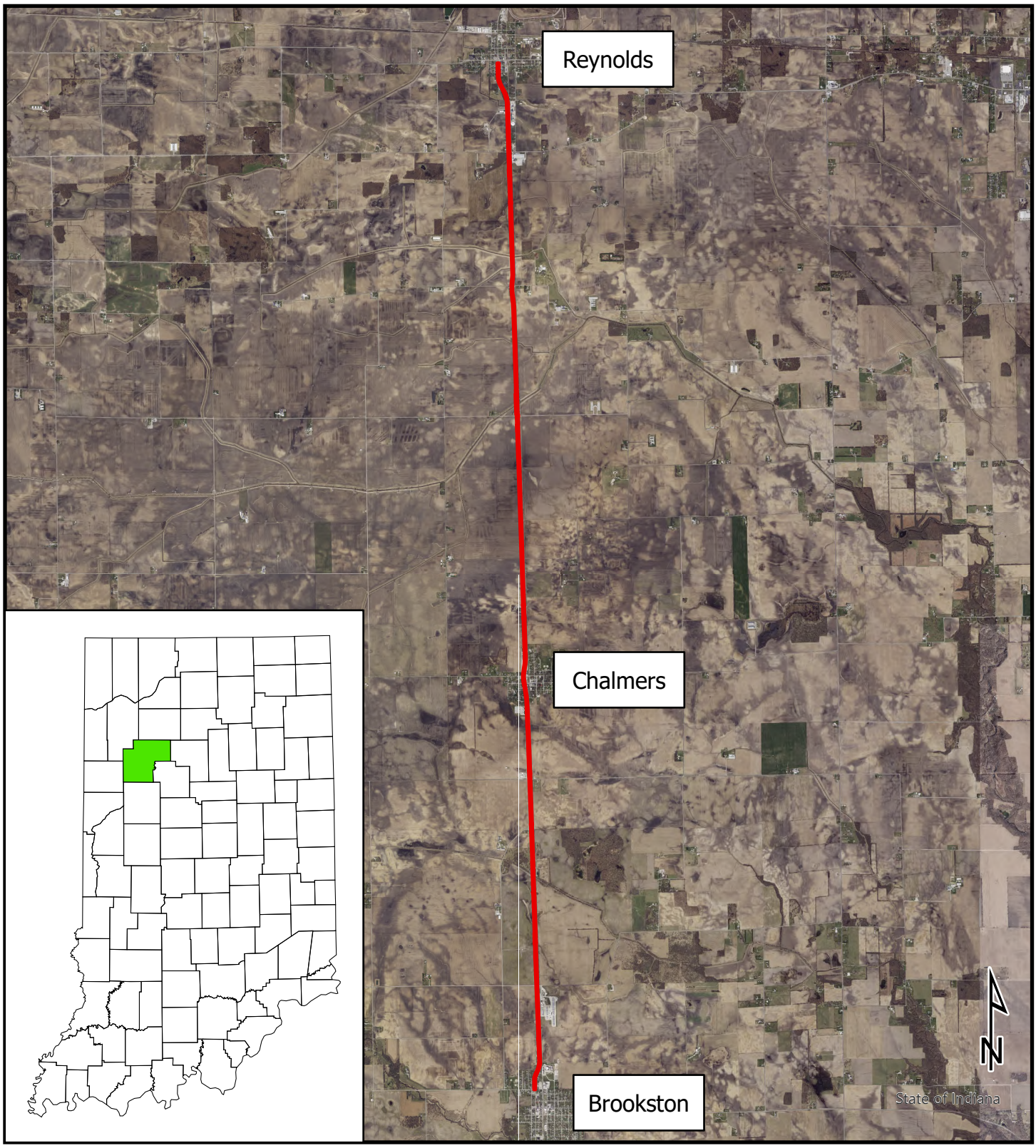
Legend

Project Area

U.S.G.S. Topographic Map

SCALE

1 0.5 0 1 Miles



PROJECT

Des. No. 2100235 (lead) & 2100171
HMA Overlay, Small Structure Replacement
SR 43, N. Junction of SR 18 to US 24/421

White County, Indiana

Legend

Project Area

Aerial Map

SCALE
1 0.5 0 1
Miles



1. Intersection of SR 43 and US 24/421, SE curb ramp, looking north.



2. Intersection of SR 43 and US 24/421, SE curb ramp, looking south. This is the northern terminus of the project area.



3. Intersection of SR 43 and US 24/421, SW curb ramp, looking southwest.



4. Intersection of SR 43 and US 24/421, SW curb ramp, looking south. This is the northern terminus of the project area.

B4



5. Intersection of SR 43 and 3rd St, NE curb ramp and sidewalk alignment, looking north. This stretch of sidewalk will be reconstructed.



6. Intersection of SR 43 and 3rd St, inlet (INCB-54956) by NE curb ramp.



7. Intersection of SR 43 and 3rd St, SE curb ramp and sidewalk alignment, looking south.



8. Intersection of SR 43 and 3rd St, inlet (INCB-54956) in SE quadrant.



9. Close-up of INCB-54956.



10. Intersection of SR 43 and 3rd St, SW curb ramp, looking south.



11. Intersection of SR 43 and 3rd St, inlet (INCB-54958) in SW quadrant.



12. Close-up of INCB-54958.



13. Intersection of SR 43 and 3rd St, NW corner, looking north. A new curb ramp will be installed here.



14. Intersection of SR 43 and 3rd St, inlet (INCB-54957) in NW quadrant.



15. Intersection of SR 43 and 4th St, NE curb ramp and sidewalk alignment, looking north. This section of sidewalk will be reconstructed.



16. Intersection of SR 43 and 4th St, SE curb ramp and sidewalk alignment, looking south. This section of sidewalk will be reconstructed.



17. Intersection of SR 43 and 4th St, SW curb ramp, looking north.



18. Intersection of SR 43 and 4th St, NW curb ramp, looking south.



19. Intersection of SR 43 and 4th St, inlet (INCB-54959) in NW quadrant.



20. Culvert CLV-64409, western outlet, looking east at SR 43.



21. Culvert CLV-64409, eastern outlet, looking west at SR 43.



22. Culvert CLV-64408, adjacent to SR 43 under CR W 350 S, southern outlet, looking north.



23. Culvert CLV-64408, northern outlet, looking south.



24. Culvert CLV-64407, western outlet, looking east at SR 43.



25. Culvert CLV-64407, eastern outlet, looking west at SR 43.



26. Culvert CLV-64406, western outlet, looking east at SR 43.



27. Culvert CLV-64406, eastern outlet, looking east at RR track.



28. Culvert CLV-64405, western outlet, looking east at SR 43.



29. Culvert CLV-64405, eastern outlet, looking east at RR track.



30. Intersection of SR 43 and Main St, inlets INCB-54951 (left) and INCB-54954 (right), looking west.



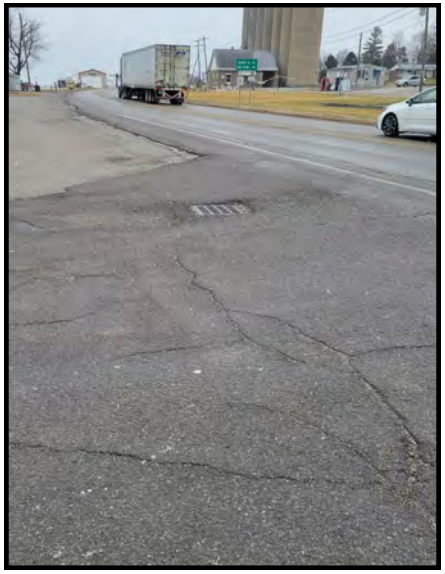
31. Intersection of SR 43 and Main St, inlet INCB-54953 (left) and INCB-54952 (right), looking north.



32. Intersection of SR 43 and Main St, inlet INCB-54952 close-up.



33. Intersection of SR 43 and Main St, inlet INCB-54961, looking west.



34. Intersection of SR 43 and Main St, inlet INCB-54960, looking north.



35. Culvert CLV-64404, western outlet, looking east at SR 43.



36. Culvert CLV-64404, eastern outlet, looking west at SR 43.



37. Culvert CLV-64403, western shoulder, looking east at SR 43 (outlet no longer visible).



38. Culvert CLV-64403, eastern outlet, looking west at SR 43.



39. Culvert CLV-64402, western outlet, looking west.



40. Culvert CLV-64402, eastern outlet, looking east at RR track.



41. Culvert CLV-64401, western outlet, looking east at SR 43.



42. Culvert CLV-64401, eastern outlet, looking west at SR 43.



43. Culvert CLV-64400, western outlet, looking east at SR 43.



44. Culvert CLV-64400, eastern outlet, looking west at SR 43.



45. Culvert CLV-64399, western outlet, looking east at SR 43.



46. Culvert CLV-64399, eastern outlet, looking west at SR 43.

PROJECT	DESIGNATION
2100235	2100235
CONTRACT	BRIDGE FILE
R-43897	N/A

KIN PROJECT INFORMATION

DESIGNATION	PROJECT DESCRIPTION
2100171	HMA OVERLAY WITH SIDEWALK AND CURB INSTALLATION

CULVERT ASSET INFORMATION

DESIGNATION	CULVERT ASSET ID
2100235	CLV-64399
2100235	CLV-64400
2100235	CLV-64401
2100235	CLV-64402
2100235	CLV-64403
2100235	CLV-64404
2100235	CLV-64405
2100235	CLV-64406
2100235	CLV-64407
2100235	CLV-64408
2100235	CLV-64409

ADDITIONAL RIGHT OF WAY
REQUIRED FOR THIS PROJECT

UPDATED PLANS
DECEMBER 15, 2023

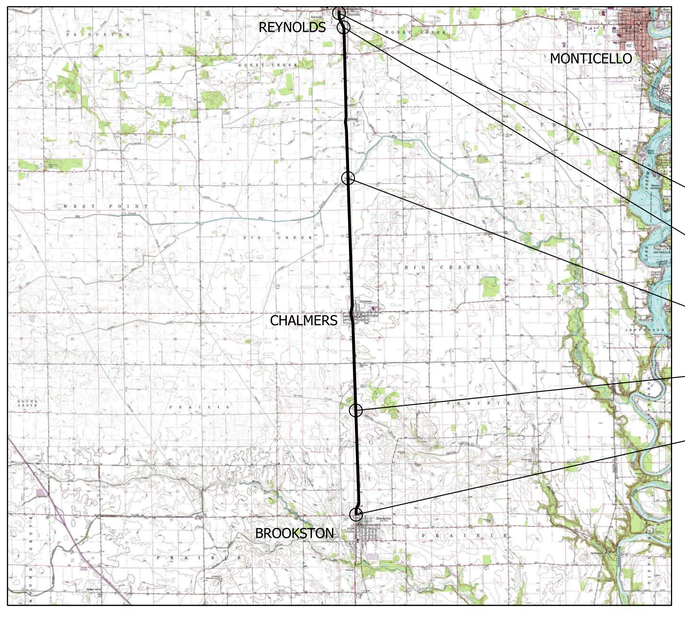
INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS

ROUTE: SR 43 FROM: RP 36+33 TO: RP 46+26

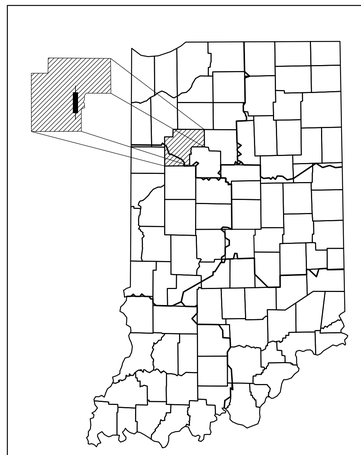
PROJECT NO. 2100235 P.E.
2100235 R/W
2100235 CONST.

HMA Overlay, Minor Structural on SR 43
Located N. Jct. SR 18 to 0.20 Miles S. of US 24/421
Sections 3, 10, 15, T25N, R4W, Section 33, T27N, R4W,
and Sections 4, 9, 16, 21, 22, 27, 28, 33, 34, T26N, R4W
Prairie, Big Creek and Honey Creek Township, White County, Indiana



Scale: 1" = 7000'
0' 3500' 7000' 14000'

TRAFFIC DATA		BROOKSTON TO CHALMERS	CHALMERS TO REYNOLDS	REYNOLDS (SUBURBAN)
A.A.D.T.	(2026)	5684 V.P.D.	4163 V.P.D.	4024 V.P.D.
A.A.D.T.	(2046)	6273 V.P.D.	4595 V.P.D.	4441 V.P.D.
D.H.V	(2046)	685 V.P.H.	445 V.P.H.	455 V.P.H.
DIRECTIONAL DISTRIBUTION		50.56%	51.27%	51.08%
TRUCKS		16.80% A.A.D.T.	20.73% A.A.D.T.	20.86% A.A.D.T.
		7.84% D.H.V.	11.81% D.H.V.	19.90% D.H.V.
DESIGN DATA				
DESIGN SPEED		35 MPH (Sta. 101+40 - 133+60 "PR-A") 55 MPH (Sta. 133+60 - 297+16 "PR-A") 40 MPH (Sta. 297+16 - 327+61 "PR-A")	55 MPH (Sta. 327+61 - 599+48 "PR-A") 45 MPH (Sta. 599+48 - 614+56 "PR-A")	35 MPH (Sta. 614+56 - 625+75 "PR-A") 25 MPH (Sta. 625+75 - 626+95.83 "PR-A")
PROJECT DESIGN CRITERIA		3R (NON-FREEWAY)	3R (NON-FREEWAY)	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION		PRINCIPAL ARTERIAL - OTHER	PRINCIPAL ARTERIAL - OTHER	PRINCIPAL ARTERIAL - OTHER
RURAL / URBAN		RURAL	RURAL	URBAN (SUBURBAN)
TERRAIN		LEVEL	LEVEL	LEVEL
ACCESS CONTROL		NONE	NONE	NONE



PROJECT LOCATION SHOWN BY
WHITE COUNTY

LATITUDE: 40°40'33.32" N LONGITUDE: 86°52'14.23" W

PAVING EXCEPTION
LENGTH: 0.062 MI.
ROADWAY LENGTH: 9.894 MI.
TOTAL LENGTH: 9.956 MI.
MAX. GRADE: 1.86 %

HUC: 051201061207
HUC: 051201061303
HUC: 051201061306
HUC: 051201061308

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

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

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE	
N/A	
DESIGNATION	
2100235	

SURVEY BOOK	SHEETS		
	1	of	132
CONTRACT	PROJECT		
R-43897	2100235		

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Title.dgn

UTILITIES

Carroll White REMC
P.O. Box599
Monticello, IN 47960
Contact: Brent Biggs
Phone: (574) 583-7161
Email: bbiggs@cwremc.coop

Comcast
720 Taylor Street
Fort Wayne, IN 46802
Contact: William Fishburn
Phone: (260) 410-3504
Email: william_fisburn@cable.comcast.com

Lumen Local DBA Brightspeed
OCM Engineering, LLC
1728 Churchman Avenue
Indianapolis, IN 46203
Contact: Mellissa Teague
Phone: (765) 656-4663
Email: Melissa.tague@brightspeed.com

Lumen National
OCM Engineering, LLC
1728 Churchman Avenue
Indianapolis, IN 46203
Contact: Justin Sharp
Phone: (317) 644-0949
Email: justin.sharp@ocmgroups.com

MCI
6835 Hillside Court
Indianapolis, IN 46250
Contact: Dennis (Rolland) Craig
Phone: (317) 498-1242
Email: Dennis.craig@verizon.com

GENERAL NOTES

All Earth Shoulders, Median Areas, Cut and Fill Slopes shall be Mulch Seeded, except where Sodding is specified.
All Existing Storm Drainage Pipes, Inlets, and Manholes shall remain unless otherwise noted.
All Disturbed Areas shall be Seeded with Seed Mixture "U" unless otherwise noted.
All Slopes are to be repaired with a minimum amount of Grading so as not to disturb existing vegetation more than necessary.

INDEX

SHEET NO.	SUBJECT
1	TITLE
2	INDEX
3	TYPICAL SECTIONS
4 - 14	MAINTENANCE OF TRAFFIC
15	GEOMETRIC TIE-UP
16 - 51	PLAN AND PROFILE
52 - 53	SUPERELEVATION DIAGRAMS
54	CONSTRUCTION DETAILS
55 - 58	CURB RAMP DETAILS
59 - 78	PAVEMENT MARKING AND TRAFFIC SIGN DETAILS
79 - 80	SUMMARY TABLES
81 - 132	CROSS SECTIONS

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

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

REVISIONS

SHEET NO.	DATE	REVISED

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

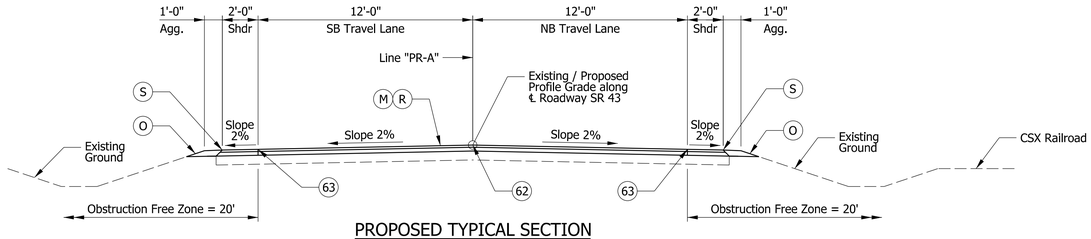
DESIGNED: DMB 11/1/22
DRAWN: MWH 11/1/22
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX
SHEET

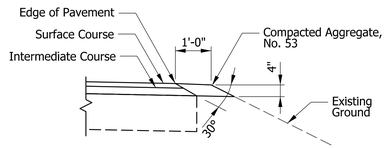
	BRIDGE FILE
	N/A
SCALE	DESIGNATION
	2100235
SURVEY BOOK	SHEETS
	2 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Index.dgn

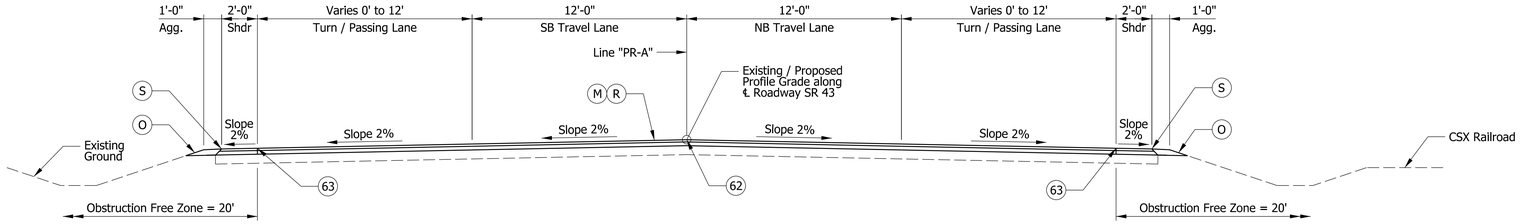


PROPOSED TYPICAL SECTION

Sta. 101+40.00 to Sta. 116+45.00 Line "PR-A"
Sta. 118+76.00 to Sta. 152+19.00 Line "PR-A"
Sta. 158+42.00 to Sta. 176+42.00 Line "PR-A"
Sta. 177+90.00 to Sta. 294+98.00 Line "PR-A"
Bridge Paving Exception Sta. 210+76.10 to Sta. 212+28.30 Line "PR-A"
Sta. 298+82.00 to Sta. 554+45.00 Line "PR-A"
Sta. 555+58.00 to Sta. 621+25.00 Line "PR-A"
Bridge Paving Exception Sta. 451+42.40 to Sta. 453+15.80 Line "PR-A"

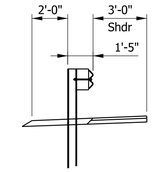


SAFETY EDGE ON HMA PAVEMENT



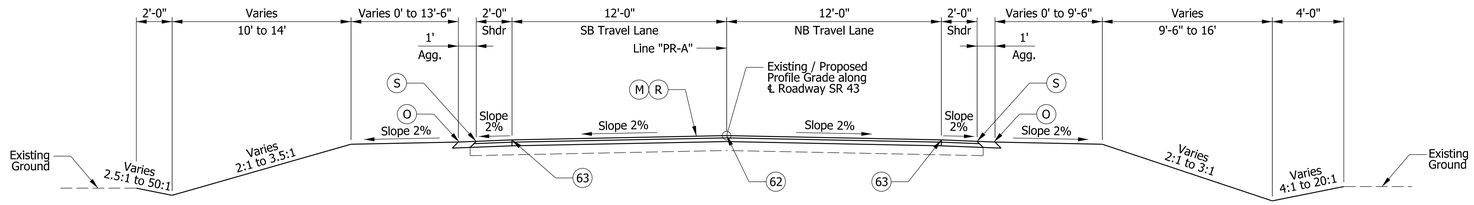
PROPOSED TYPICAL SECTION

Sta. 116+45.00 to Sta. 118+76.00 Line "PR-A"
Sta. 152+19.00 to Sta. 158+42.00 Line "PR-A"
Sta. 294+98.00 to Sta. 298+82.00 Line "PR-A"



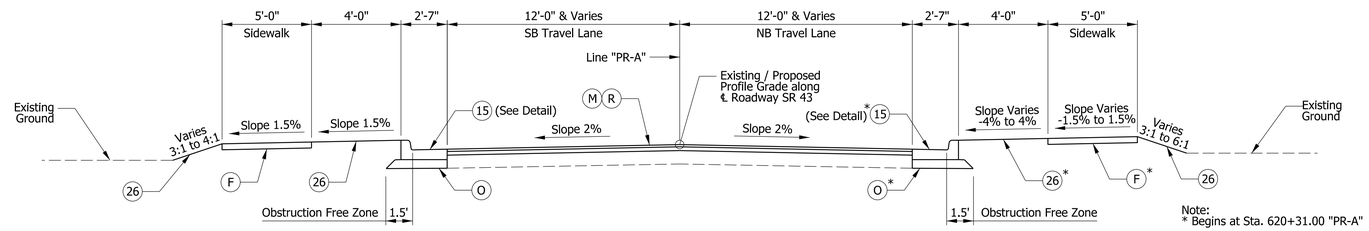
GUARDRAIL DETAIL

Sta. 207+88.50 to Sta. 210+82.25 RT Line "PR-A"
Sta. 209+57.25 to Sta. 211+07.25 LT Line "PR-A"
Sta. 211+98.25 to Sta. 213+42.00 RT Line "PR-A"
Sta. 212+22.00 to Sta. 215+09.50 LT Line "PR-A"
Sta. 448+92.25 to Sta. 451+93.50 RT Line "PR-A"
Sta. 449+80.00 to Sta. 451+48.75 LT Line "PR-A"
Sta. 452+85.00 to Sta. 455+72.50 LT Line "PR-A"
Sta. 453+10.50 to Sta. 454+35.50 RT Line "PR-A"
Sta. 520+30.50 to Sta. 531+18.00 LT Line "PR-A"
Sta. 523+33.00 to Sta. 529+39.25 RT Line "PR-A"



PROPOSED TYPICAL SECTION

Sta. 176+42.00 to Sta. 177+90.00 Line "PR-A"
Sta. 554+45.00 to Sta. 555+58.00 Line "PR-A"



Note:
* Begins at Sta. 620+31.00 "PR-A"

PROPOSED TYPICAL SECTION

Sta. 621+25.00 to Sta. 627+06.00 Line "PR-A"

LEGEND

- (F) Concrete Sidewalk
- (M) Milling, Asphalt, 4 in
- (O) Compacted Aggregate No. 53
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
  275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm
- (S) Safety Edge, Variable Depth Compacted Aggregate, No. 53
- (15) Combined Concrete Curb and Gutter
- (26) Nursery Sodding
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

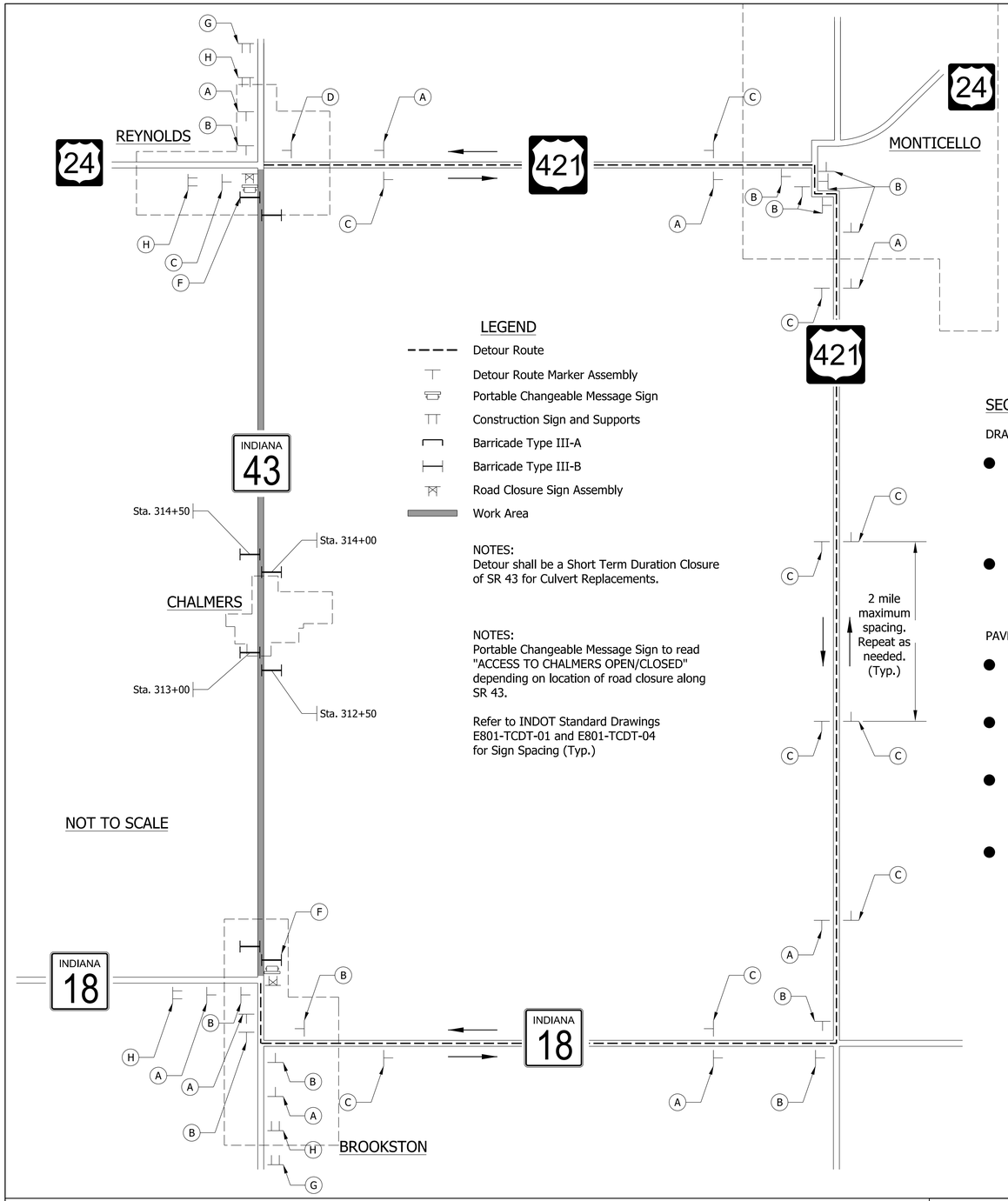
DESIGNED: DMB 11/1/22
DRAWN: MWH 11/1/22
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL
CROSS SECTIONS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1/4" = 1'-0"	2100235
SURVEY BOOK	SHEETS
	3 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Typical_01.dgn



NOT TO SCALE

LEGEND

- Detour Route
- Detour Route Marker Assembly
- Portable Changeable Message Sign
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B
- Road Closure Sign Assembly
- Work Area

NOTES:
Detour shall be a Short Term Duration Closure of SR 43 for Culvert Replacements.

NOTES:
Portable Changeable Message Sign to read "ACCESS TO CHALMERS OPEN/CLOSED" depending on location of road closure along SR 43.

Refer to INDOT Standard Drawings E801-TCDT-01 and E801-TCDT-04 for Sign Spacing (Typ.)

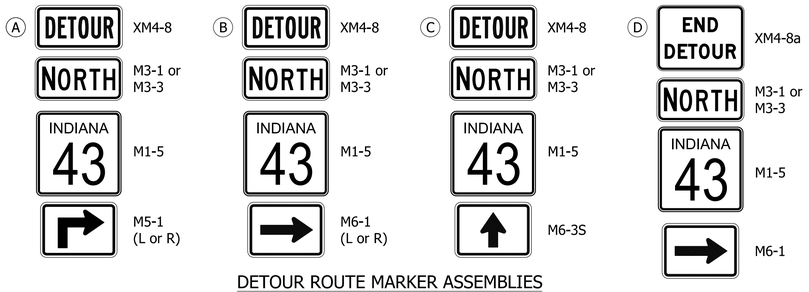
SEQUENCE OF OPERATION

DRAINAGE STRUCTURE REPLACEMENT AND SIDEWALK/CURB RAMPS IN REYNOLDS

- Eleven cross-culverts running across SR 43 are being replaced and will require a closure of traffic in both directions. Only structures with no private or public access between them may be simultaneously replaced. Sidewalk/curb work in Reynolds (Des 2100171) will also require a closure of traffic in both directions. This work shall not be constructed simultaneously with any cross-culvert replacement.
- Portable Changeable Message Signs will be deployed 2 weeks before construction begins to alert motorists of the coming detour. They will remain up during construction to indicate whether access to Chalmers is open or not.

PAVEMENT MILLING, PATCHING, AND RESURFACING WORK

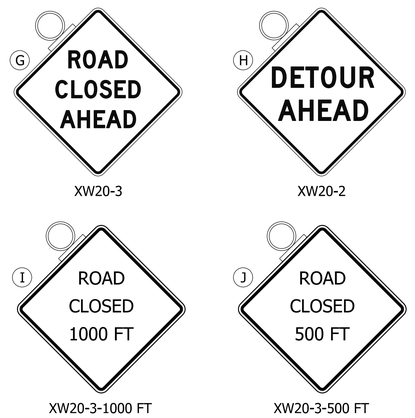
- Once the drainage structures have been replaced, the detour signage and Portable Changeable Message Signs shall be taken down in preparation for pavement milling, patching, and resurfacing along SR 43.
- During the milling, patching, and resurfacing operations, traffic along SR 43 shall be maintained by flagger control in accordance with Standard No. E 801-TCFO-01.
- A "Flagger Ahead" symbolic sign, ONE LANE ROAD AHEAD sign, and ROAD WORK AHEAD sign shall be used in each direction. This stationary signing shall be periodically retrieved and repositioned to new advance warning areas as work progresses.
- Sign legends shall be covered or turned from view when work is not in progress.



DETOUR ROUTE MARKER ASSEMBLIES



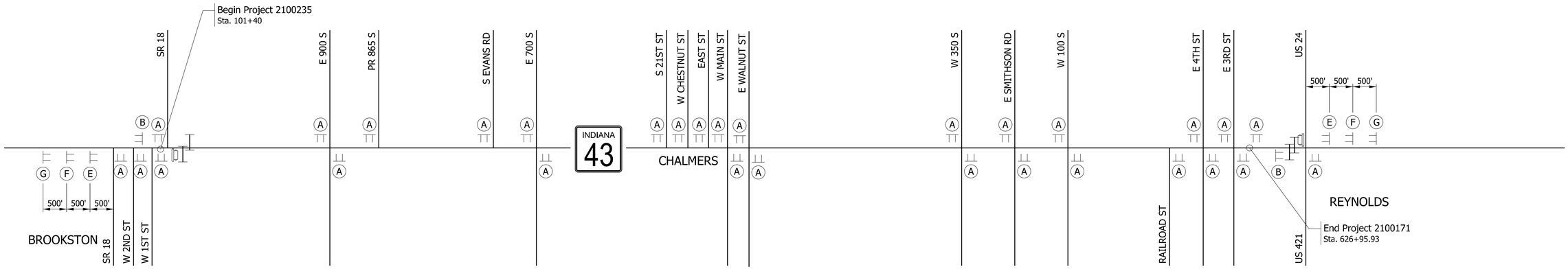
ROAD CLOSURE SIGN ASSEMBLIES



CONSTRUCTION SIGNS, TYPE A

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: MWH 2/23/23	MAINTENANCE OF TRAFFIC DETOUR PLAN	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23		SURVEY BOOK; SHEETS: 4 of 132; CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_01.dgn



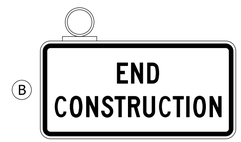
MAINTENANCE OF TRAFFIC PLAN
NOT TO SCALE

LEGEND

- Portable Changeable Message Sign
- Construction Sign and Supports
- Barricade Type III-B



XW20-1



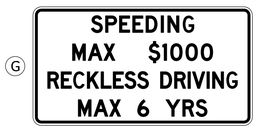
XG20-2



XW20-1



XG20-1



XW2-6-A

CONSTRUCTION SIGNS, TYPE A

NOTES:
Traffic Control during the resurrfacing work shall follow Standard Drawing No. E 801-TCFO-05.

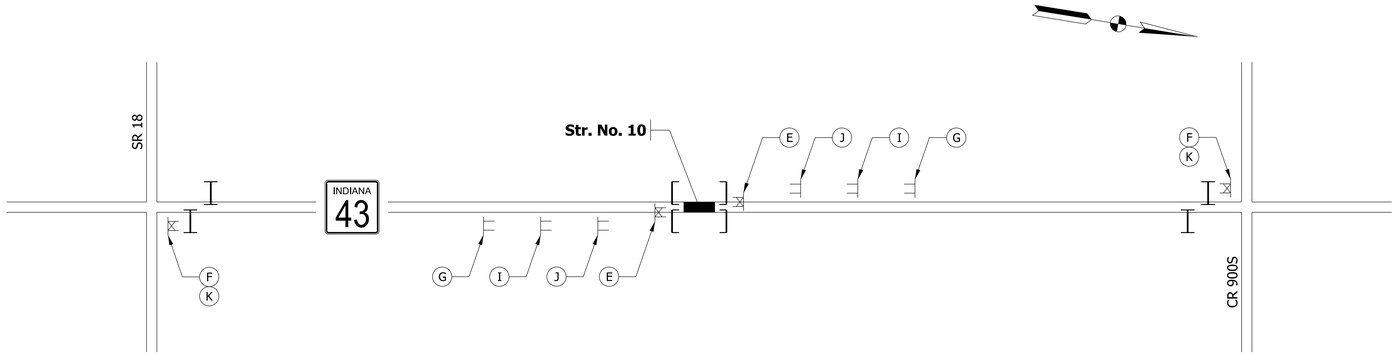
XG20-1 to read 10 MILES.

Portable Changeable Message Sign to read "ACCESS TO CHALMERS OPEN/CLOSED" depending on location of road closure along SR 43.

Refer to INDOT Standard Drawings E801-TCDT-01 and E801-TCDT-04 for Sign Spacing (Typ.)

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: MWH 2/23/23	MAINTENANCE OF TRAFFIC SR 43	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23		SURVEY BOOK; SHEETS: 5 of 132; CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_02.dgn



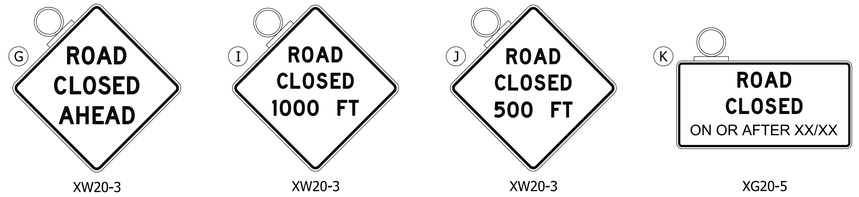
LEGEND

- Segment Under Construction
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B



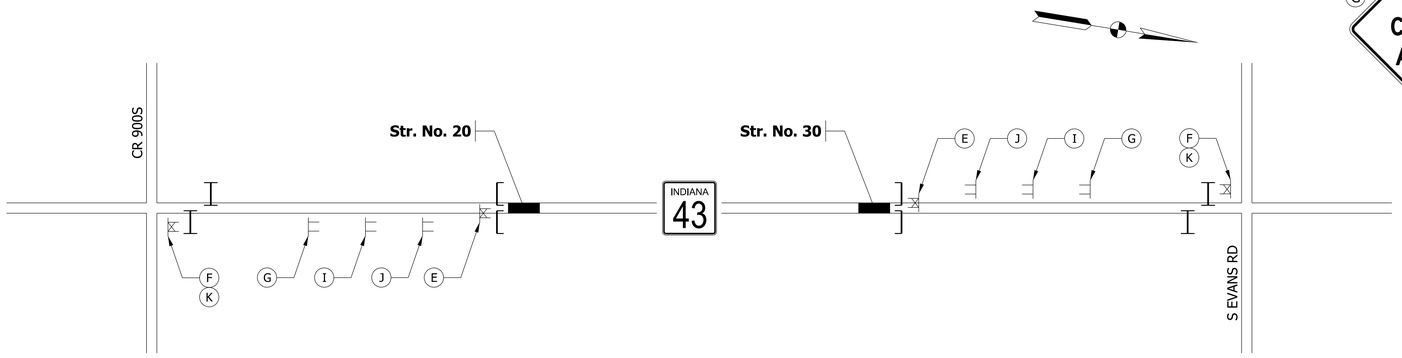
R11-2 R11-3

ROAD CLOSURE SIGN ASSEMBLIES



XW20-3 XW20-3 XW20-3 XG20-5

CONSTRUCTION SIGNS TYPE "A"



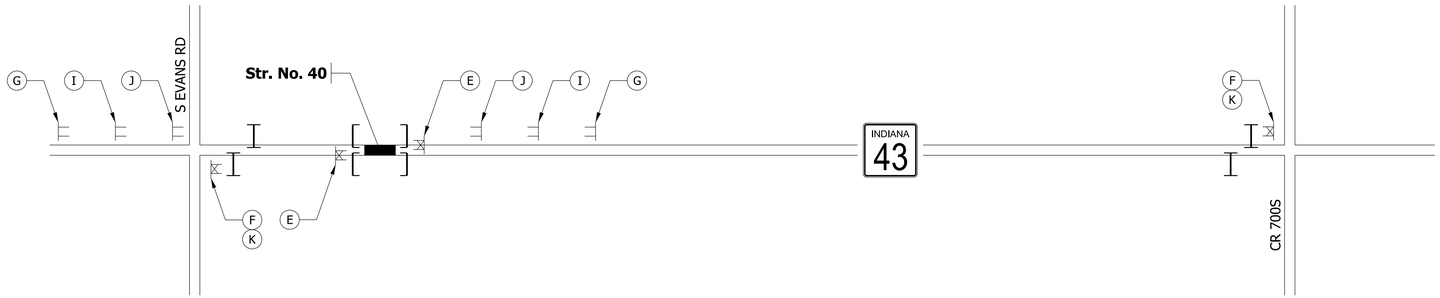
NOTES:
Detour shall be a Short Term Duration Closure of SR 43 for Culvert Replacements.

NOTES:
R11-3 to read 1 MILE at SR 18, CR 900S, Evans Rd, CR 700S, CR 600S, CR 350S, Smithson Rd and CR 100S intersections.

Advance Sign Spacing shall be 500' per Standard Drawing 801-TCDT-01. Appropriate locations of signs in field should be verified.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: MWH 2/23/23	MAINTENANCE OF TRAFFIC CLOSURE PLAN	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23		SURVEY BOOK; SHEETS: 6 of 132
			CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_03.dgn

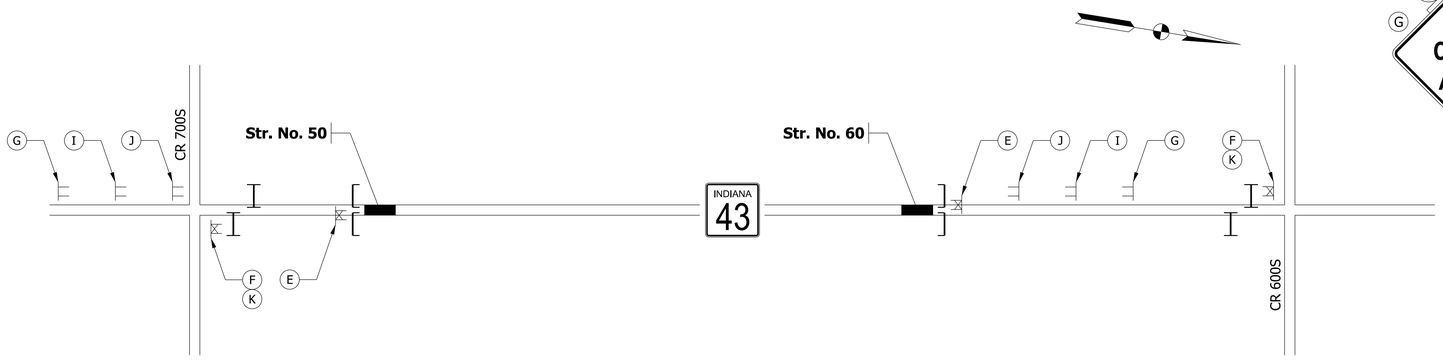


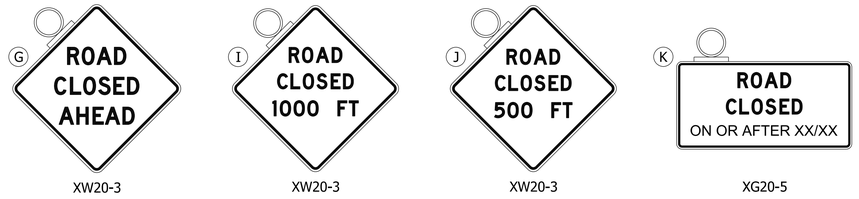
LEGEND

- Segment Under Construction
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B



ROAD CLOSURE SIGN ASSEMBLIES





CONSTRUCTION SIGNS TYPE "A"

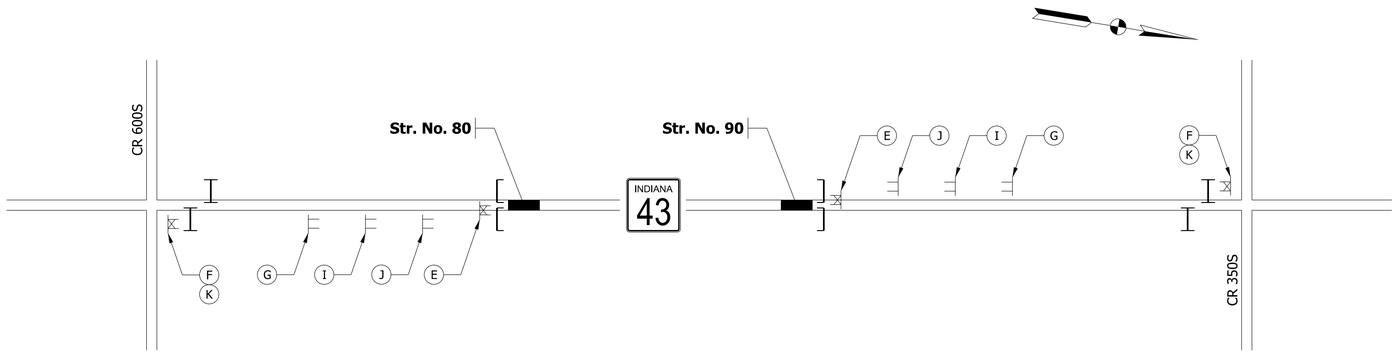
NOTES:
Detour shall be a Short Term Duration Closure of SR 43 for Culvert Replacements.

NOTES:
R11-3 to read 1 MILE at SR 18, CR 900S, Evans Rd, CR 700S, CR 600S, CR 350S, Smithson Rd and CR 100S intersections.

Advance Sign Spacing shall be 500' per Standard Drawing 801-TCDT-01. Appropriate locations of signs in field should be verified.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: MWH 2/23/23	MAINTENANCE OF TRAFFIC CLOSURE PLAN	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23		SURVEY BOOK; SHEETS: 7 of 132
			CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_04.dgn

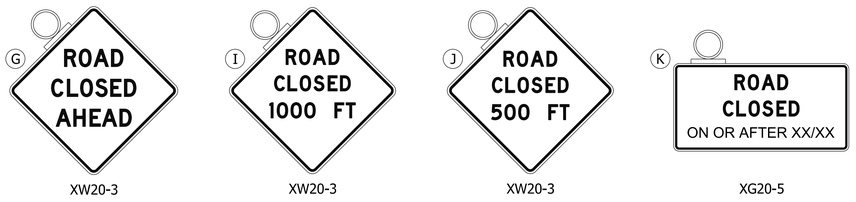


LEGEND

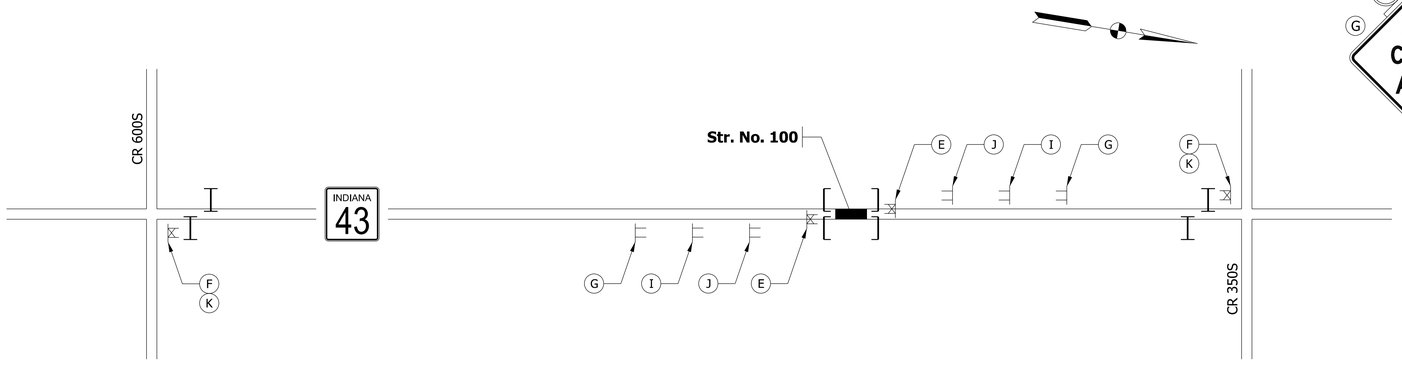
- Segment Under Construction
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B



ROAD CLOSURE SIGN ASSEMBLIES



CONSTRUCTION SIGNS TYPE "A"



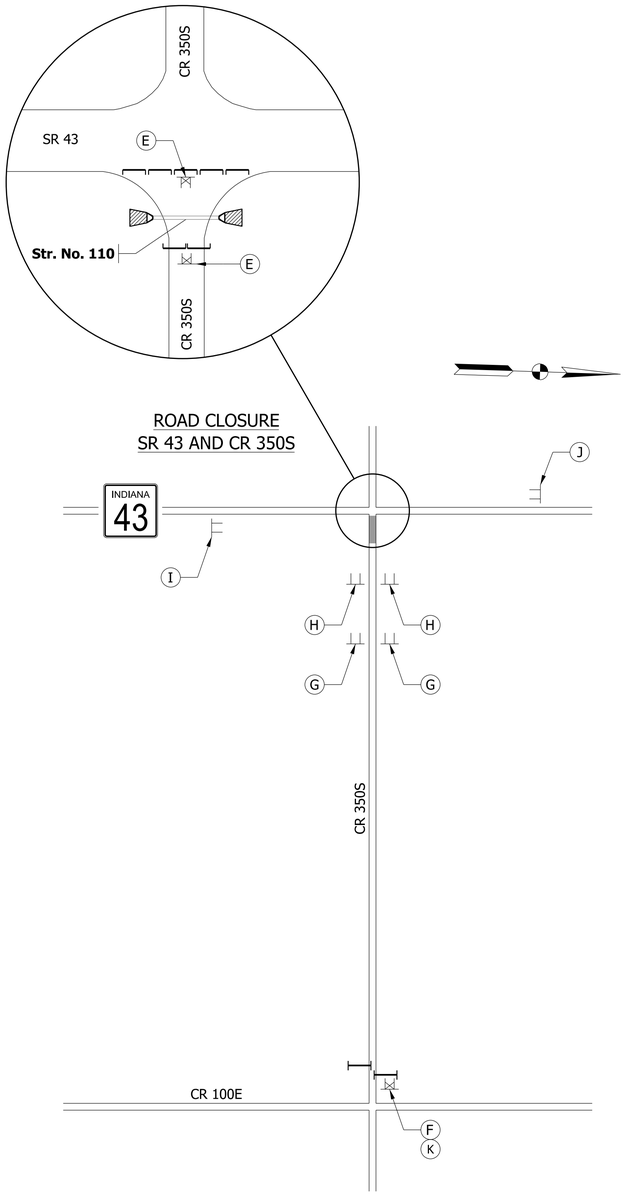
NOTES:
Detour shall be a Short Term Duration Closure of SR 43 for Culvert Replacements.

NOTES:
R11-3 to read 1 MILE at SR 18, CR 900S, Evans Rd, CR 700S, CR 600S, CR 350S, Smithson Rd and CR 100S intersections.

Advance Sign Spacing shall be 500' per Standard Drawing 801-TCDT-01. Appropriate locations of signs in field should be verified.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: MWH 2/23/23	MAINTENANCE OF TRAFFIC CLOSURE PLAN	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23		SURVEY BOOK; SHEETS: 8 of 132; CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_05.dgn

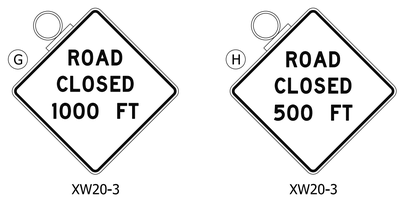


LEGEND

- Segment Under Construction
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B



ROAD CLOSURE SIGN ASSEMBLIES

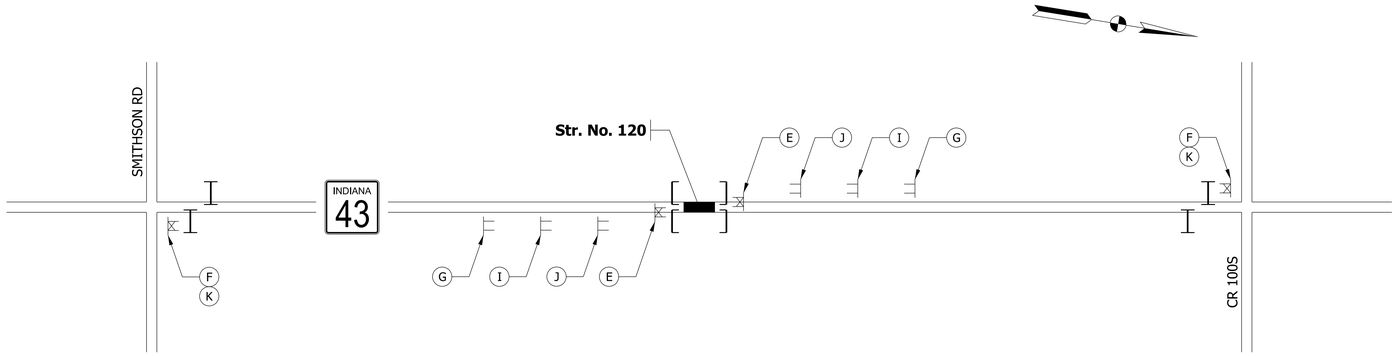




CONSTRUCTION SIGNS TYPE "A"

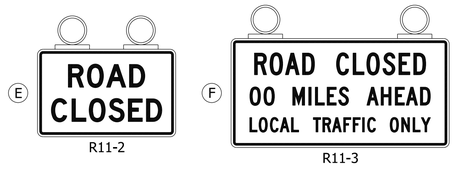
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: MWH 2/23/23	MAINTENANCE OF TRAFFIC CLOSURE PLAN	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23		SURVEY BOOK; SHEETS: 9 of 132
			CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_06.dgn



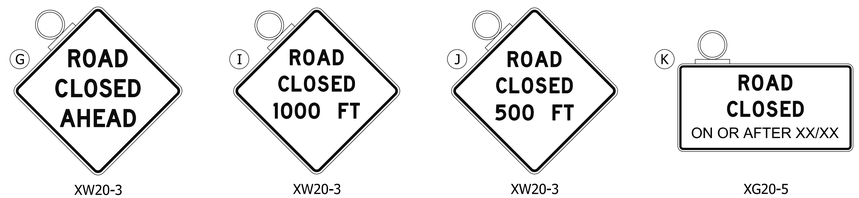
LEGEND

- Segment Under Construction
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B



R11-2 R11-3

ROAD CLOSURE SIGN ASSEMBLIES



XW20-3 XW20-3 XW20-3 XG20-5

CONSTRUCTION SIGNS TYPE "A"

SUMMARY OF QUANTITIES		
ITEM	UNIT	QUANTITY
ROAD CLOSURE SIGN ASSEMBLY	EACH	6
CONSTRUCTION SIGN TYPE "A"	EACH	52
BARRICADE TYPE III-A	LFT	84
BARRICADE TYPE III-B	LFT	144

NOTES:
Detour shall be a Short Term Duration Closure of SR 43 for Culvert Replacements.

NOTES:
R11-3 to read 1 MILE at SR 18, CR 900S, Evans Rd, CR 700S, CR 600S, CR 350S, Smithson Rd and CR 100S intersections.

Advance Sign Spacing shall be 500' per Standard Drawing 801-TCDT-01. Appropriate locations of signs in field should be verified.

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

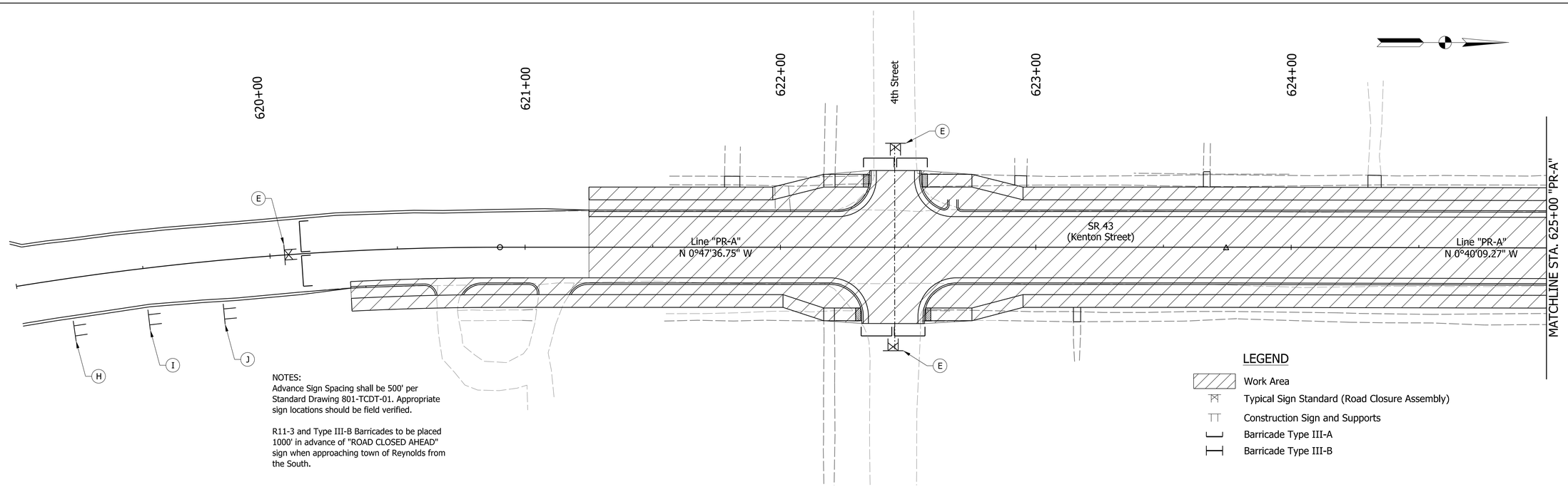
DESIGNED: DMB 2/22/23 | DRAWN: MWH 2/23/23
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
CLOSURE PLAN

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
NO SCALE	2100235
SURVEY BOOK	SHEETS
	10 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_07.dgn

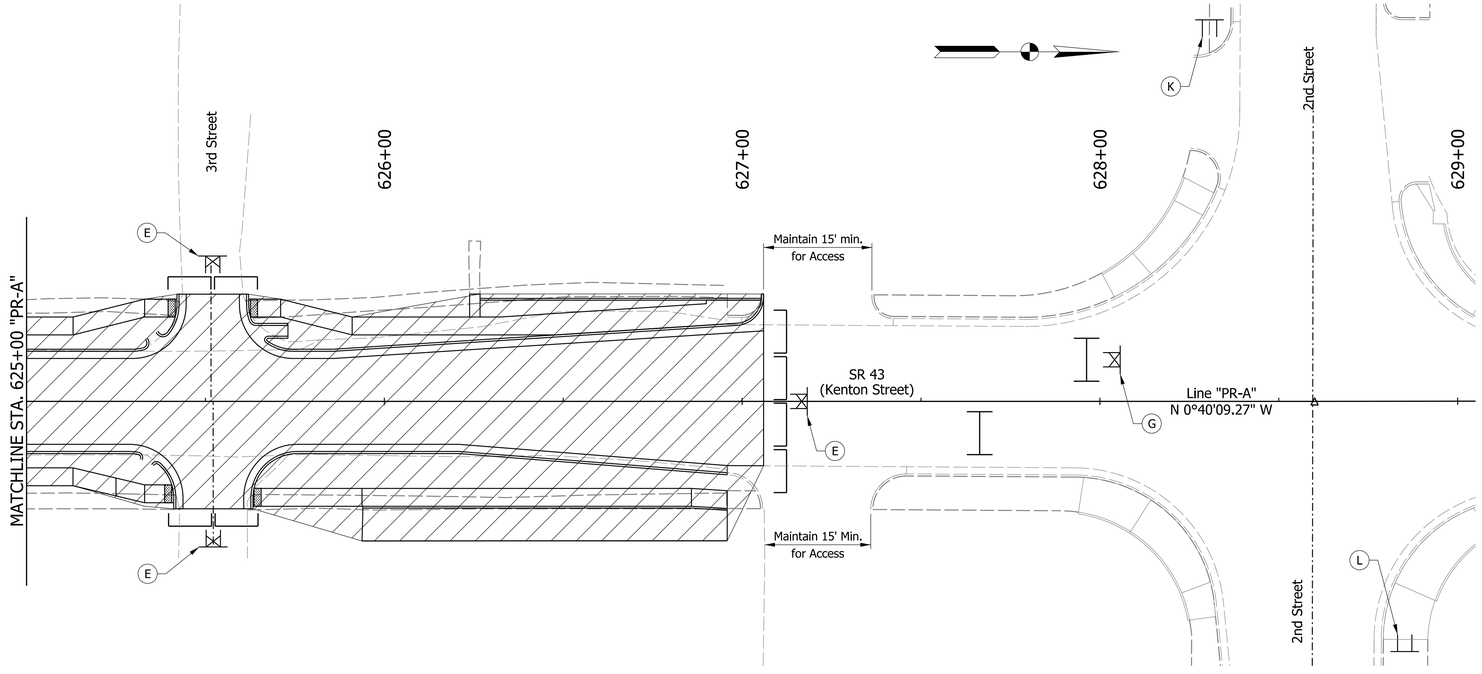


NOTES:
Advance Sign Spacing shall be 500' per Standard Drawing 801-TCDT-01. Appropriate sign locations should be field verified.

R11-3 and Type III-B Barricades to be placed 1000' in advance of "ROAD CLOSED AHEAD" sign when approaching town of Reynolds from the South.

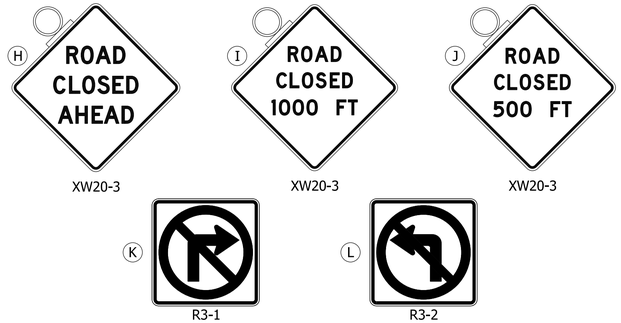
LEGEND

- Work Area
- Typical Sign Standard (Road Closure Assembly)
- Construction Sign and Supports
- Barricade Type III-A
- Barricade Type III-B





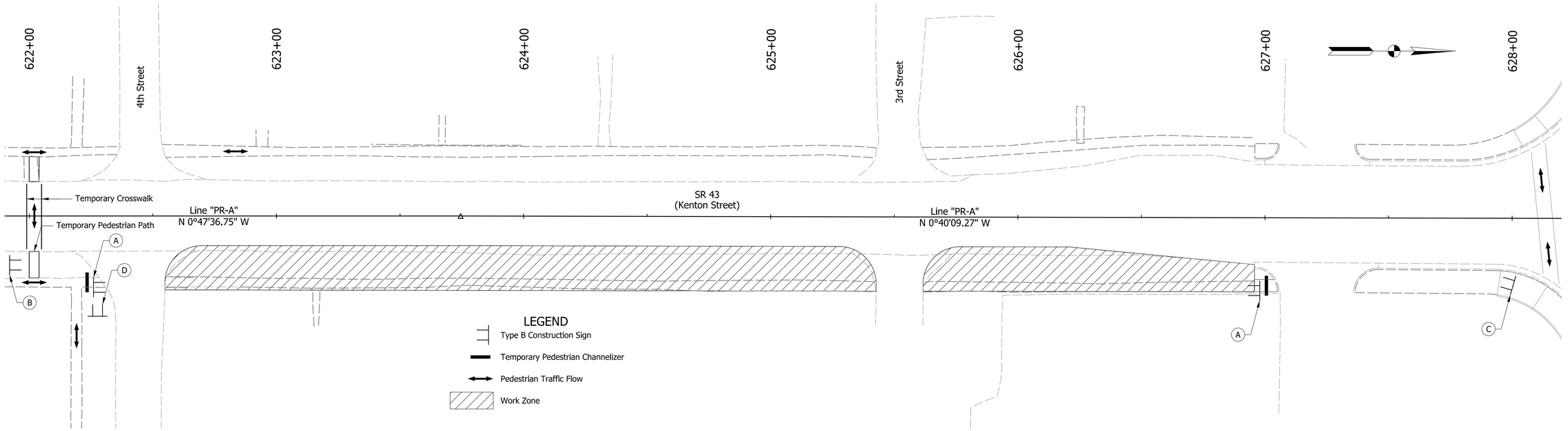
ROAD CLOSURE SIGN ASSEMBLIES



CONSTRUCTION SIGNS TYPE "A"

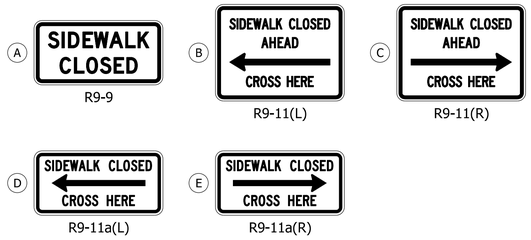
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 2/22/23	DRAWN: ESC 2/23/23		SCALE: NO SCALE / DESIGNATION: 2100235
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23	MAINTENANCE OF TRAFFIC ROAD CLOSURE	SURVEY BOOK / SHEETS: 11 of 132
			CONTRACT: R-43897 / PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht MOT_08.dgn



SUMMARY OF QUANTITIES - PEDESTRIAN MAINTENANCE OF TRAFFIC

ITEM	UNIT	QUANTITY
TEMPORARY PAVEMENT MARKING, REMOVABLE, 6 INCH	LFT	120
CONSTRUCTION SIGN, TYPE "B"	EACH	8
TEMPORARY ACCESSIBLE PEDESTRIAN PATH	SYS	42
TEMPORARY PEDESTRIAN CHANNELIZER	LFT	20



CONSTRUCTION SIGNS TYPE "B"

GENERAL NOTES FOR SIDEWALK CLOSURE

1. LIMIT CURB RAMP WORK TO ONE CORNER OF AN INTERSECTION AT A TIME TO ELIMINATE DISRUPTION TO MAINTENANCE OF TRAFFIC.
2. TEMPORARY TRAFFIC CONTROL ITEM LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE APPROVED BY ENGINEER FOR EACH QUADRANT CLOSURE. LAYOUT SHOWN SHALL BE USED AT EACH QUADRANT OF LISTED INTERSECTIONS.
3. DETECTABLE BARRIERS SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE CLOSED SIDEWALK.
4. SIDEWALK CLOSURES SHALL BE LIMITED TO SEVEN DAYS TO MINIMIZE DISRUPTION TO PEDESTRIAN TRAFFIC.
5. BARRICADES SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE CLOSED SIDEWALK.
6. WORK SHALL BE PERFORMED IN A MANNER WHICH MINIMIZES IMPACTS TO BUSINESSES CAUSED BY THE SIDEWALK CLOSURE.
7. FLAGGER OPERATIONS SHALL BE IN ACCORDANCE WITH STD. DWG. E801-TCFO.
8. TRAFFIC CONTROL DEVICES FOR VEHICLE TRAFFIC ARE NOT SHOWN BUT SHALL BE USED IN ACCORDANCE WITH THE IMUTCD AND INDOT STANDARD DRAWINGS.
9. CONTRACTOR SHALL USE PEDESTRIAN RAILING SYSTEM, LONGITUDINAL PEDESTRIAN BARRIER, OR EQUIVALENT DELINEATOR AS APPROVED BY THE ENGINEER FOR PEDESTRIAN CHANNELIZER. DIVERTED PATHWAY SHALL BE A MINIMUM OF 5' IN WIDTH.

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

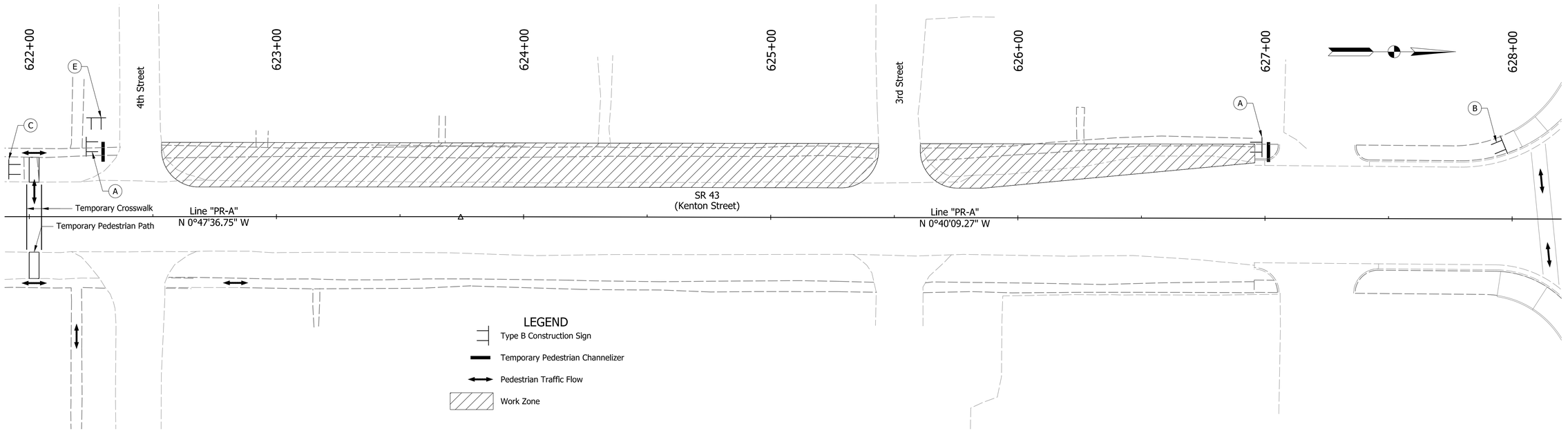
DESIGNED: DMB 2/22/23 | DRAWN: ESC 2/23/23
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

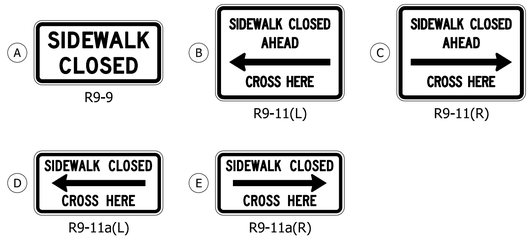
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PEDESTRIAN MOT - PHASE 1

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 20'	2100235
SURVEY BOOK	SHEETS
	12 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PED MOT_20_01.dgn





CONSTRUCTION SIGNS TYPE "B"

GENERAL NOTES FOR SIDEWALK CLOSURE

1. LIMIT CURB RAMP WORK TO ONE CORNER OF AN INTERSECTION AT A TIME TO ELIMINATE DISRUPTION TO MAINTENANCE OF TRAFFIC.
2. TEMPORARY TRAFFIC CONTROL ITEM LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE APPROVED BY ENGINEER FOR EACH QUADRANT CLOSURE. LAYOUT SHOWN SHALL BE USED AT EACH QUADRANT OF LISTED INTERSECTIONS.
3. DETECTABLE BARRIERS SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE CLOSED SIDEWALK.
4. SIDEWALK CLOSURES SHALL BE LIMITED TO SEVEN DAYS TO MINIMIZE DISRUPTION TO PEDESTRIAN TRAFFIC.
5. BARRICADES SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE CLOSED SIDEWALK.
6. WORK SHALL BE PERFORMED IN A MANNER WHICH MINIMIZES IMPACTS TO BUSINESSES CAUSED BY THE SIDEWALK CLOSURE.
7. FLAGGER OPERATIONS SHALL BE IN ACCORDANCE WITH STD. DWG. E801-TCFO.
8. TRAFFIC CONTROL DEVICES FOR VEHICLE TRAFFIC ARE NOT SHOWN BUT SHALL BE USED IN ACCORDANCE WITH THE IMUTCD AND INDOT STANDARD DRAWINGS.
9. CONTRACTOR SHALL USE PEDESTRIAN RAILING SYSTEM, LONGITUDINAL PEDESTRIAN BARRIER, OR EQUIVALENT DELINEATOR AS APPROVED BY THE ENGINEER FOR PEDESTRIAN CHANNELIZER. DIVERTED PATHWAY SHALL BE A MINIMUM OF 5' IN WIDTH.

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

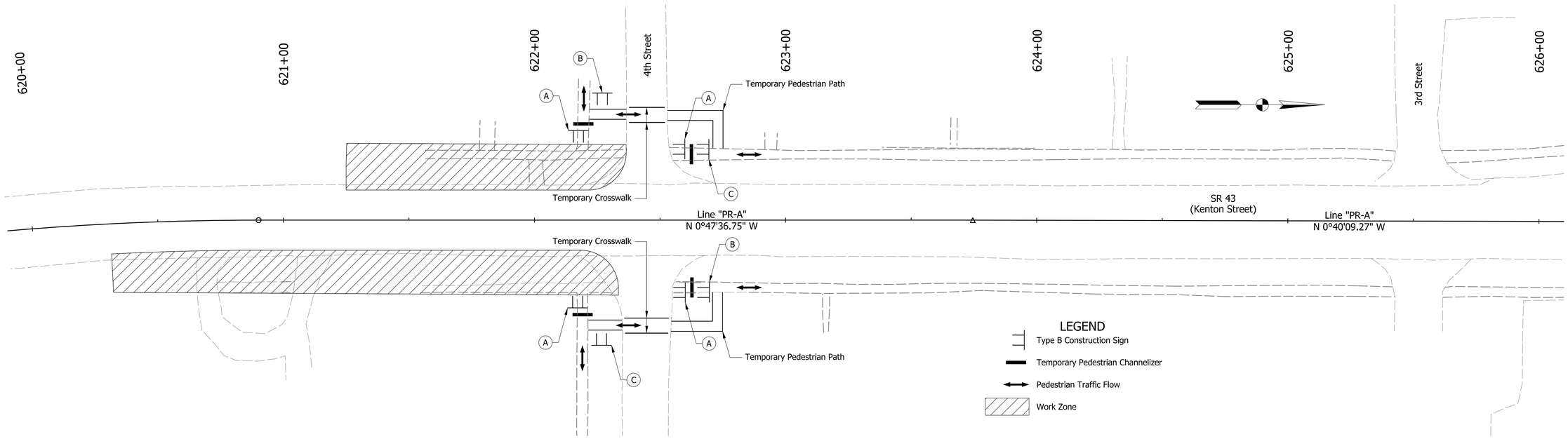
DESIGNED: DMB 2/22/23 | DRAWN: ESC 2/23/23
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

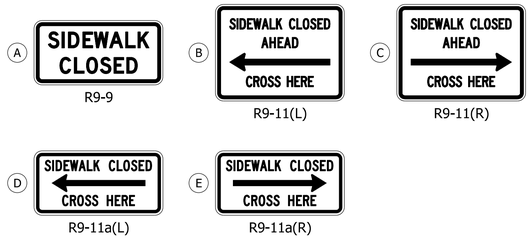
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PEDESTRIAN MOT - PHASE 2

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 20'	2100235
SURVEY BOOK	SHEETS
	13 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PED MOT_20_02.dgn





CONSTRUCTION SIGNS TYPE "B"

GENERAL NOTES FOR SIDEWALK CLOSURE

1. LIMIT CURB RAMP WORK TO ONE CORNER OF AN INTERSECTION AT A TIME TO ELIMINATE DISRUPTION TO MAINTENANCE OF TRAFFIC.
2. TEMPORARY TRAFFIC CONTROL ITEM LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE APPROVED BY ENGINEER FOR EACH QUADRANT CLOSURE. LAYOUT SHOWN SHALL BE USED AT EACH QUADRANT OF LISTED INTERSECTIONS.
3. DETECTABLE BARRIERS SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE CLOSED SIDEWALK.
4. SIDEWALK CLOSURES SHALL BE LIMITED TO SEVEN DAYS TO MINIMIZE DISRUPTION TO PEDESTRIAN TRAFFIC.
5. BARRICADES SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE CLOSED SIDEWALK.
6. WORK SHALL BE PERFORMED IN A MANNER WHICH MINIMIZES IMPACTS TO BUSINESSES CAUSED BY THE SIDEWALK CLOSURE.
7. FLAGGER OPERATIONS SHALL BE IN ACCORDANCE WITH STD. DWG. E801-TCFO.
8. TRAFFIC CONTROL DEVICES FOR VEHICLE TRAFFIC ARE NOT SHOWN BUT SHALL BE USED IN ACCORDANCE WITH THE IMUTCD AND INDOT STANDARD DRAWINGS.
9. CONTRACTOR SHALL USE PEDESTRIAN RAILING SYSTEM, LONGITUDINAL PEDESTRIAN BARRIER, OR EQUIVALENT DELINEATOR AS APPROVED BY THE ENGINEER FOR PEDESTRIAN CHANNELIZER. DIVERTED PATHWAY SHALL BE A MINIMUM OF 5' IN WIDTH.

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

DESIGNED: DMB 2/22/23 | DRAWN: ESC 2/23/23

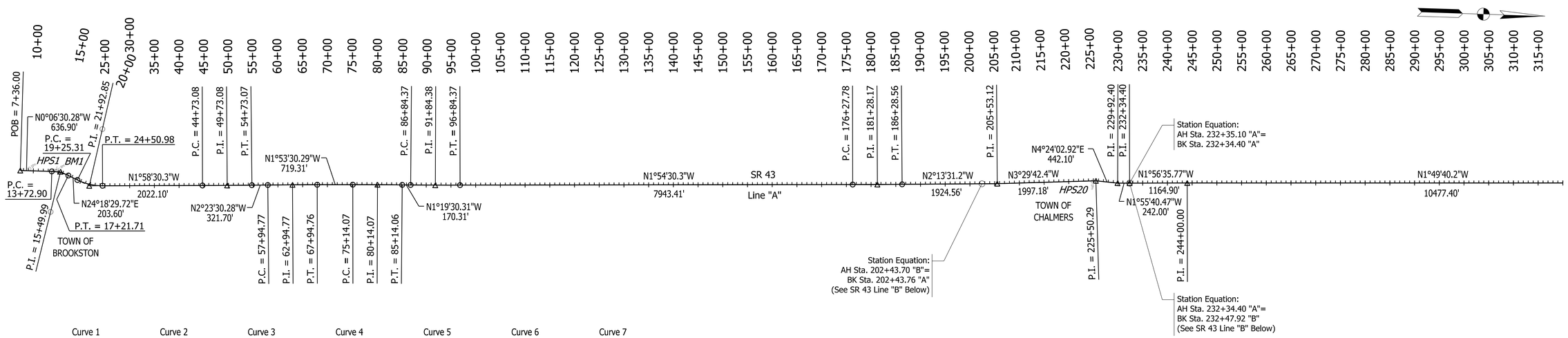
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PEDESTRIAN MOT - PHASE 3

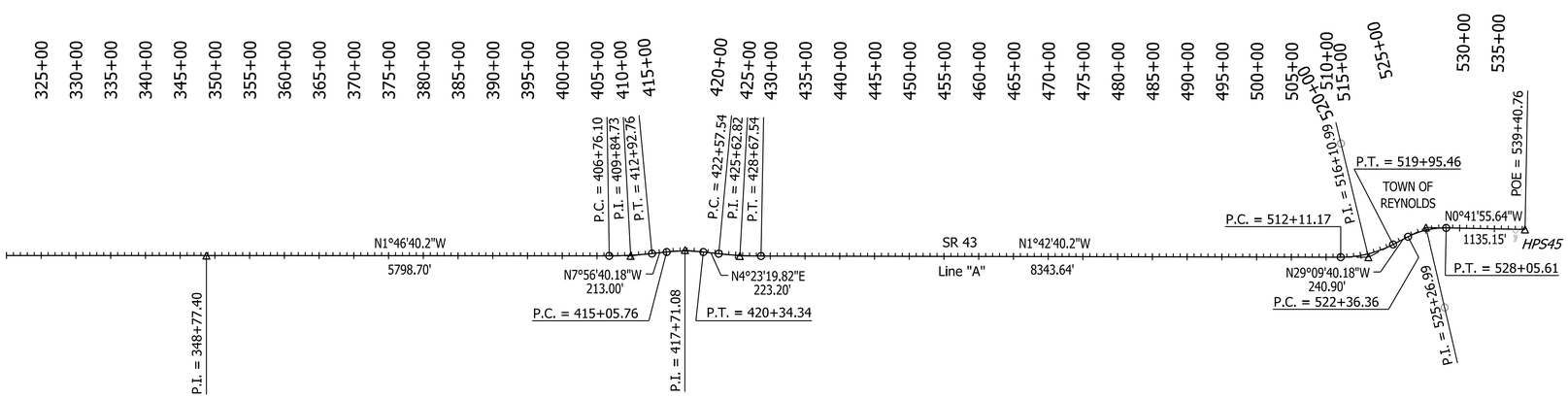
	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 20'	2100235
SURVEY BOOK	SHEETS
	14 of 132
CONTRACT	PROJECT
R-43897	2100235

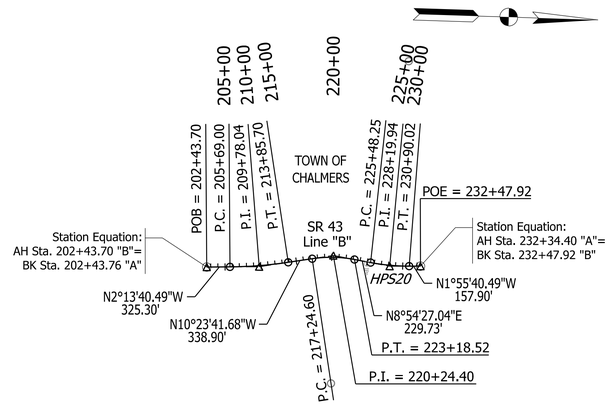
I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PED MOT_20_03.dgn



Curve 1	Curve 2	Curve 3	Curve 4	Curve 5	Curve 6	Curve 7
PI Sta. 15+49.99 "A"	PI Sta. 21+92.85 "A"	PI Sta. 49+73.08 "A"	PI Sta. 62+94.77 "A"	PI Sta. 80+14.07 "A"	PI Sta. 91+84.38 "A"	PI Sta. 181+28.17 "A"
R 818.511'	R 1145.916'	R 137509.260'	R 114591.000'	R 101110.240'	R 98221.370'	R 180934.100'
L 348.81'	L 525.67'	L 1000.00'	L 1000.00'	L 999.99'	L 1000.00'	L 1000.78'
T 177.09'	T 267.54'	T 500.00'	T 500.00'	T 500.00'	T 500.00'	T 500.39'
Delta 24°25'00.0"	Delta 26°17'00.0"	Delta 0°25'00.0"	Delta 0°30'00.0"	Delta 0°34'00.0"	Delta 0°35'00.0"	Delta 0°19'00.9"
Dc 7°00'00.00"	Dc 4°59'59.99"	Dc 0°02'30.00"	Dc 0°03'00.00"	Dc 0°03'24.00"	Dc 0°03'30.00"	Dc 0°01'54.00"

BENCHMARK DATA:
BM 1: COTTON SPINDLE IN EAST FACE OF WOOD POST, WEST SIDE OF SIDEWALK AND ON THE WEST SIDE OF SR 43.
STA. 14+53.99 "A" 40.48' LT., EL. 687.38



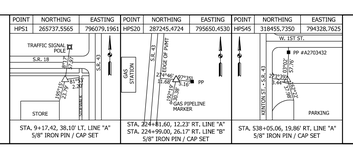


Curve 8	Curve 9	Curve 10	Curve 11	Curve 12
PI Sta. 409+84.73 "A"	PI Sta. 417+71.08 "A"	PI Sta. 425+62.82 "A"	PI Sta. 516+10.99 "A"	PI Sta. 525+26.99 "A"
R 5729.580'	R 2455.538'	R 5729.580'	R 1637.020'	R 1145.916'
L 616.67'	L 528.57'	L 610.00'	L 784.26'	L 569.25'
T 308.63'	T 265.31'	T 305.29'	T 399.82'	T 290.63'
Delta 6°10'00.0"	Delta 12°20'00.0"	Delta 6°06'00.0"	Delta 27°27'00.0"	Delta 28°27'44.5"
Dc 1°00'00.00"	Dc 2°19'59.98"	Dc 1°00'00.00"	Dc 3°30'00.02"	Dc 4°59'59.99"

Curve B1	Curve B2	Curve B3
PI Sta. 209+78.04 "B"	PI Sta. 220+24.40 "B"	PI Sta. 228+19.94 "B"
R 5729.580'	R 1762.950'	R 2864.790'
L 816.700'	L 593.922'	L 541.771'
T 409.043'	T 299.802'	T 271.696'
Delta 8°10'01.2"	Delta 19°18'08.7"	Delta 10°50'07.5"
Dc 1°00'00.00"	Dc 3°14'59.98"	Dc 2°00'00.00"

NOTE TO REVIEWER:
Geometric Ties to be finalized at a later Submittal.

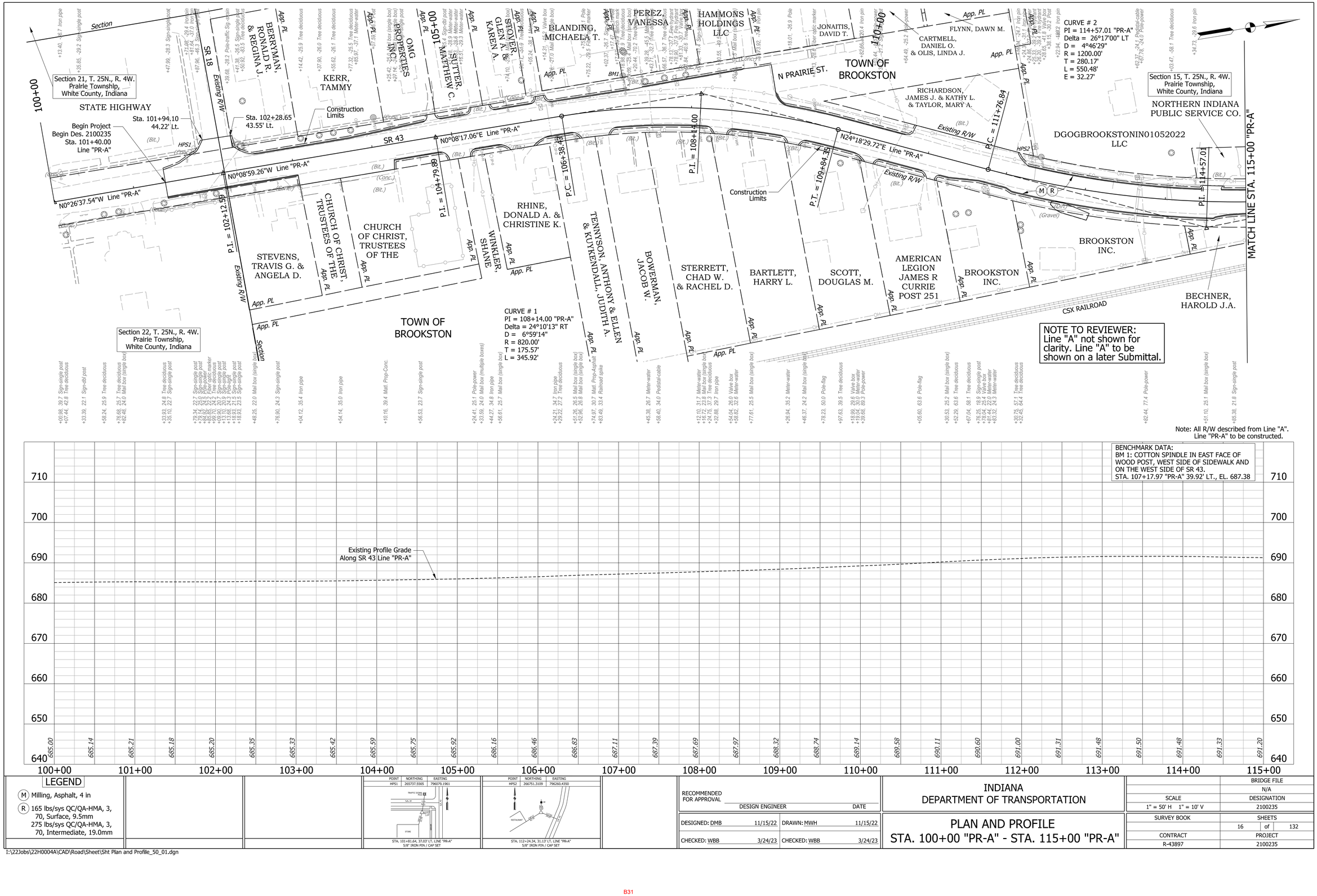
Note: All R/W described from Line "A". Line "PR-A" to be constructed.



RECOMMENDED FOR APPROVAL		INDIANA DEPARTMENT OF TRANSPORTATION	
DESIGN ENGINEER	DATE		
DESIGNED: DMB	8/18/23	DRAWN: MWH	8/18/23
CHECKED: WBB	8/18/23	CHECKED: WBB	8/18/23
		GEOMETRIC TIE-UP	

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 1000'	2100235
SURVEY BOOK	SHEETS
	15 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht GeomTies_01.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS1	260737.5565	796075.1961

STA. 101+81.64, 37.03' LT, LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS2	260751.3109	796300.4350

STA. 112+24.34, 31.13' LT, LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

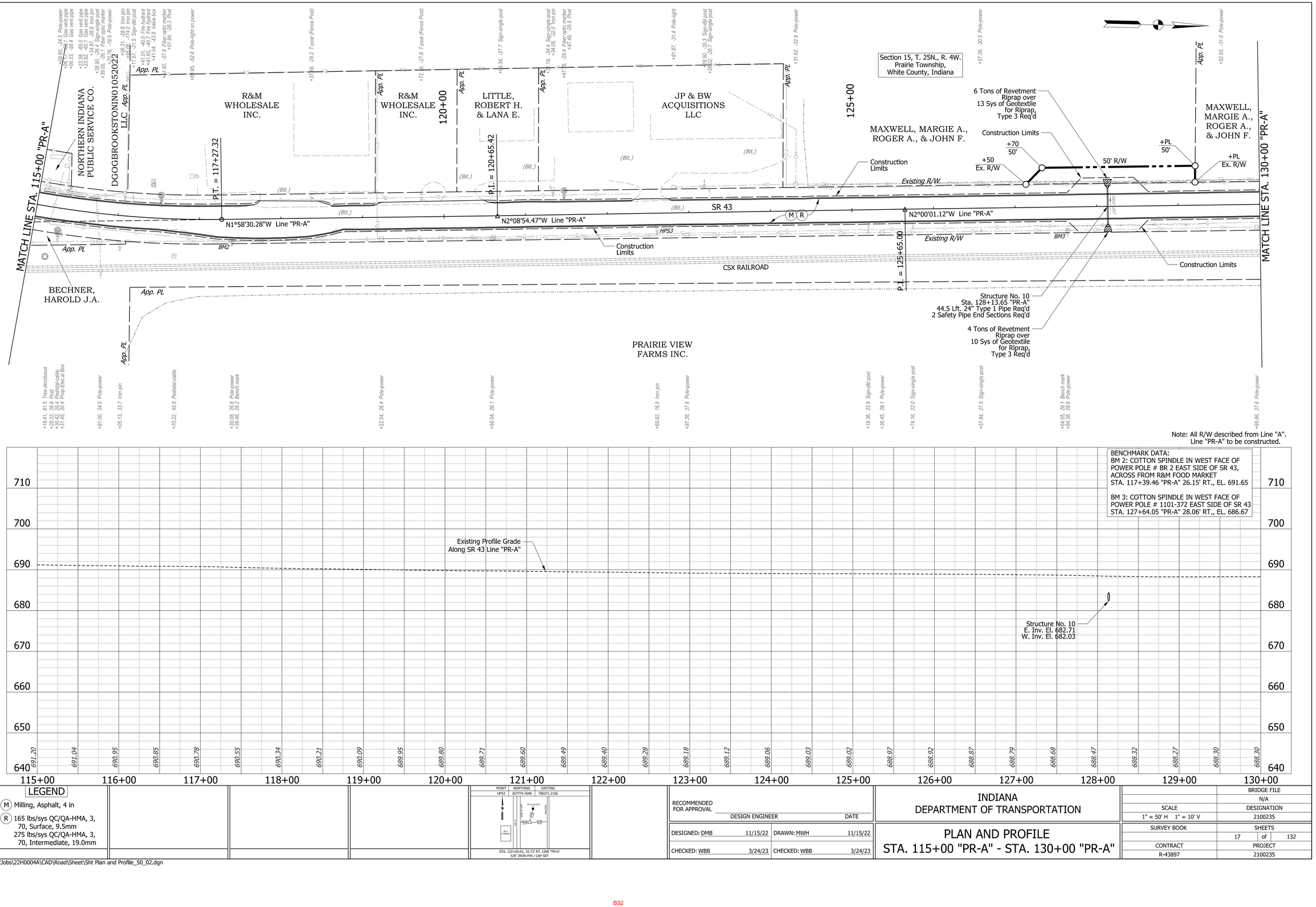
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 100+00 "PR-A" - STA. 115+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	16 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_01.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS3	26777N.7648	796371.2156

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER _____ DATE _____

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

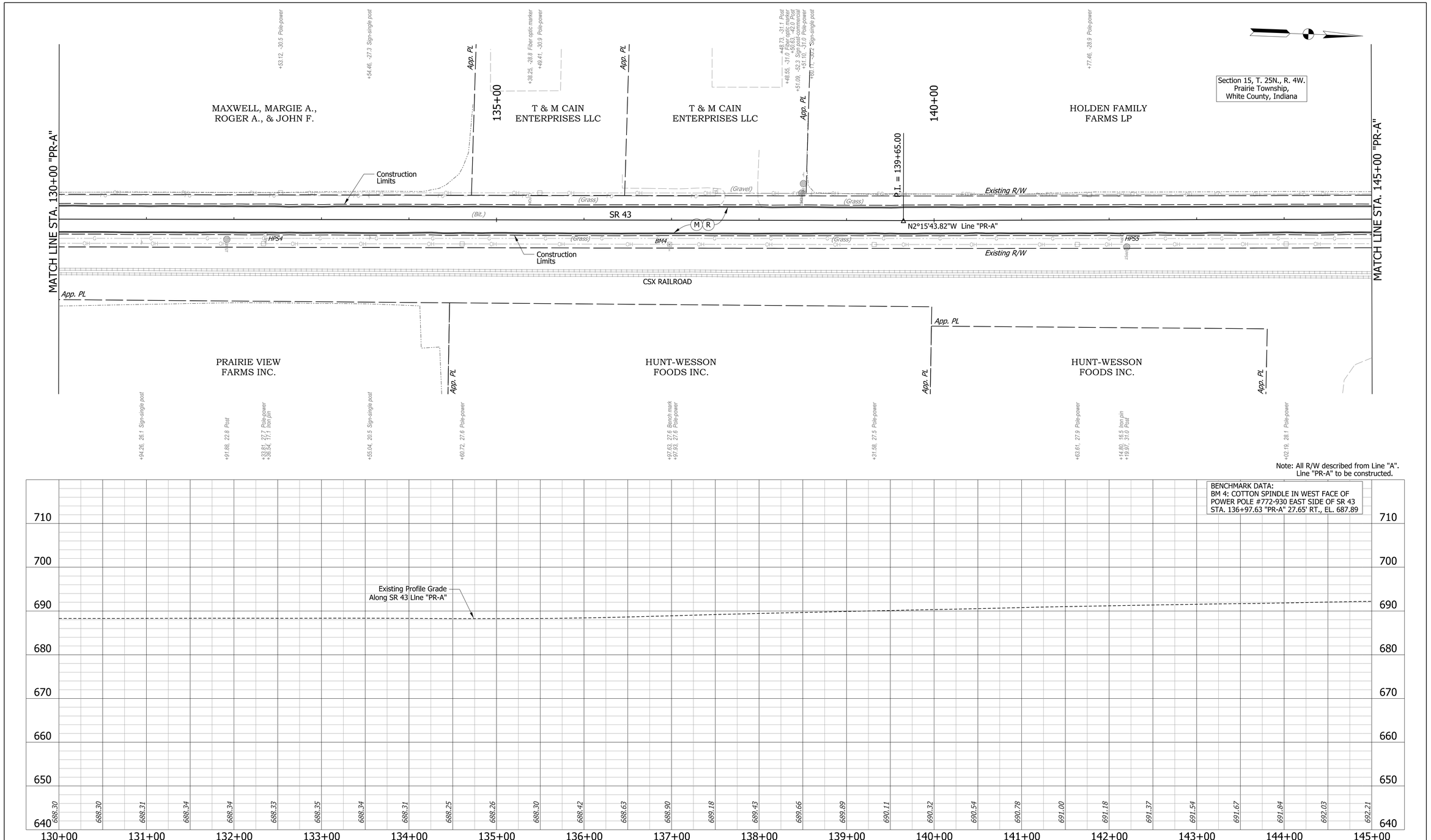
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 115+00 "PR-A" - STA. 130+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	17 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_02.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS4	268749.8173	796336.5443

STA. 132+36.54, 17.09' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS5	269727.4934	796300.6965

STA. 142+14.80, 16.53' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

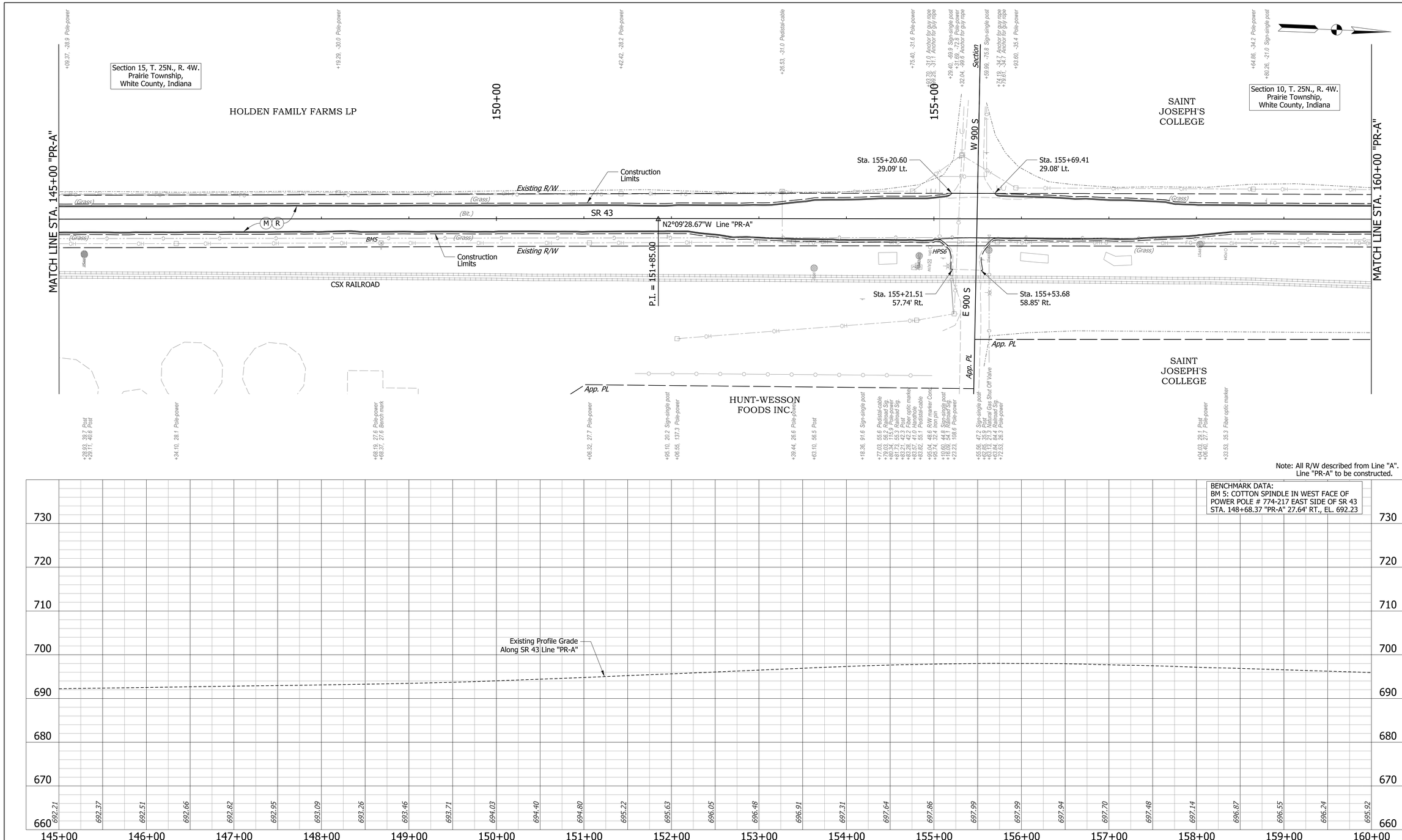
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 130+00 "PR-A" - STA. 145+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	18 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_03.dgn

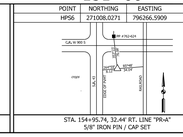


Note: All R/W described from Line "A".
Line "PR-A" to be constructed.

LEGEND

- (M) Milling, Asphalt, 4 in
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
  275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS6	271008.0273	796366.5909



STA. 154+95.74, 32.44' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

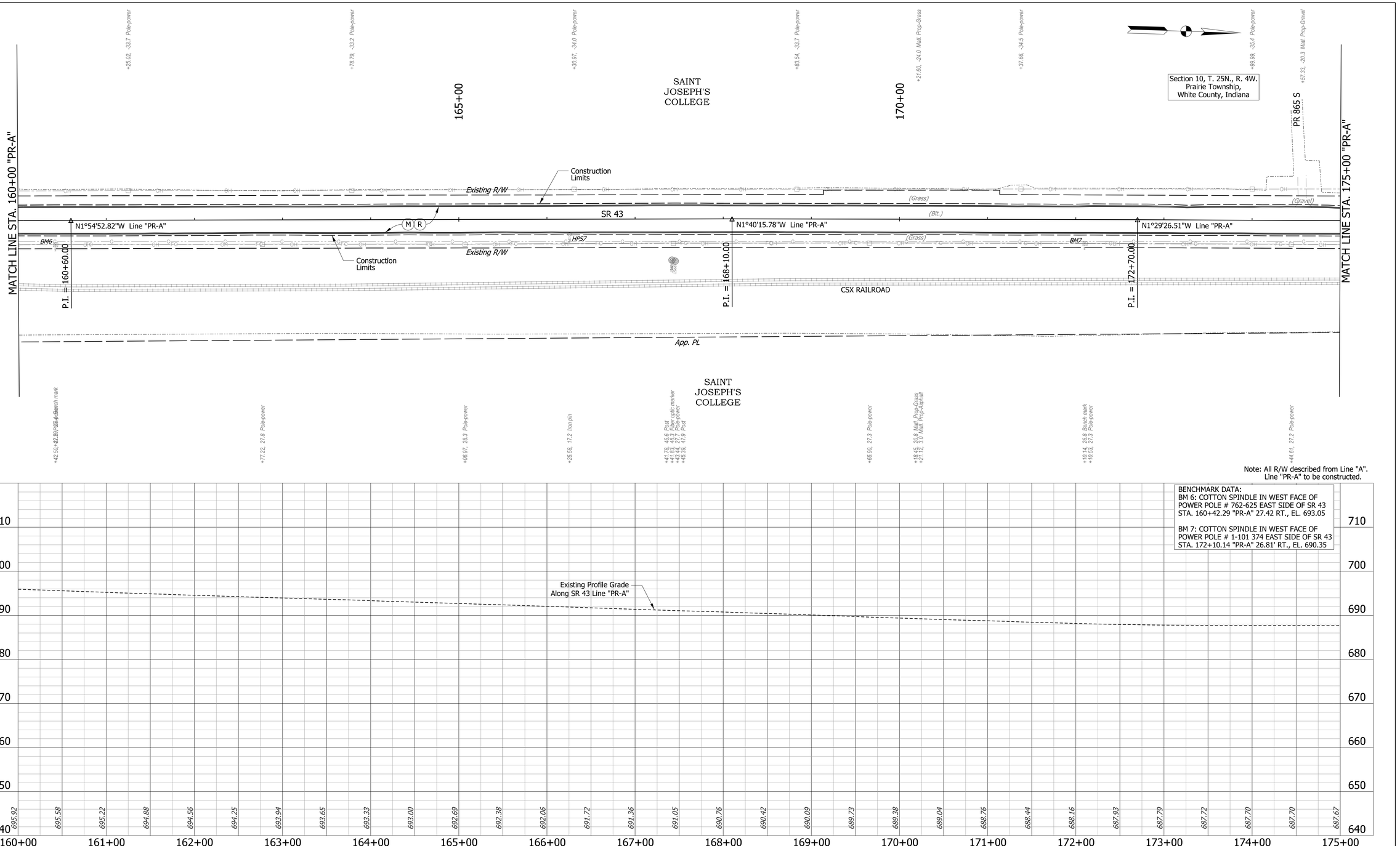
DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 145+00 "PR-A" - STA. 160+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	19 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_04.dgn



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

BENCHMARK DATA:
BM 6: COTTON SPINDLE IN WEST FACE OF POWER POLE # 762-625 EAST SIDE OF SR 43
STA. 160+42.29 "PR-A" 27.42 RT., EL. 693.05

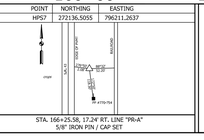
BM 7: COTTON SPINDLE IN WEST FACE OF POWER POLE # 1-101 374 EAST SIDE OF SR 43
STA. 172+10.14 "PR-A" 26.81' RT., EL. 690.35

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS7	272136.5055	796311.2637



RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

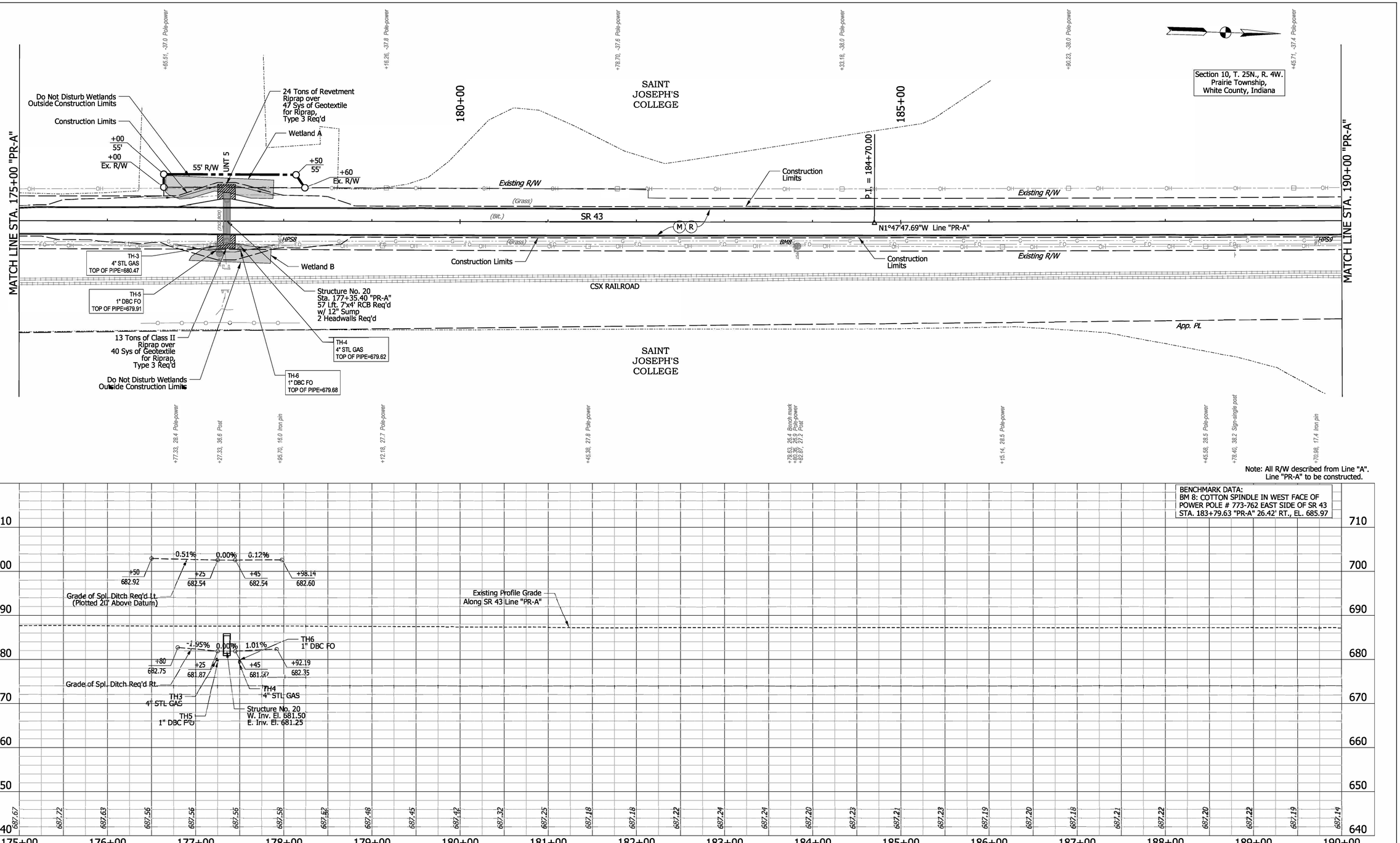
DESIGNED: DMB 11/15/22
DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 160+00 "PR-A" - STA. 175+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	20 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_05.dgn



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

BENCHMARK DATA:
BM 8: COTTON SPINDLE IN WEST FACE OF POWER POLE # 773-762 EAST SIDE OF SR 43
STA. 183+79.63 "PR-A" 26.42' RT., EL. 685.97

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS8	273305.9870	796176.7565

STA. 177+95.70, 15.98' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS9	274482.9319	796144.9420

STA. 189+70.98, 17.42' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

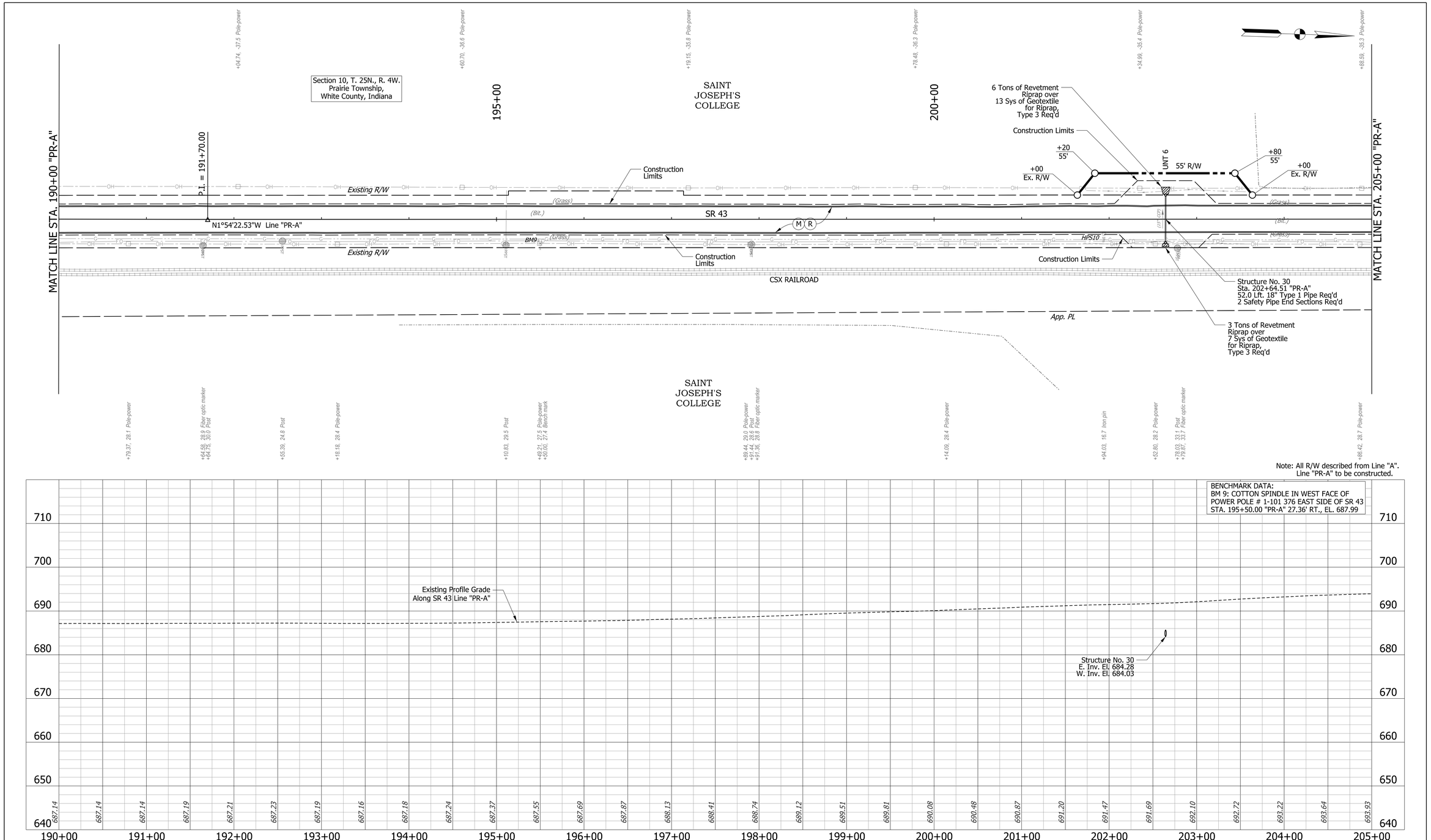
DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 175+00 "PR-A" - STA. 190+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	21 of 138
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_06.dgn



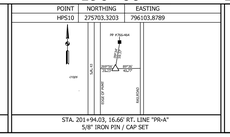
Note: All R/W described from Line "A".
Line "PR-A" to be constructed.

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS10	275703.3303	796103.8789



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

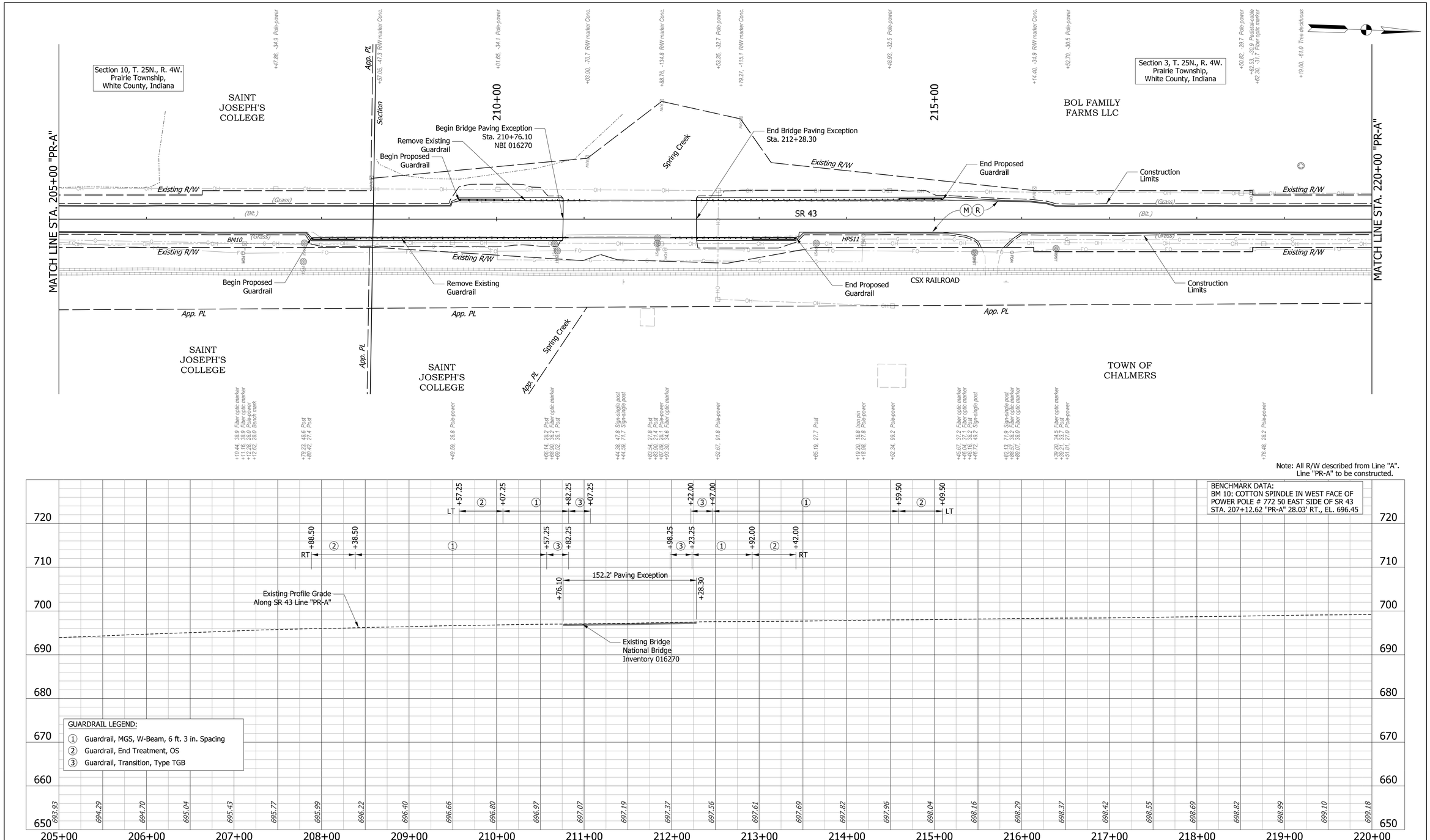
CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 190+00 "PR-A" - STA. 205+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	22 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_07.dgn



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

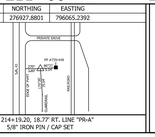
GUARDRAIL LEGEND:

1. Guardrail, MGS, W-Beam, 6 ft. 3 in. Spacing
2. Guardrail, End Treatment, OS
3. Guardrail, Transition, Type TGB

LEGEND

- (M) Milling, Asphalt, 4 in
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
  275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS11	276927.8803	796065.2392



STA. 214+19.20, 18.77' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

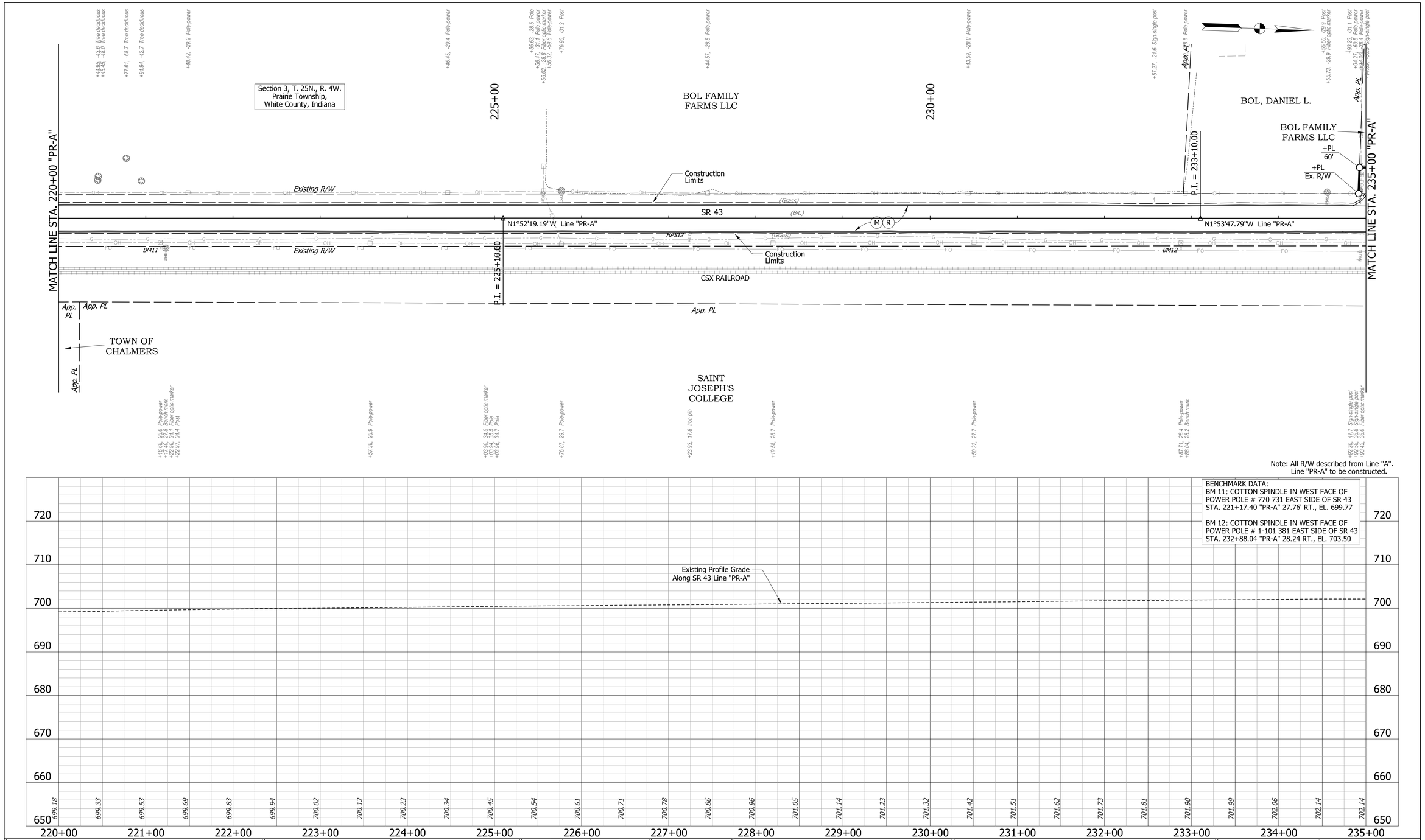
DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 205+00 "PR-A" - STA. 220+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	23 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_08.dgn



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

BENCHMARK DATA:
BM 11: COTTON SPINDLE IN WEST FACE OF POWER POLE # 770 731 EAST SIDE OF SR 43
STA. 221+17.40 "PR-A" 27.76' RT., EL. 699.77

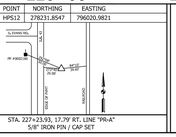
BM 12: COTTON SPINDLE IN WEST FACE OF POWER POLE # 1-101 381 EAST SIDE OF SR 43
STA. 232+88.04 "PR-A" 28.24 RT., EL. 703.50

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS12	278231.8547	796020.9821



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

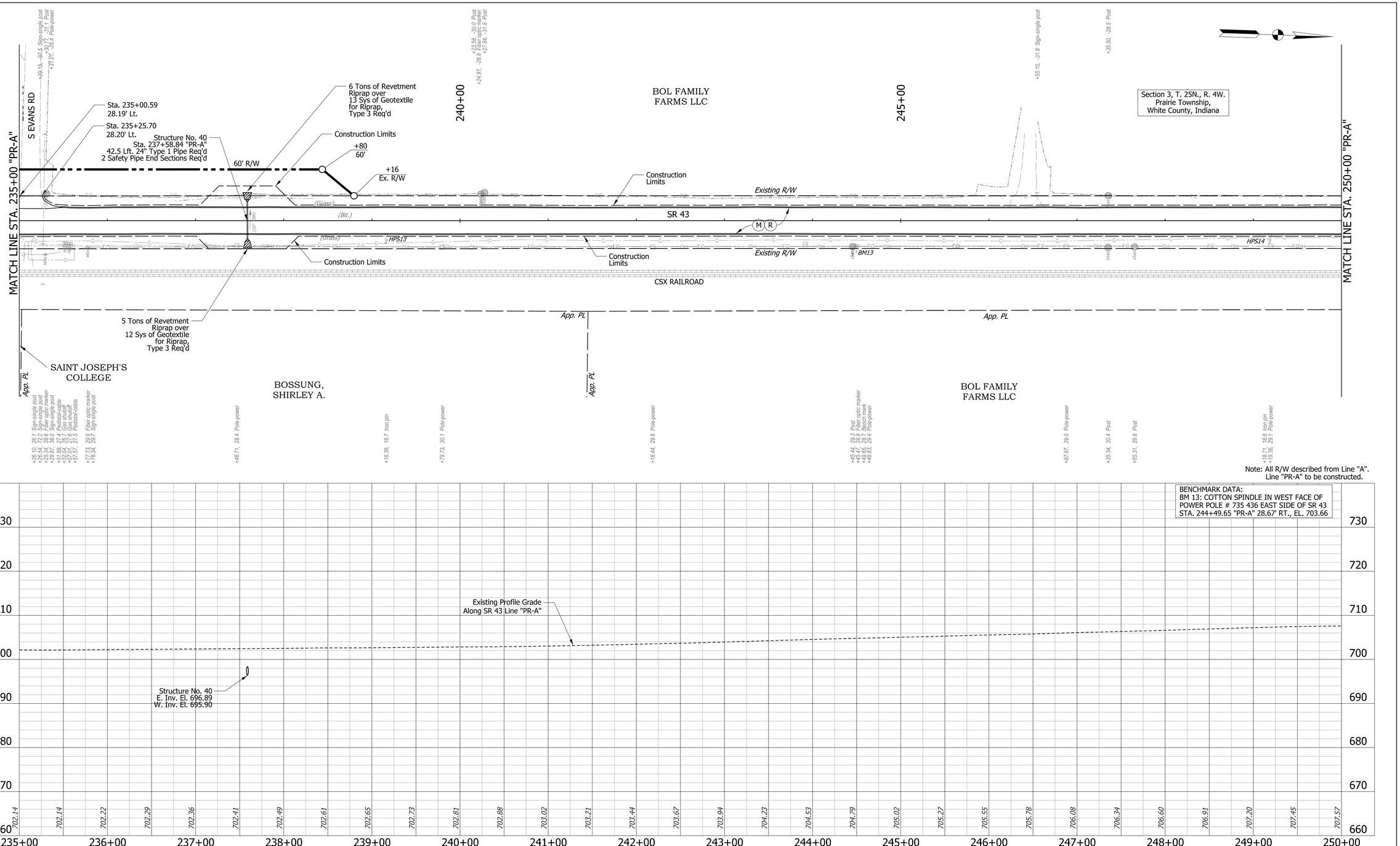
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 220+00 "PR-A" - STA. 235+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	24 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_09.dgn



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

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS13	279423.6122	795980.7039

STA. 239+16.36, 16.72' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS14	280425.4107	795947.3886

STA. 249+18.71, 16.58' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

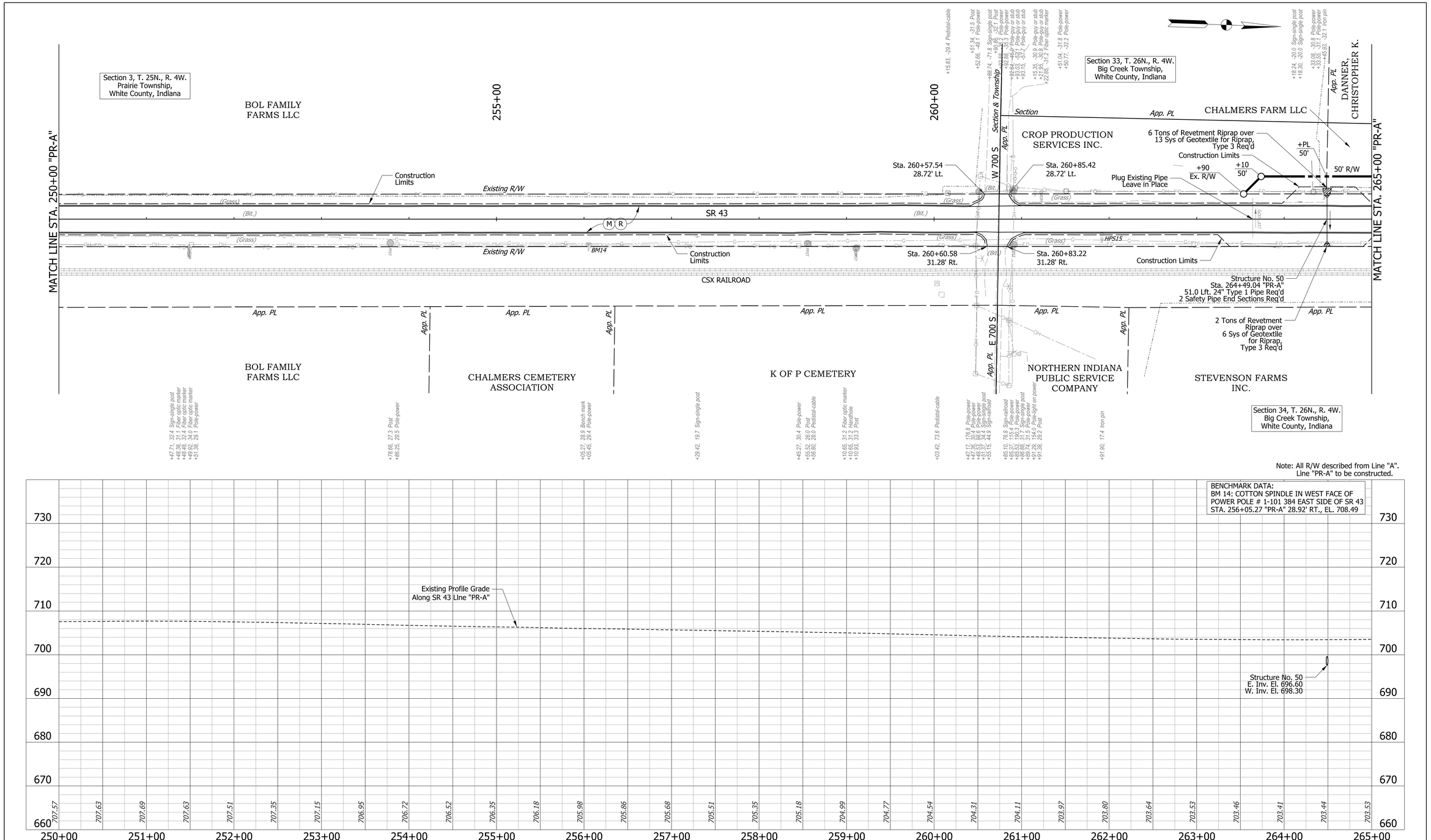
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 235+00 "PR-A" - STA. 250+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	25 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_10.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS15	281697.9238	7959906.0277



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

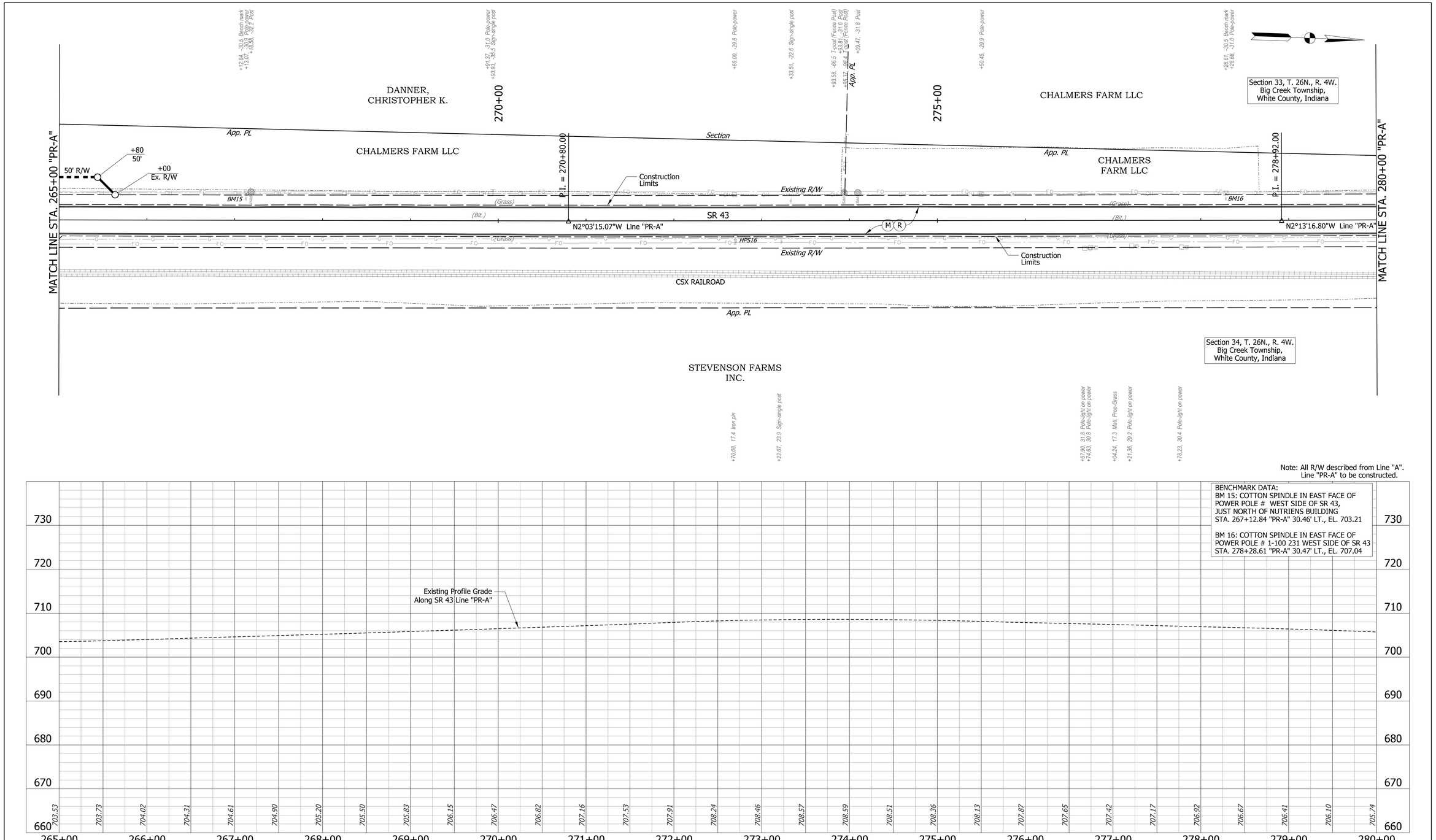
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 250+00 "PR-A" - STA. 265+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	26 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_11.dgn



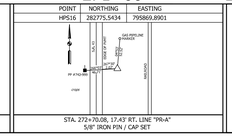
Note: All R/W described from Line "A".
Line "PR-A" to be constructed.

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS16	282775.5434	795869.8901



STA. 272+70.08, 17.43' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

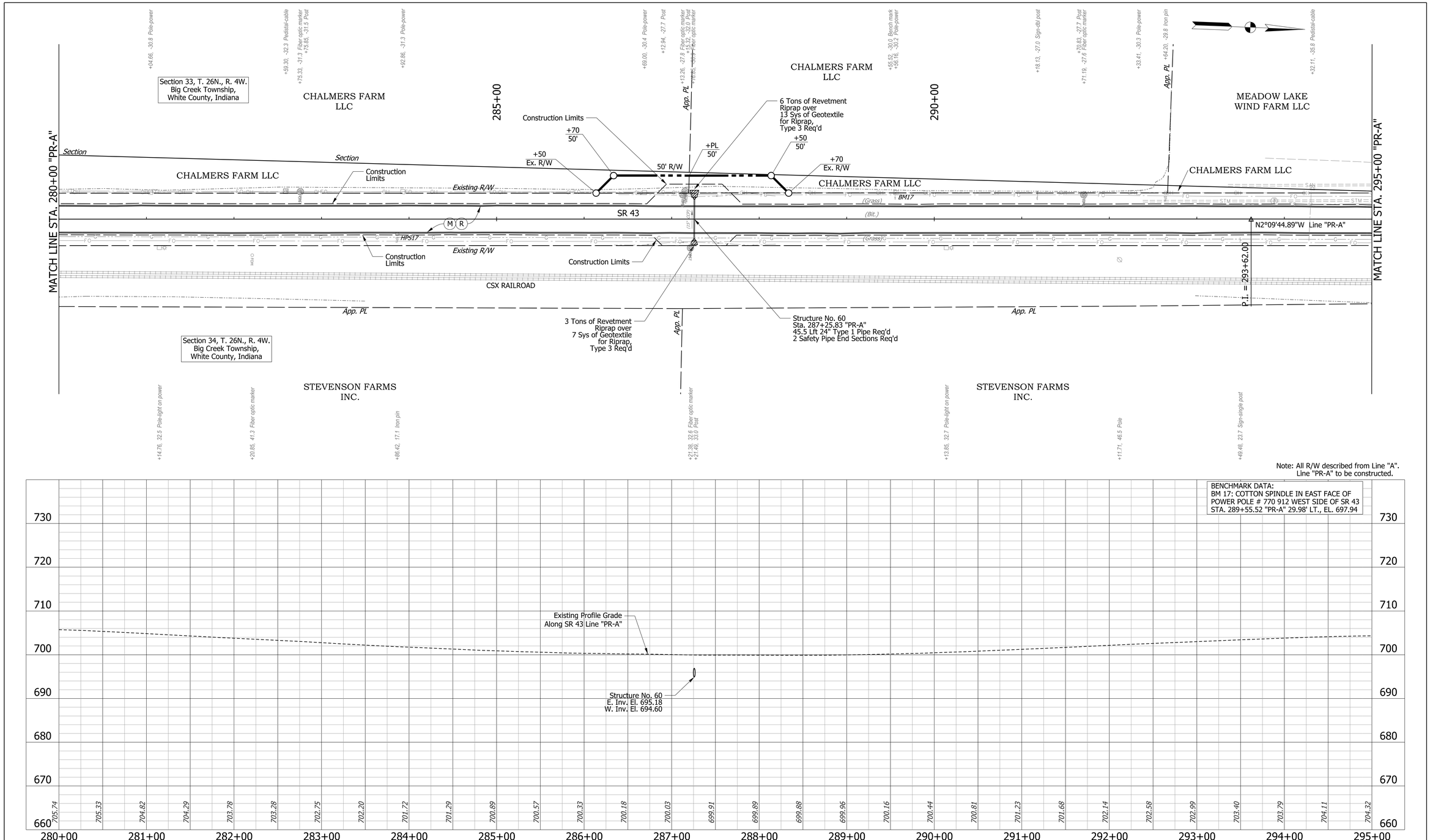
CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 265+00 "PR-A" - STA. 280+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	27 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_12.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS17	283891.1567	795828.1028

STA. 283+86.42, 17.10' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

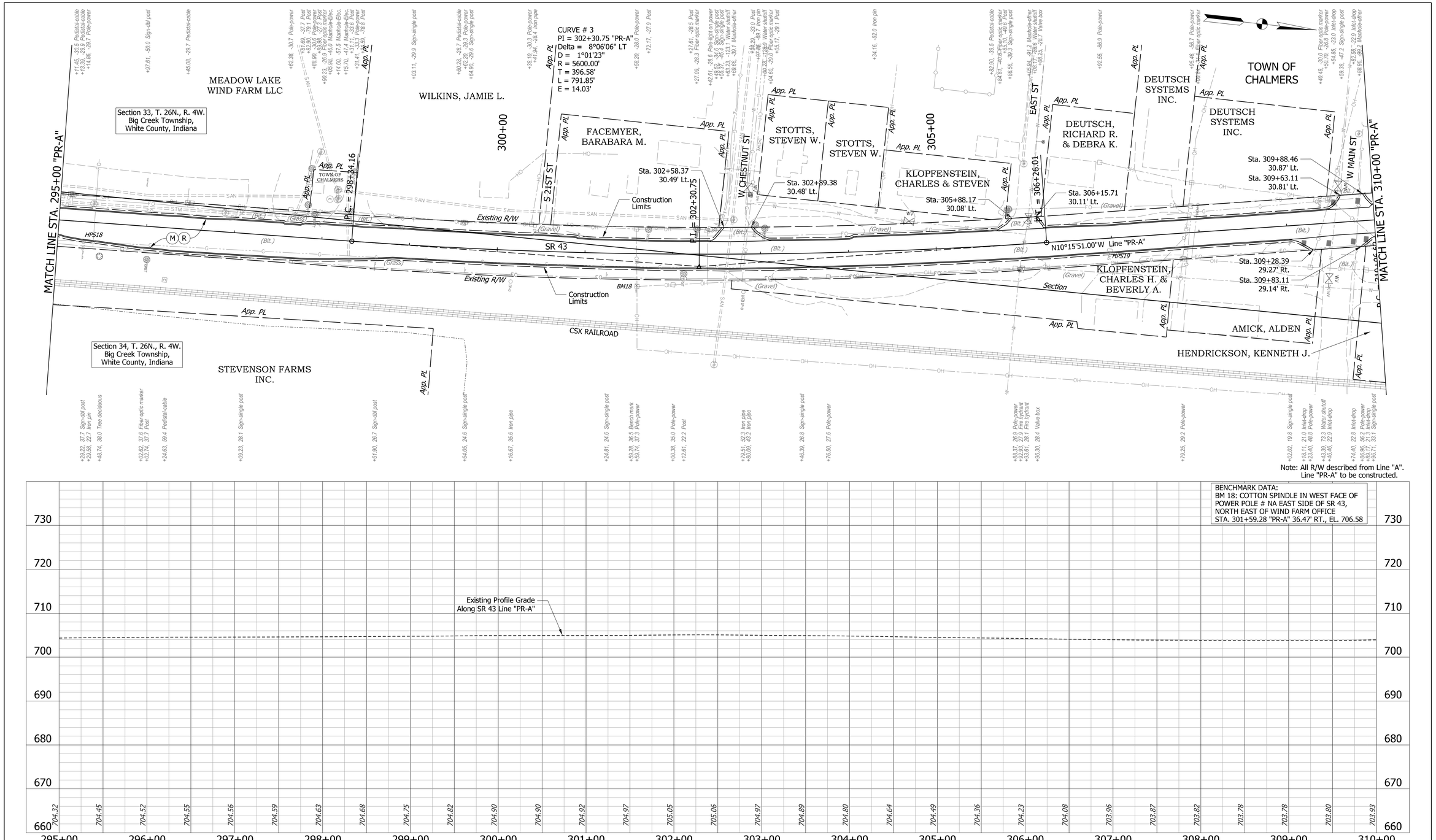
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 280+00 "PR-A" - STA. 295+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	28 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_13.dgn



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

BENCHMARK DATA:
BM 18: COTTON SPINDLE IN WEST FACE OF POWER POLE # NA EAST SIDE OF SR 43, NORTH EAST OF WIND FARM OFFICE
STA. 301+59.28 "PR-A" 36.47' RT., EL. 706.58

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS18	285033.6578	795780.5476

STA. 295+29.58, 22.68' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS19	286196.2282	795670.6073

STA. 306+97.22, 13.76' RT. LINE "PR-A"
COTTON SPINDLE SET FLUSH IN SHLDR

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

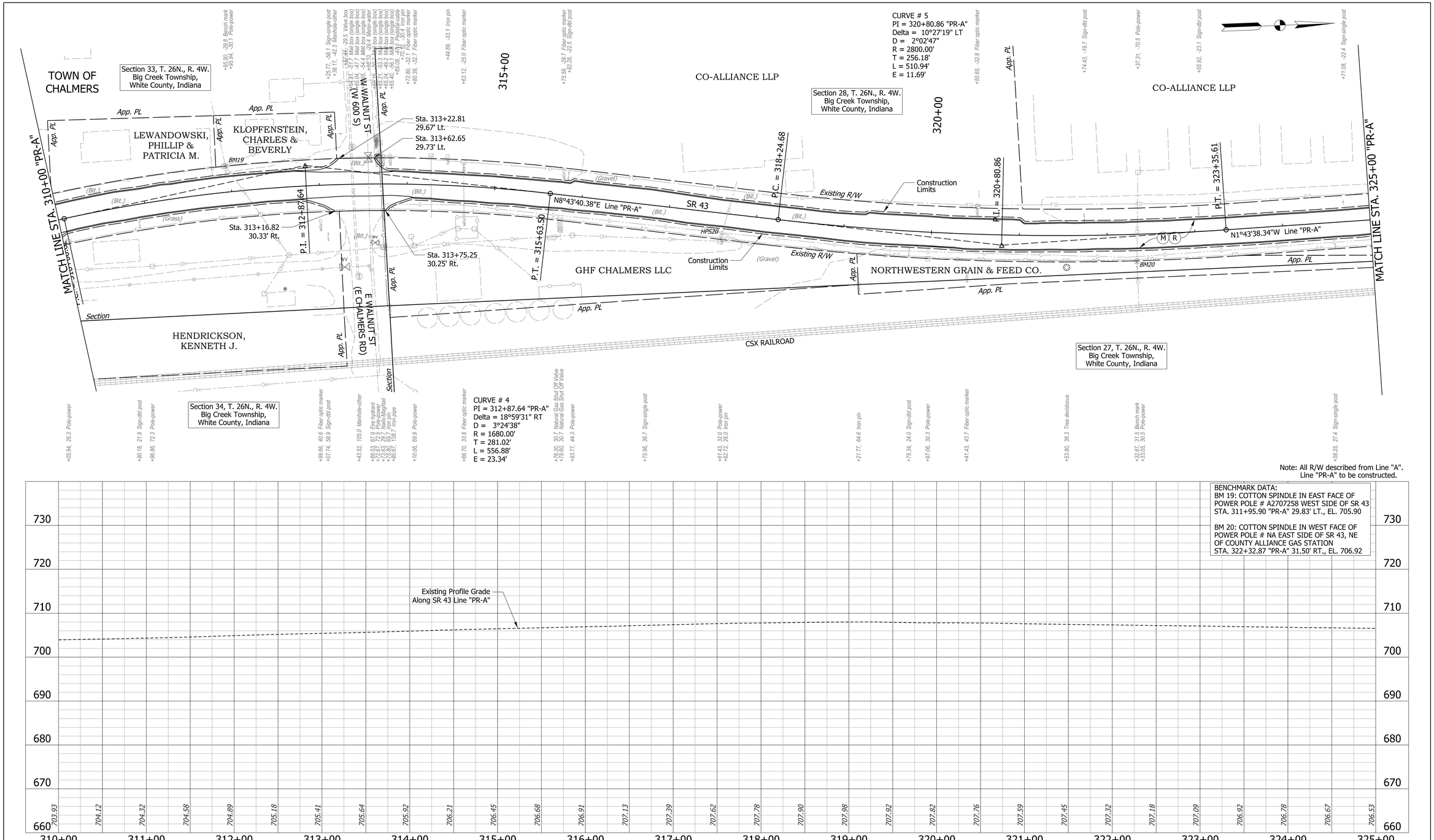
DESIGNED: DMB 11/15/22
DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 295+00 "PR-A" - STA. 310+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	29 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_14.dgn



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

BENCHMARK DATA:
BM 19: COTTON SPINDLE IN EAST FACE OF POWER POLE # A2707258 WEST SIDE OF SR 43 STA. 311+95.90 "PR-A" 29.83' LT., EL. 705.90

BM 20: COTTON SPINDLE IN WEST FACE OF POWER POLE # NA EAST SIDE OF SR 43, NE OF COUNTY ALLIANCE GAS STATION STA. 322+32.87 "PR-A" 31.50' RT., EL. 706.92

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS20	2872745.4724	795650.4530

STA. 317+62.72, 26.02' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

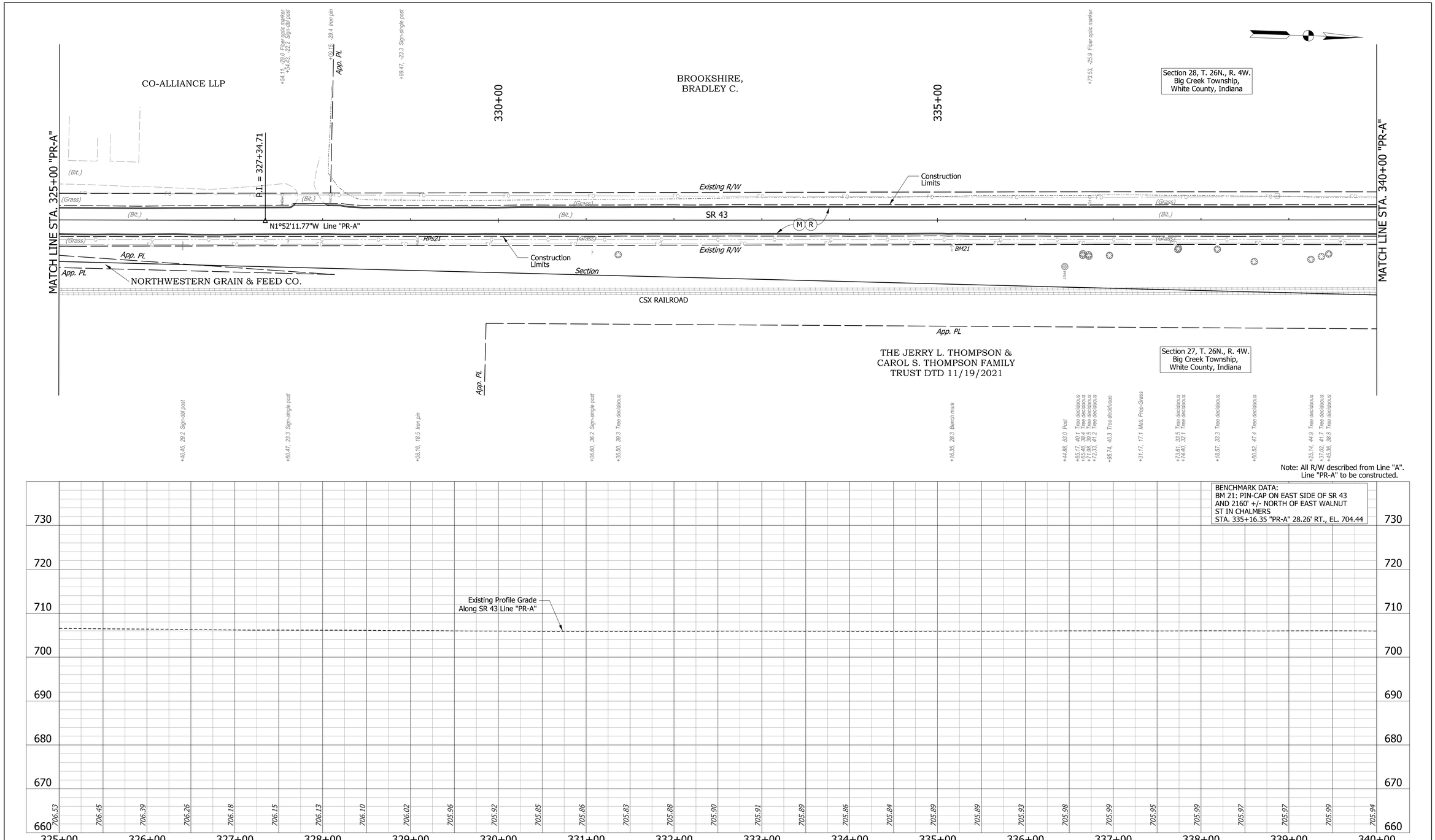
CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 310+00 "PR-A" - STA. 325+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	30 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_15.dgn



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

BENCHMARK DATA:
BM 21: PIN-CAP ON EAST SIDE OF SR 43 AND 2160' +/- NORTH OF EAST WALNUT ST IN CHALMERS
STA. 335+16.35 "PR-A" 28.26' RT., EL. 704.44

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS21	288392.8062	795666.1083



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER _____ DATE _____

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

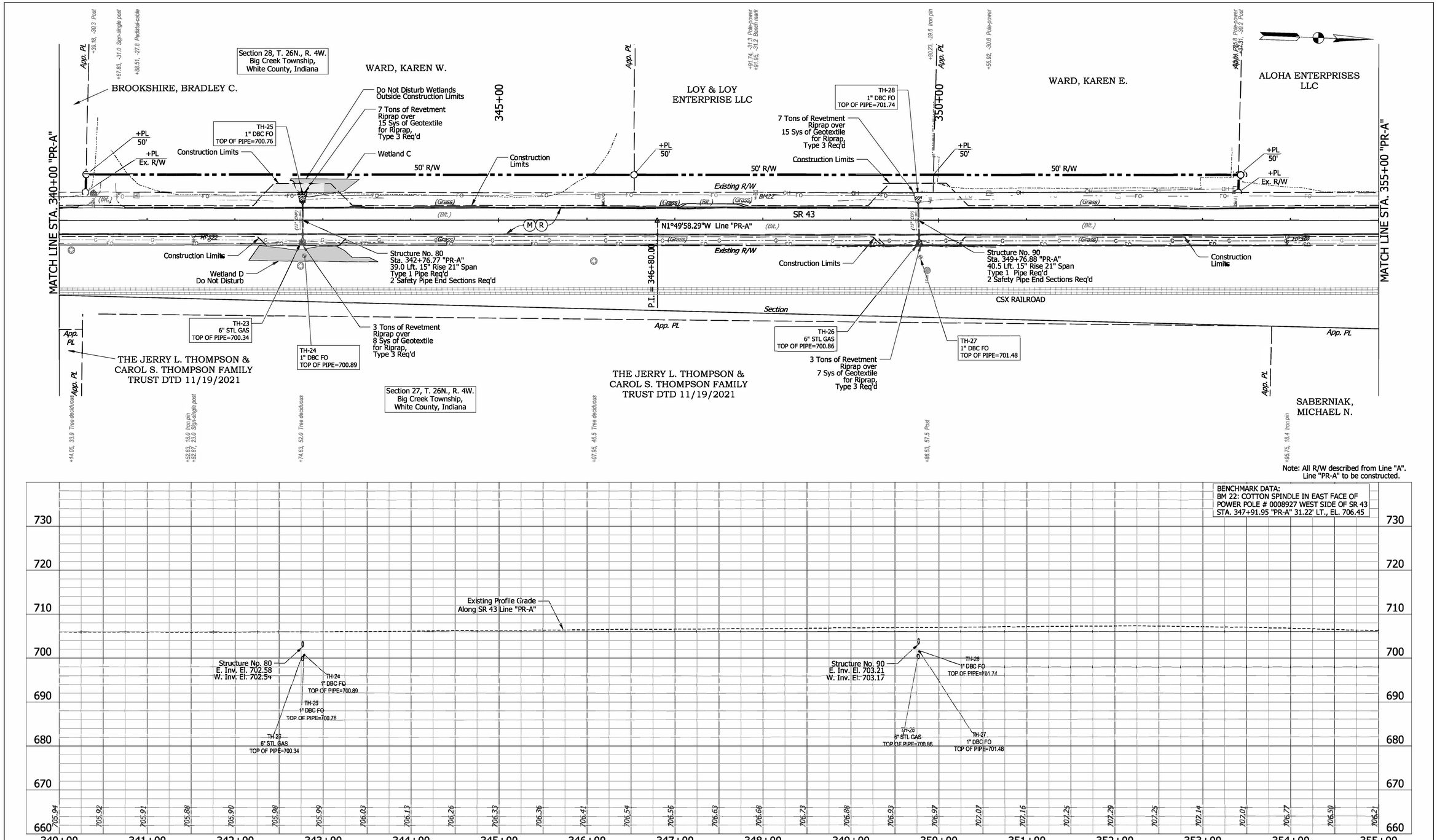
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 325+00 "PR-A" - STA. 340+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	31 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_16.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS22	2896536.8011	795625.0185

STA. 341+52.83, 18.04' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS23	2900879.0715	795585.2662

STA. 353+95.75, 18.38' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

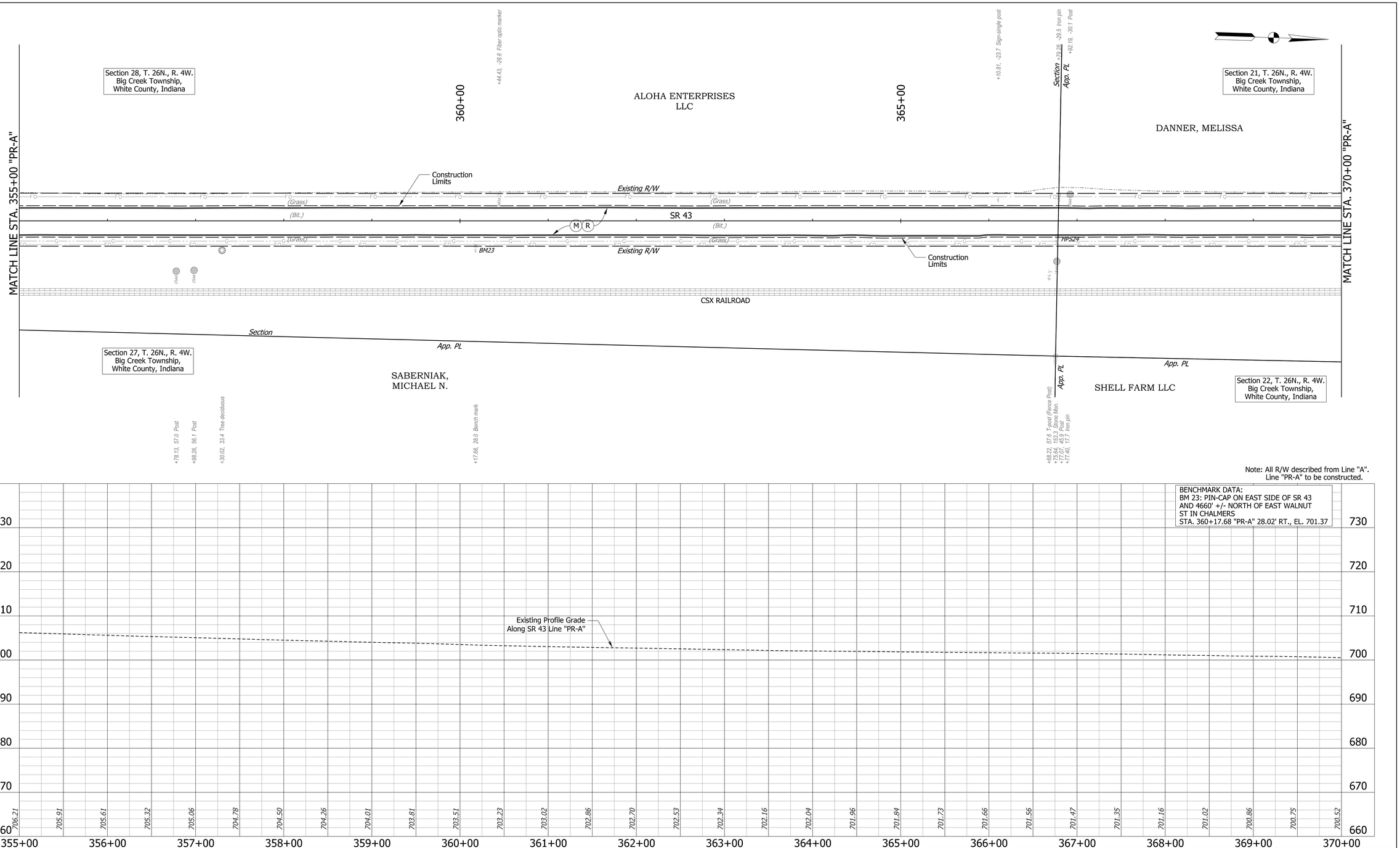
DESIGNED: DMB	11/15/22	DRAWN: MWH	11/15/22
CHECKED: WBB	3/24/23	CHECKED: WBB	3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 340+00 "PR-A" - STA. 355+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	32 of 138
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_17.dgn



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

LEGEND

- (M) Milling, Asphalt, 4 in
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
  275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS24	292160.0459	795543.6395

STA. 366+77.40, 17.75' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

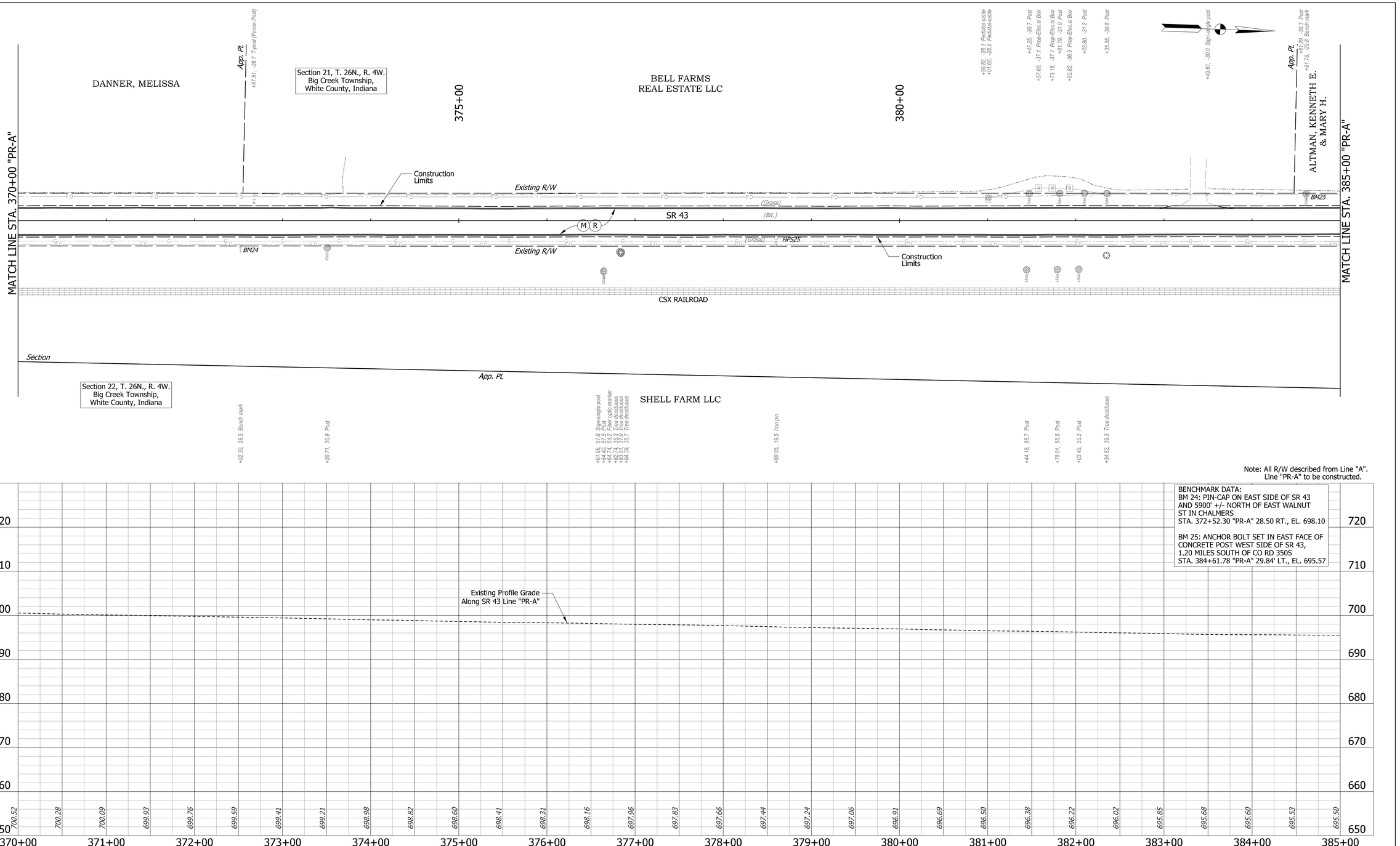
DESIGNED: DMB 11/15/22	DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 355+00 "PR-A" - STA. 370+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	33 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_18.dgn



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

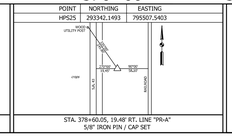
BENCHMARK DATA:
BM 24: PIN-CAP ON EAST SIDE OF SR 43
AND 5900' +/- NORTH OF EAST WALNUT
ST IN CHALMERS
STA. 372+52.30 "PR-A" 28.50 RT., EL. 698.10

BM 25: ANCHOR BOLT SET IN EAST FACE OF
CONCRETE POST WEST SIDE OF SR 43,
1.20 MILES SOUTH OF CO RD 350S
STA. 384+61.78 "PR-A" 29.84' LT., EL. 695.57

LEGEND

- (M) Milling, Asphalt, 4 in
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
  275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPs25	293342.1493	795507.5403



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER _____ DATE _____

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

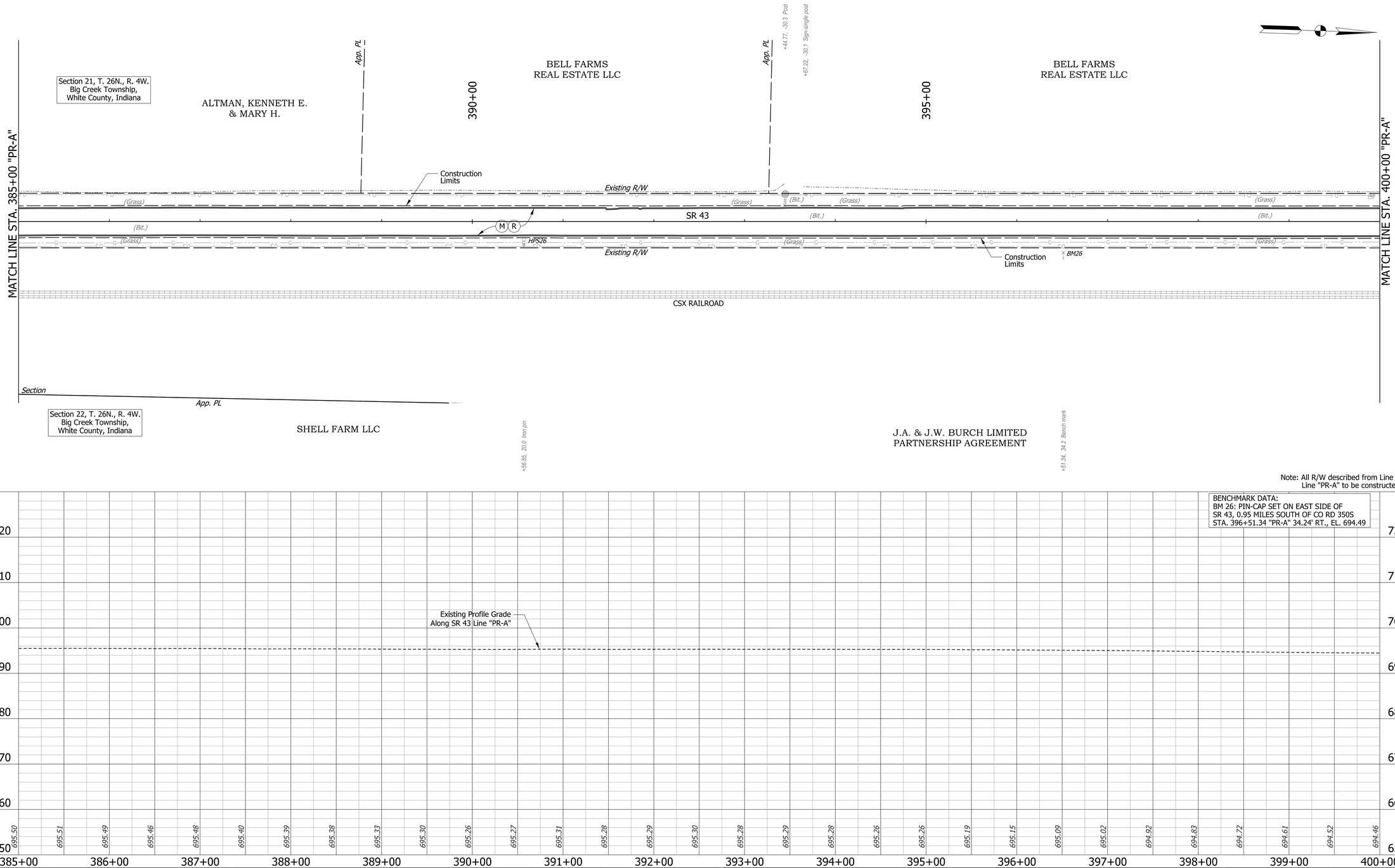
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 370+00 "PR-A" - STA. 385+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	34 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_19.dgn

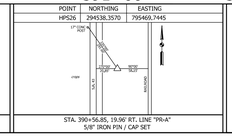


LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS26	294538.3570	795460.7445



STA. 390+56.85, 19.96' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

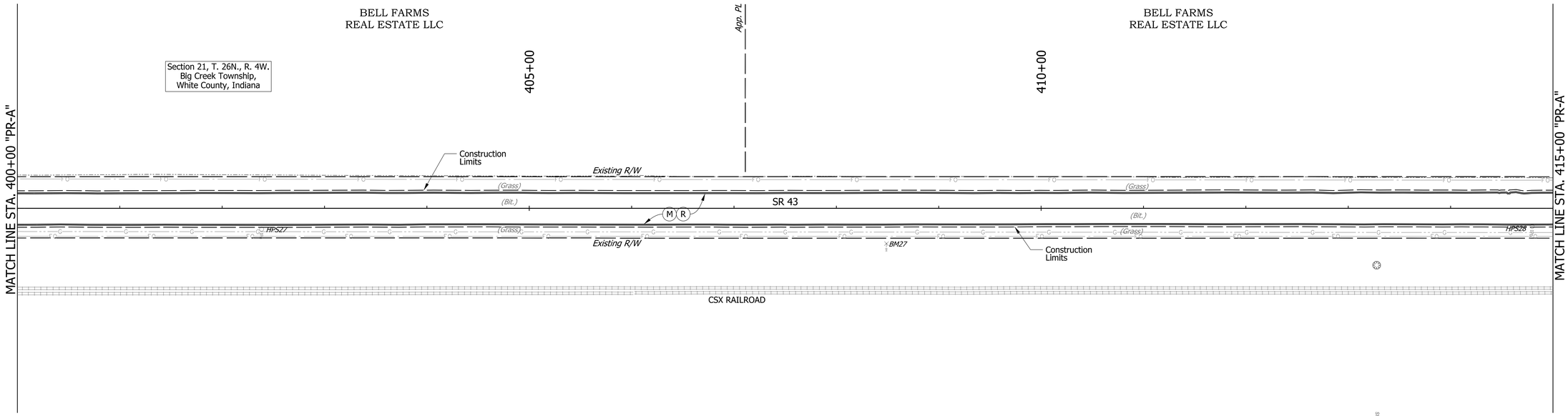
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

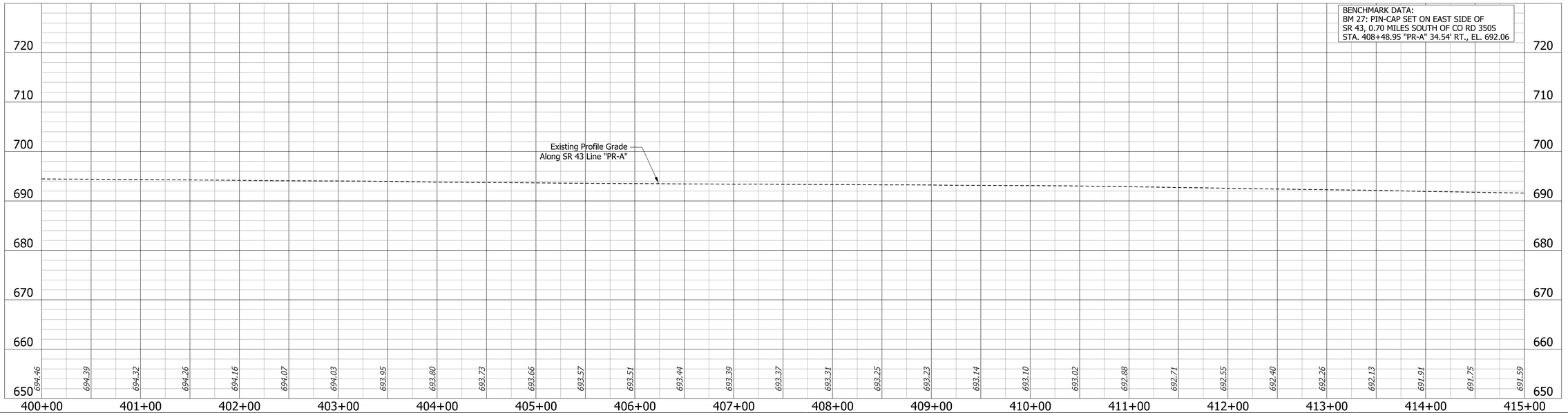
PLAN AND PROFILE
STA. 385+00 "PR-A" - STA. 400+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	35 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_20.dgn



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



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS27	295719.4259	795432.3707

STA. 402+38.51, 20.38' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS28	296955.7876	795390.0144

STA. 414+79.60, 17.72' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

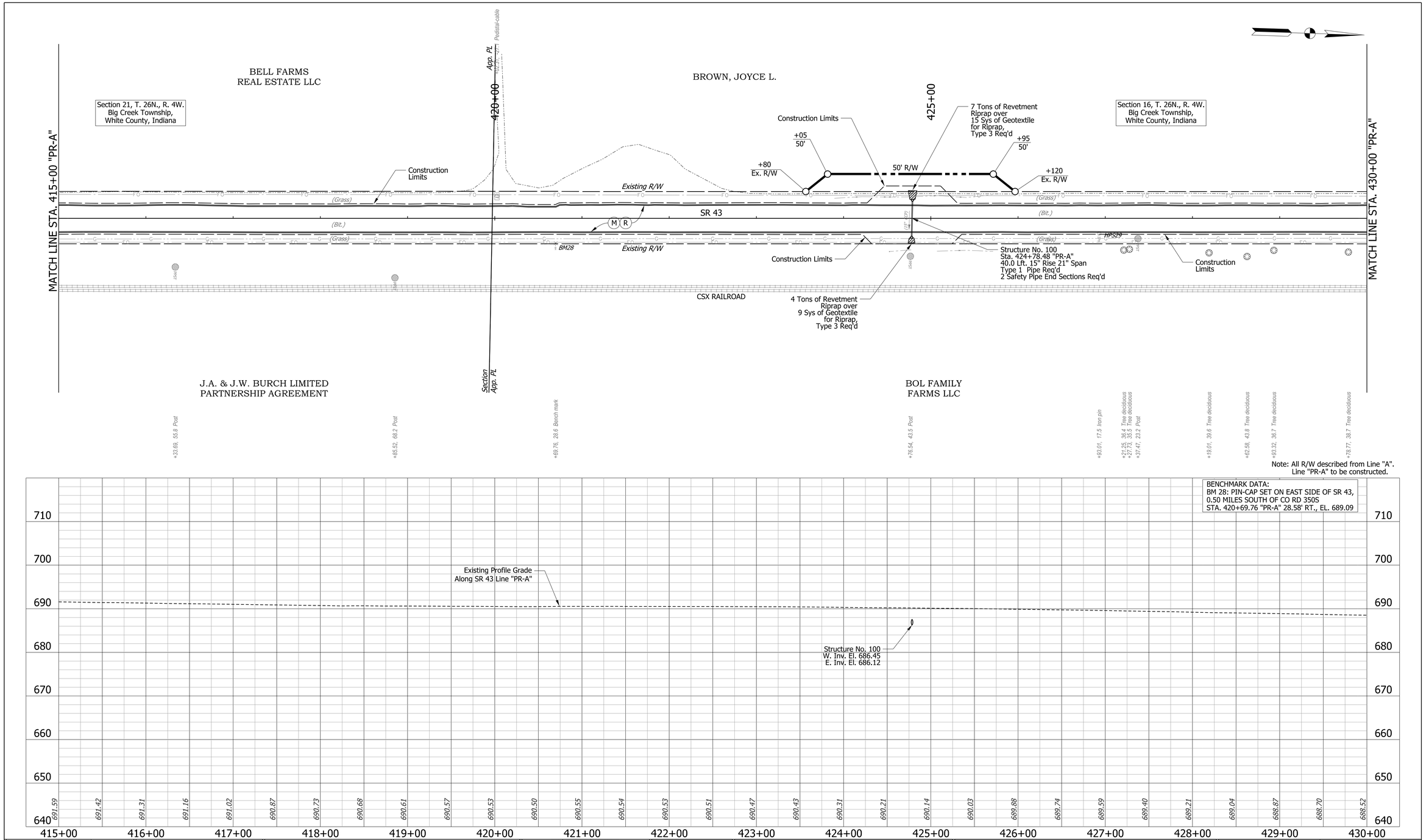
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 400+00 "PR-A" - STA. 415+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	36 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_21.dgn



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

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS29	298172.5762	795350.9612

STA. 426+93.01, 17.47' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

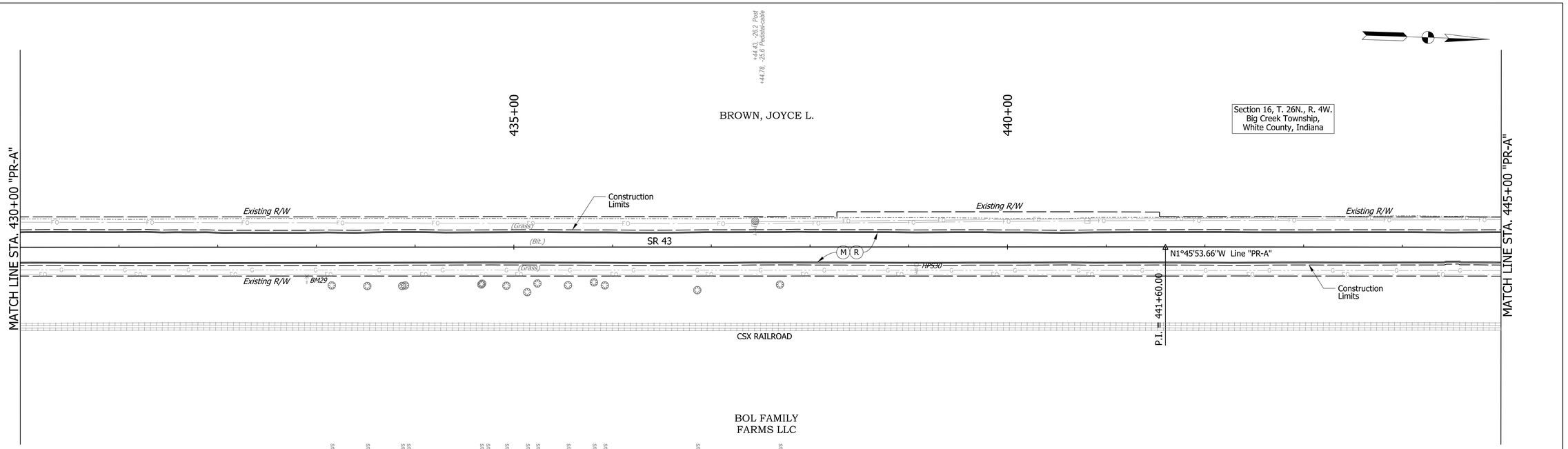
CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

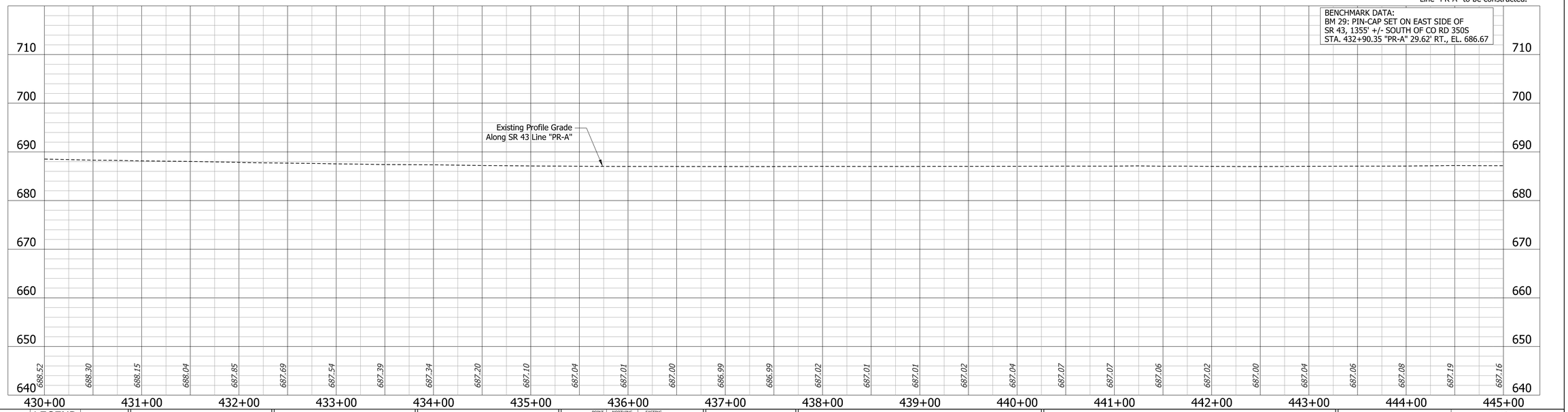
PLAN AND PROFILE
STA. 415+00 "PR-A" - STA. 430+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	37 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_22.dgn



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

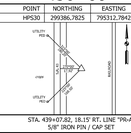


LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS30	299386.7825	795312.7942



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

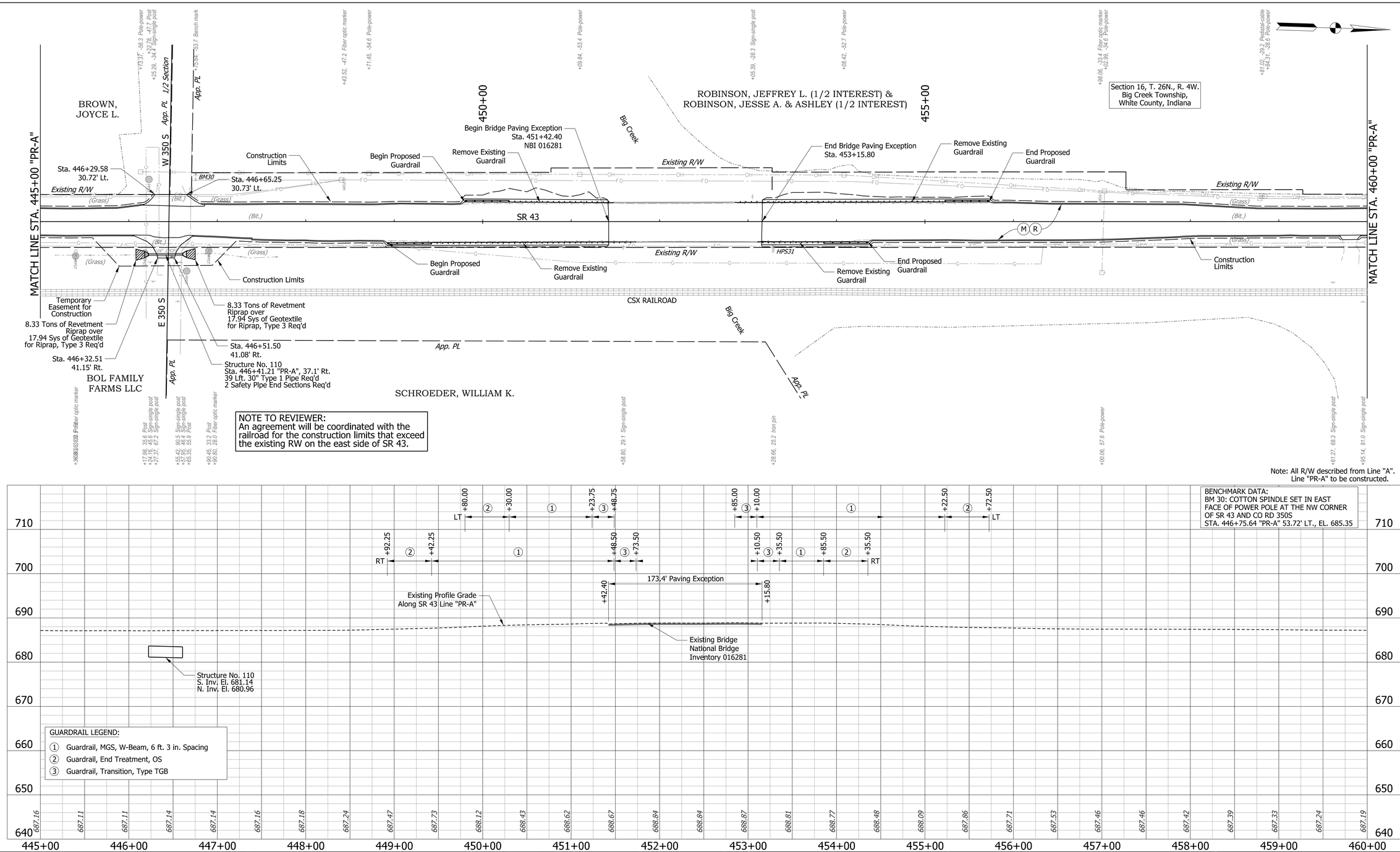
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

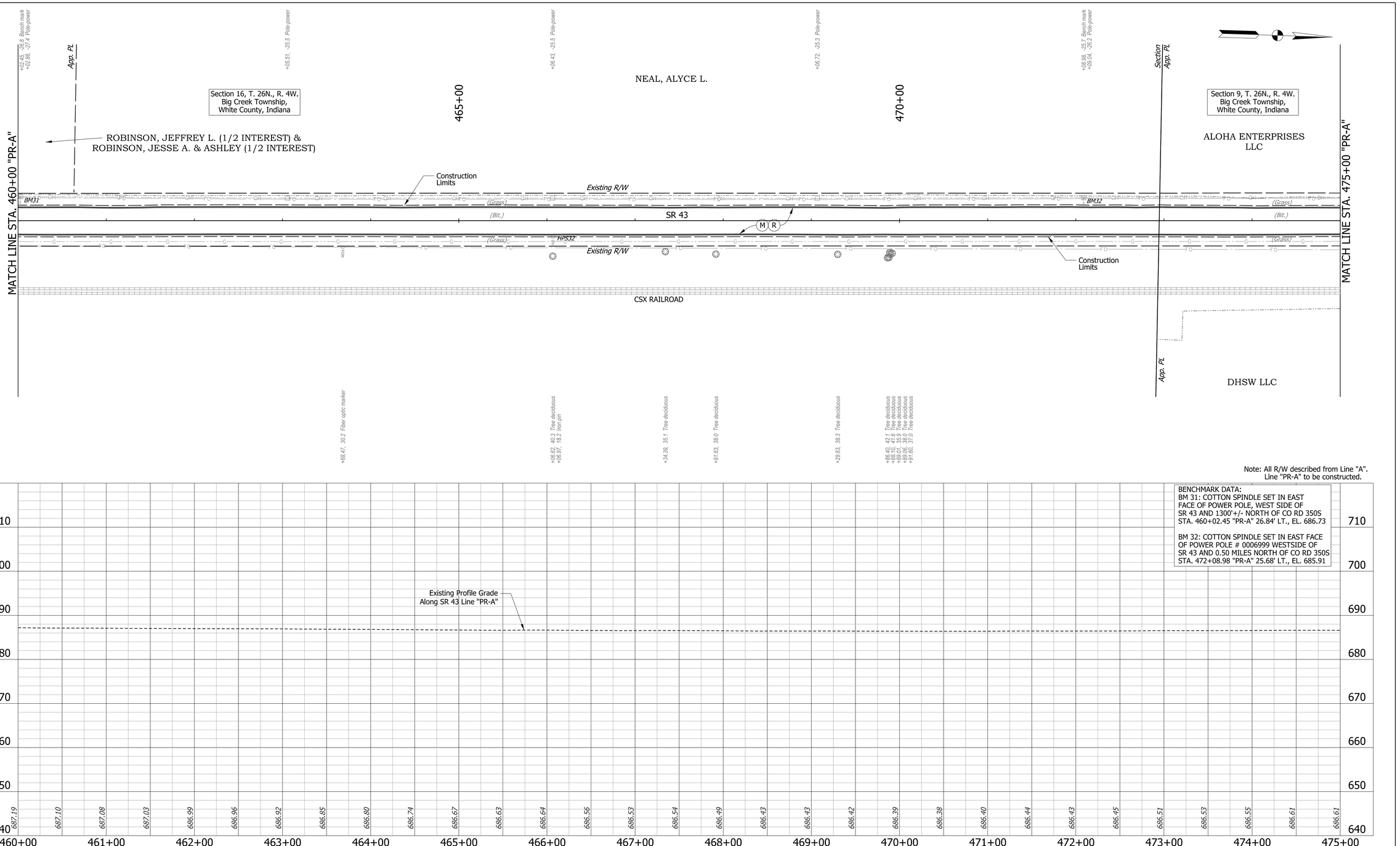
PLAN AND PROFILE
STA. 430+00 "PR-A" - STA. 445+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	38 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_23.dgn



I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_24.dgn



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

BENCHMARK DATA:
BM 31: COTTON SPINDLE SET IN EAST FACE OF POWER POLE, WEST SIDE OF SR 43 AND 1300'+/- NORTH OF CO RD 350S
STA. 460+02.45 "PR-A" 26.84' LT., EL. 686.73

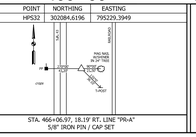
BM 32: COTTON SPINDLE SET IN EAST FACE OF POWER POLE # 0006999 WESTSIDE OF SR 43 AND 0.50 MILES NORTH OF CO RD 350S
STA. 472+08.98 "PR-A" 25.68' LT., EL. 685.91

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS32	302084.6196	795229.3949



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

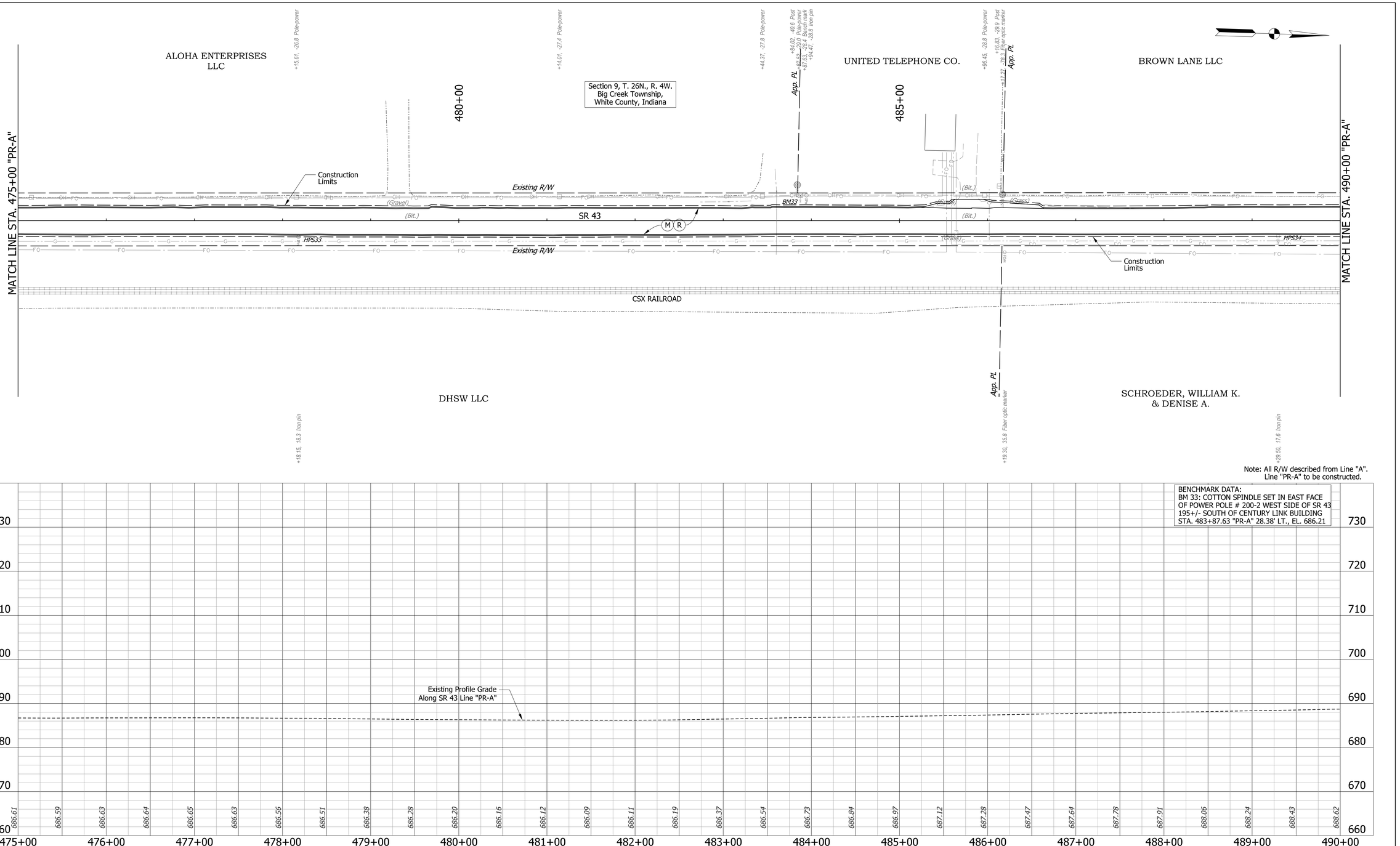
DESIGNED: DMB 11/15/22
DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 460+00 "PR-A" - STA. 475+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	40 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_25.dgn



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

BENCHMARK DATA:
BM 33: COTTON SPINDLE SET IN EAST FACE OF POWER POLE # 200-2 WEST SIDE OF SR 43 195+/- SOUTH OF CENTURY LINK BUILDING
STA. 483+87.63 "PR-A" 28.38' LT., EL. 686.21

LEGEND

- (M) Milling, Asphalt, 4 in
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
  275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS33	303295.2308	795192.1972

STA. 478+18.15, 18.30' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS34	304406.0311	795157.2827

STA. 489+29.50, 17.61' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

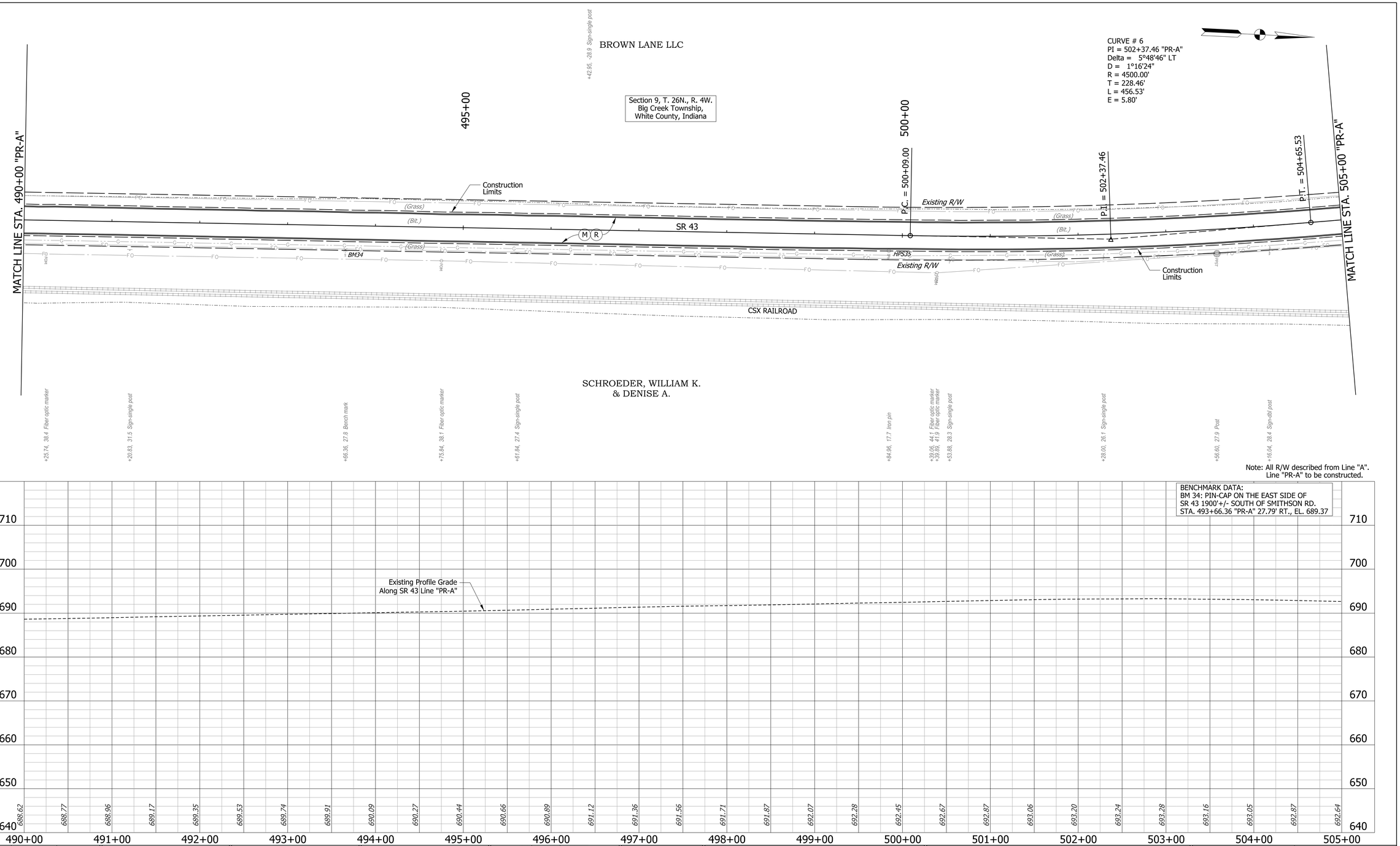
DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 475+00 "PR-A" - STA. 490+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	41 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_26.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS35	305460.9961	795124.8737

STA. 499+84.96, 17.71' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

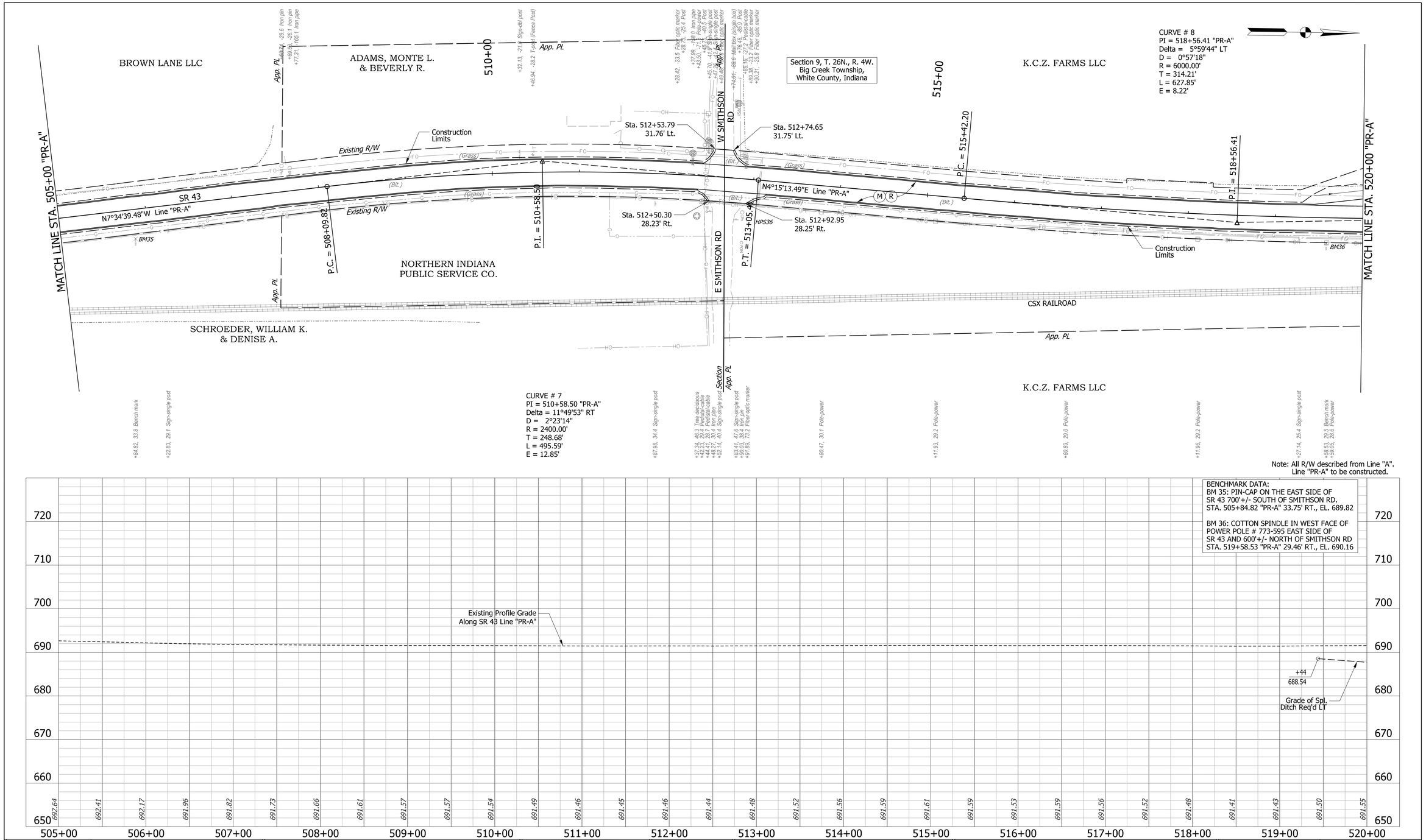
DESIGNED: DMB 11/15/22	DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 490+00 "PR-A" - STA. 505+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	42 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_27.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS36	306757.1416	795046.7572

STA. 512+90.03, 38.41' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

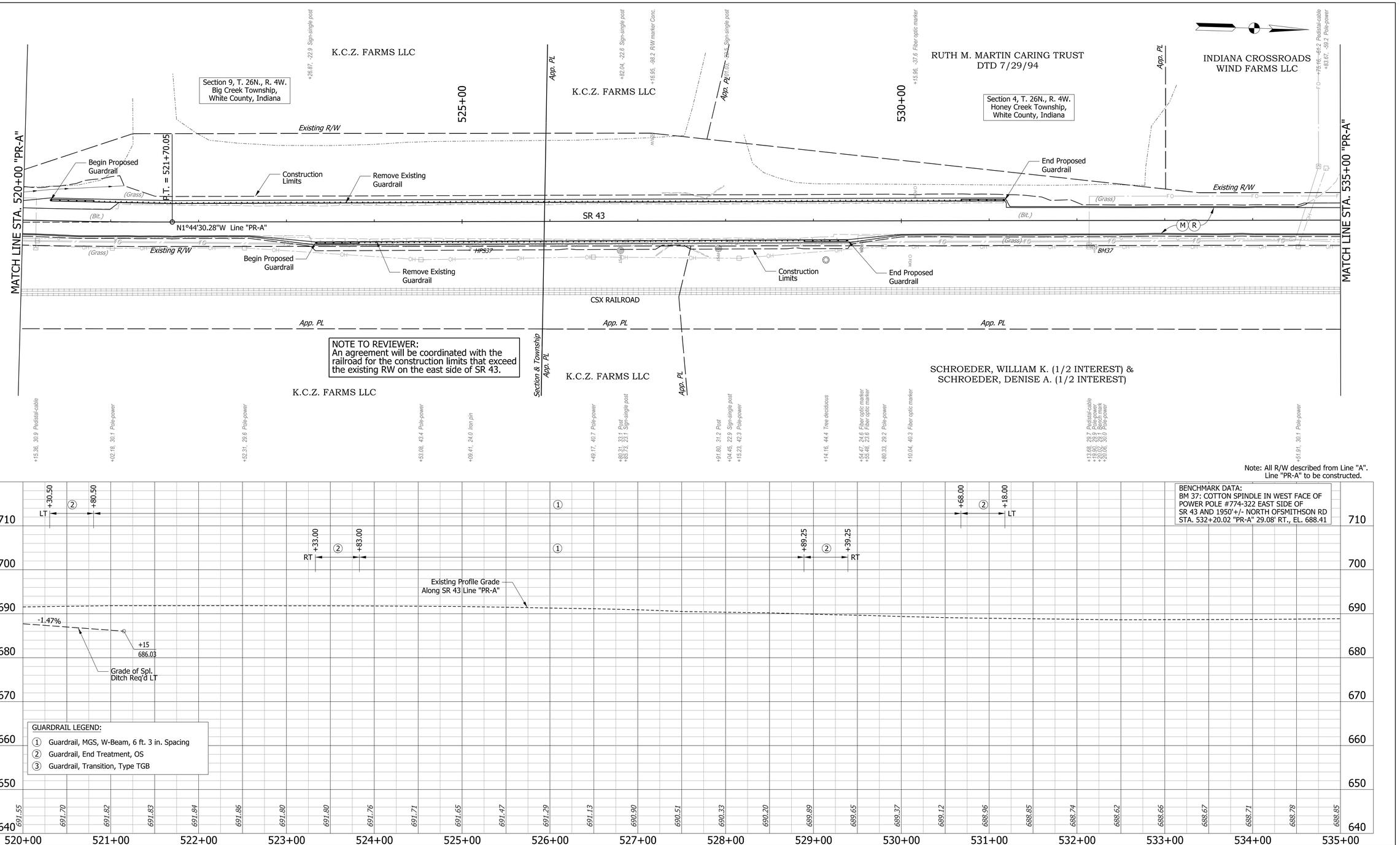
CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 505+00 "PR-A" - STA. 520+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	43 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_28.dgn



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

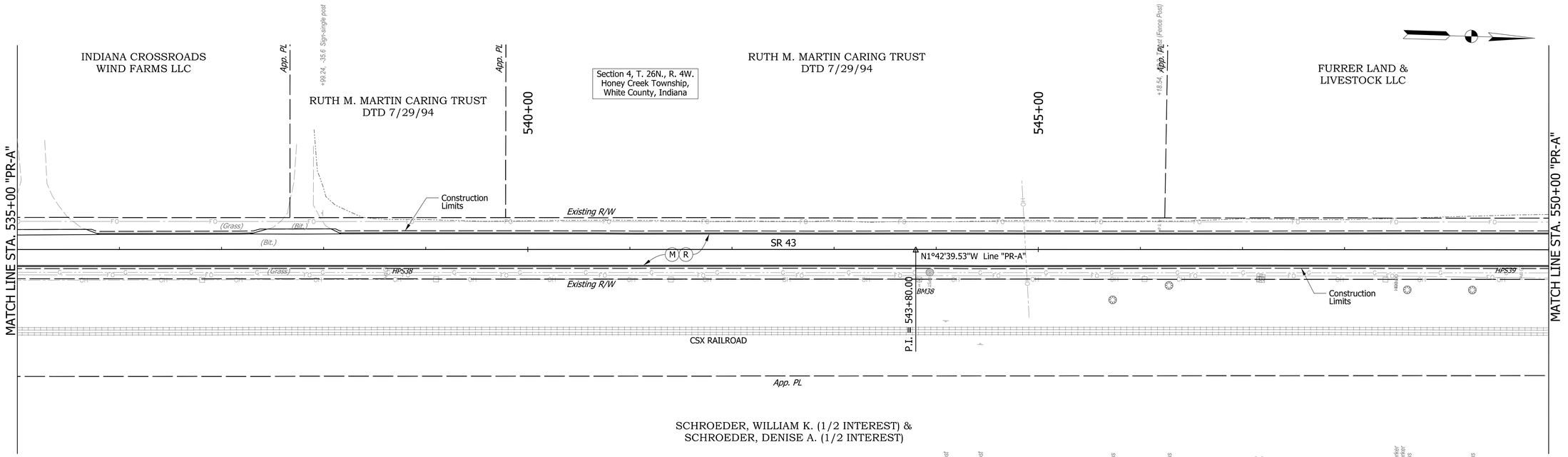
CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 520+00 "PR-A" - STA. 535+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	44 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_29.dgn

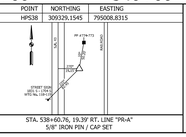


LEGEND

(M) Milling, Asphalt, 4 in

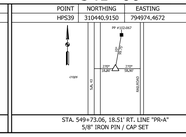
(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS38	309329.1545	795008.8315



STA. 538+60.76, 19.39' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

POINT	NORTHING	EASTING
HPS39	310443.9150	794974.4672



STA. 549+73.06, 18.51' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

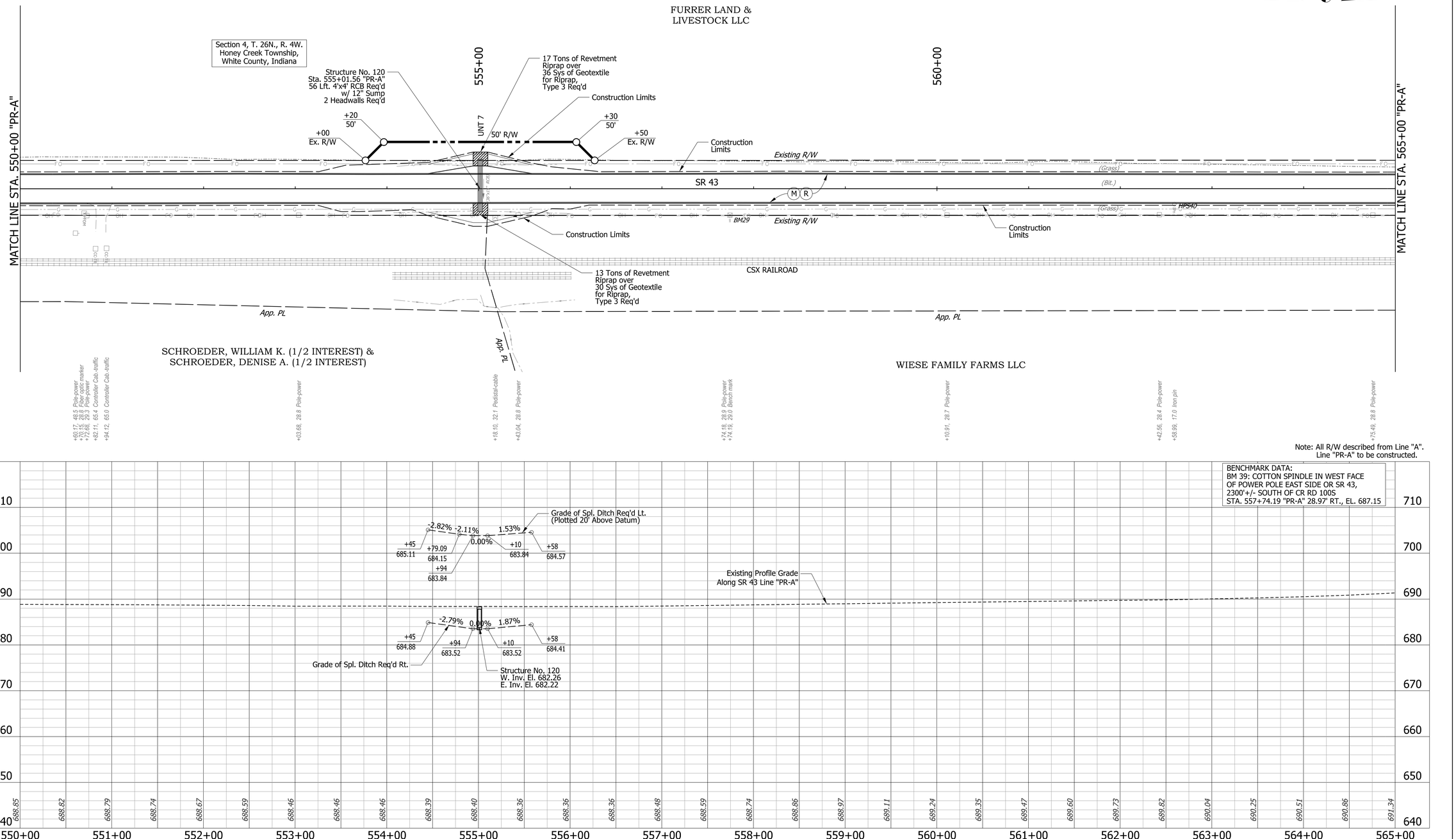
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 535+00 "PR-A" - STA. 550+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	45 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_30.dgn



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

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS40	311726.2177	794934.5191

STA. 562+58.99, 16.96' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

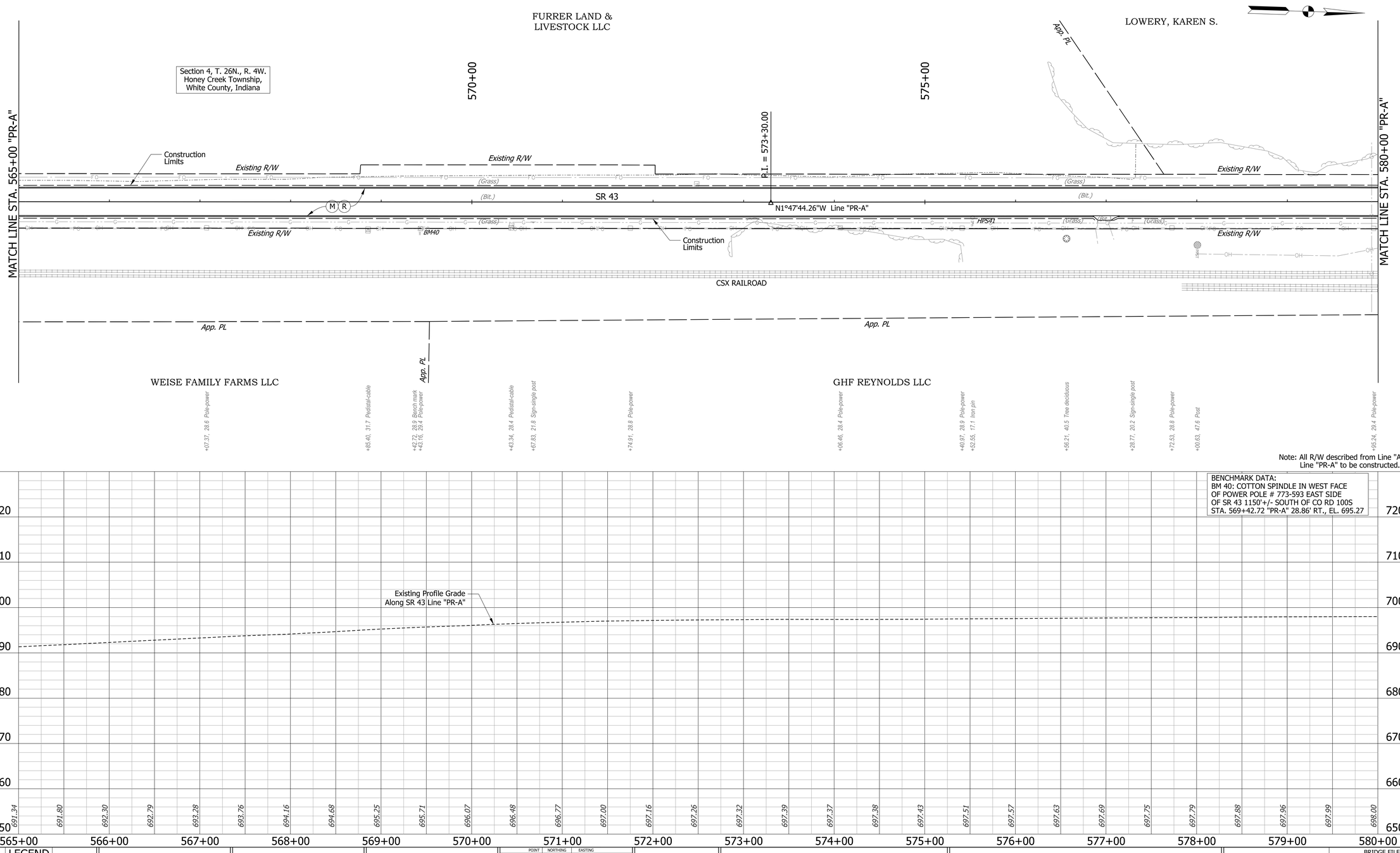
DESIGNED: DMB 11/15/22
CHECKED: WBB 3/24/23
DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 550+00 "PR-A" - STA. 565+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	46 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_31.dgn



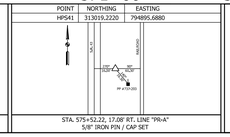
Note: All R/W described from Line "A".
Line "PR-A" to be constructed.

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS41	313015.2220	794895.6880



RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

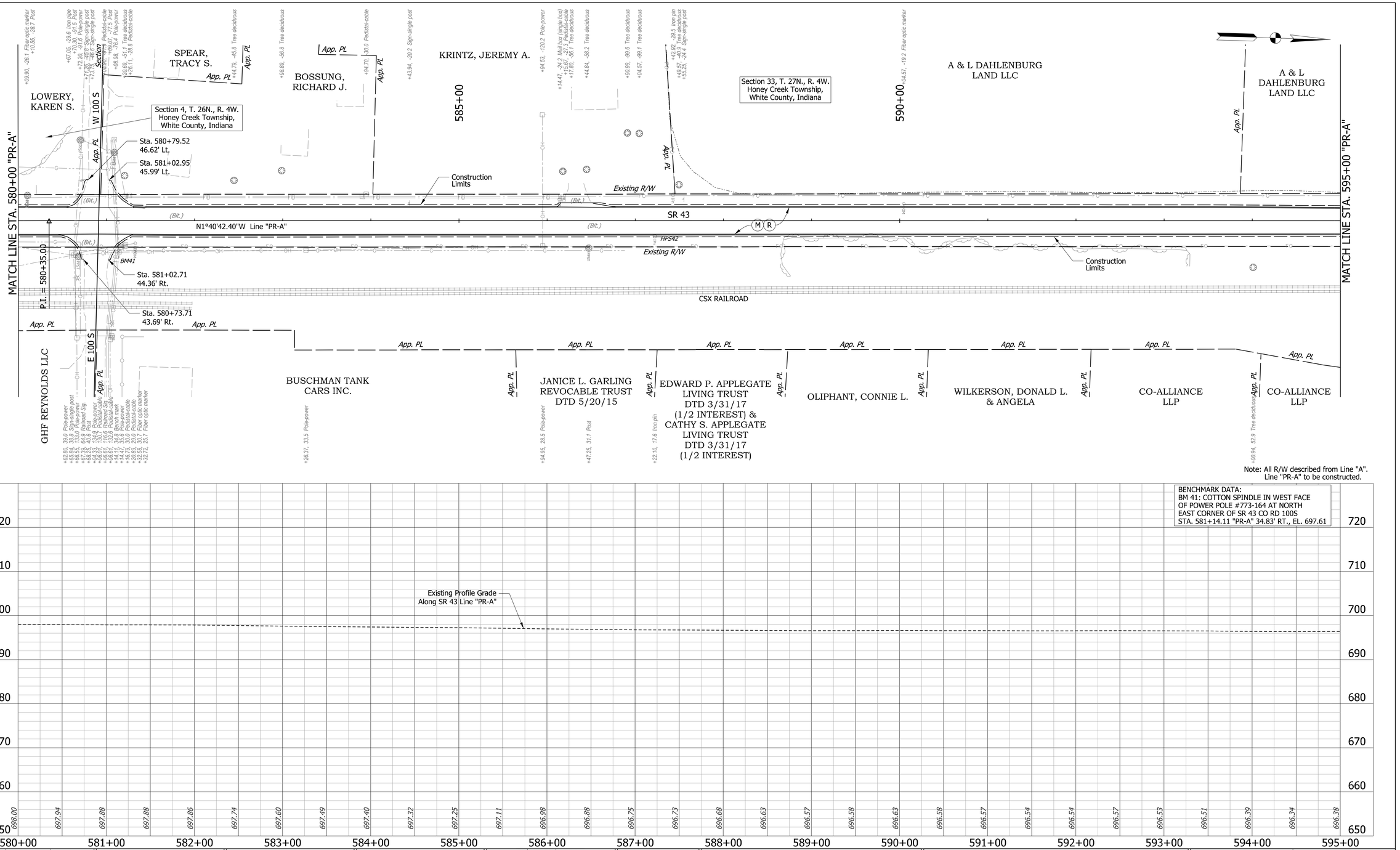
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 565+00 "PR-A" - STA. 580+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	47 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_32.dgn



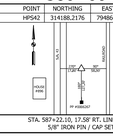
Note: All R/W described from Line "A". Line "PR-A" to be constructed.

LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS42	314188.2176	794860.9437



STA. 587+22.10, 17.58' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

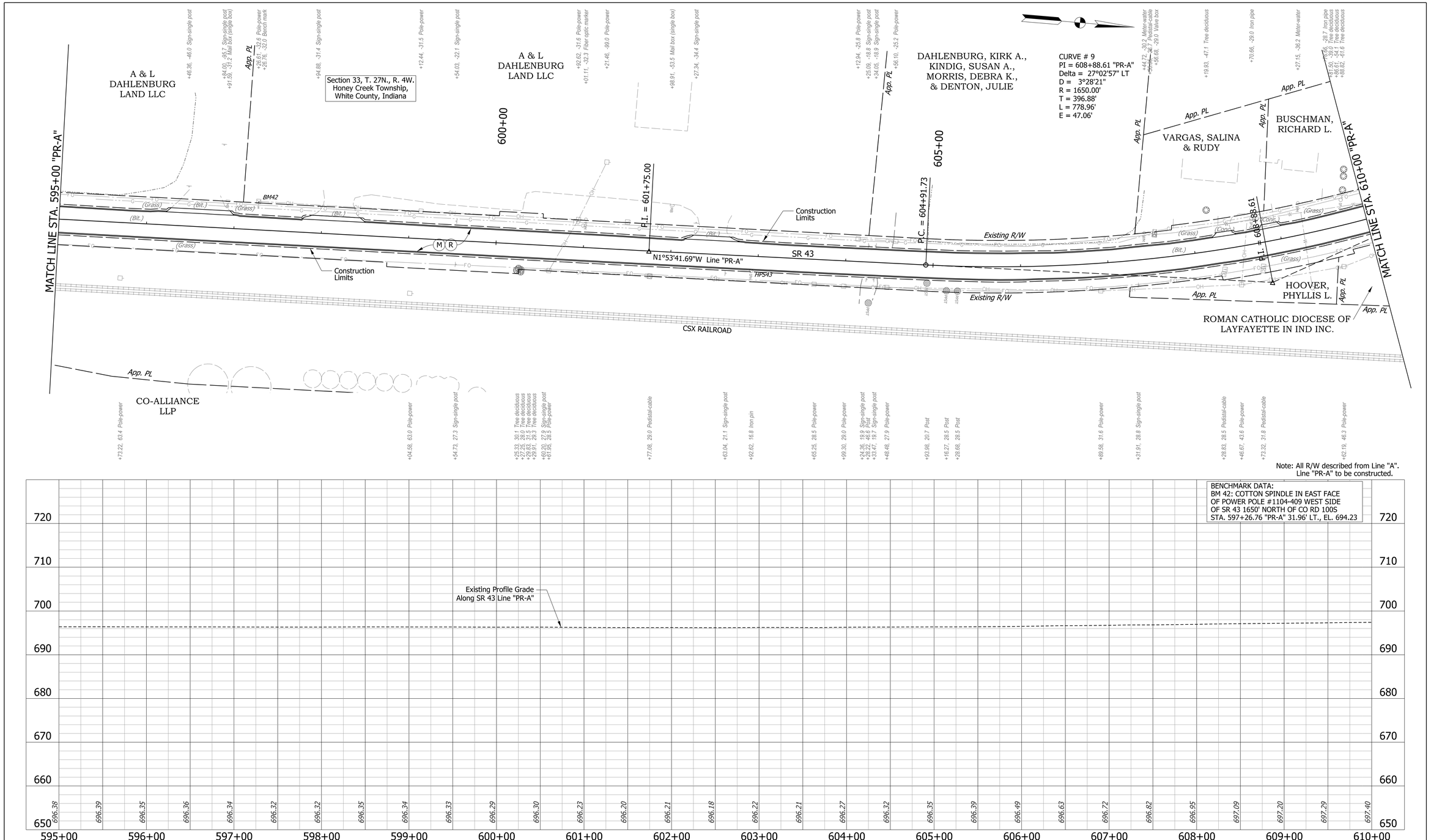
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 580+00 "PR-A" - STA. 595+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	48 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_33.dgn

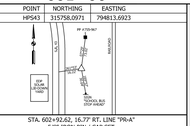


LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS43	315758.0973	794813.6923



STA. 602+92.62, 16.77' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 11/15/22 | DRAWN: MWH 11/15/22

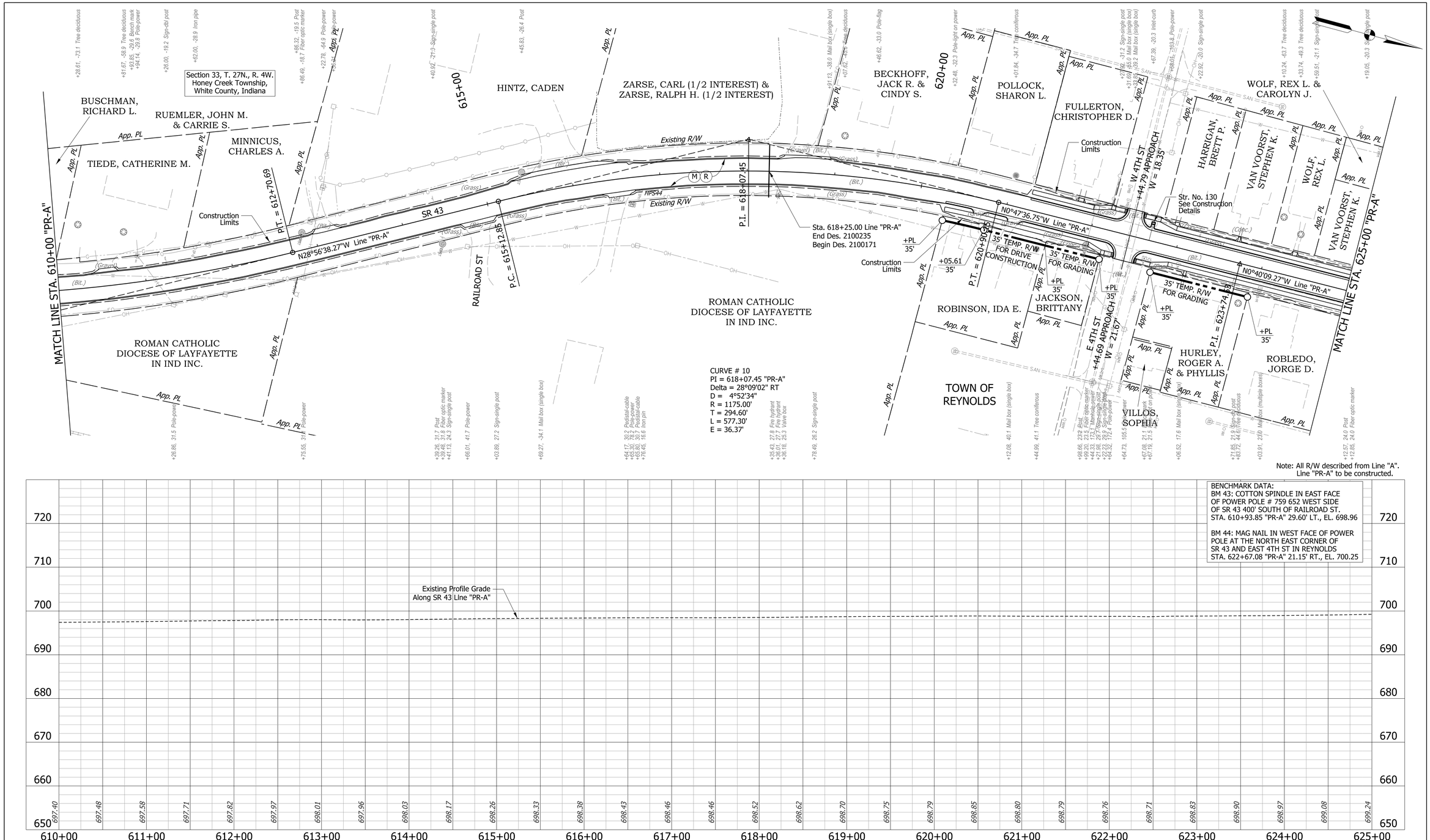
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 595+00 "PR-A" - STA. 610+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	49 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_34.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS44	317066.5535	794414.4620

STA. 616+67.18, 97.67' RT. LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

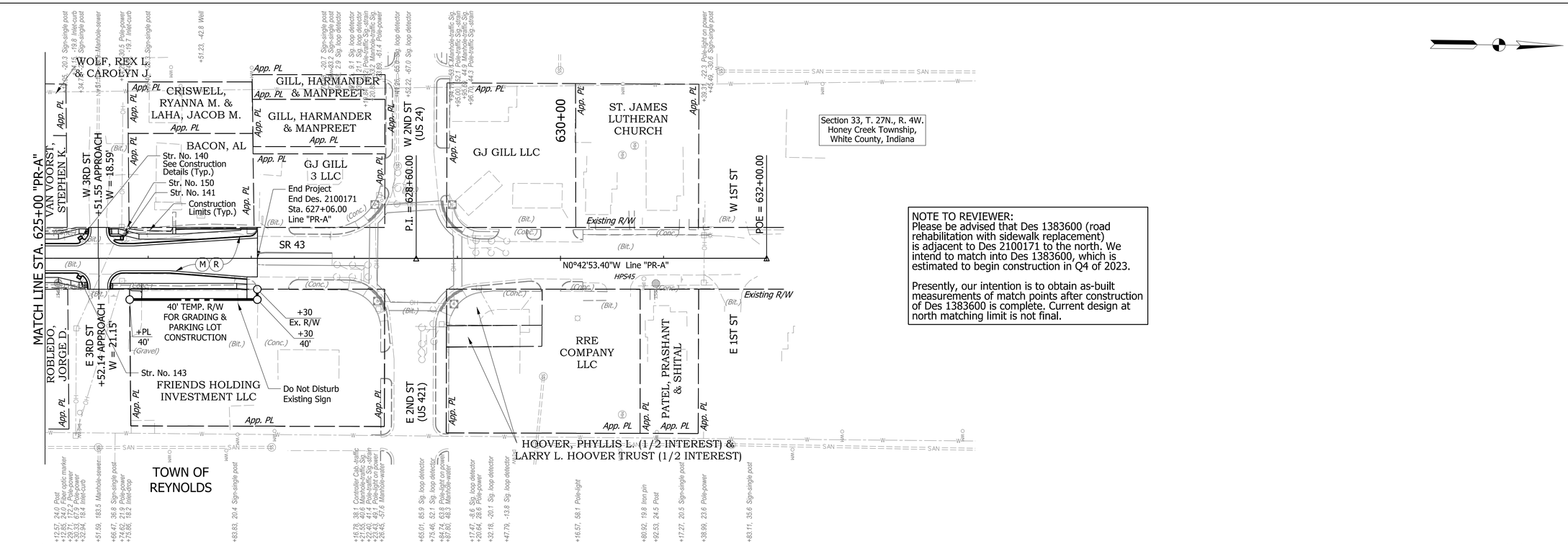
INDIANA
DEPARTMENT OF TRANSPORTATION

DESIGNED: DMB 11/15/22	DRAWN: MWH 11/15/22
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

PLAN AND PROFILE
STA. 610+00 "PR-A" - STA. 625+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	50 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_35.dgn



LEGEND

(M) Milling, Asphalt, 4 in

(R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm
275 lbs/sys QC/QA-HMA, 3, 70, Intermediate, 19.0mm

POINT	NORTHING	EASTING
HPS45	318455.7350	794328.7625

STA. 630+80.92, 19.82' RT., LINE "PR-A"
5/8" IRON PIN / CAP SET

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 11/15/22 DRAWN: MWH 11/15/22

CHECKED: WBB 3/24/23 CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

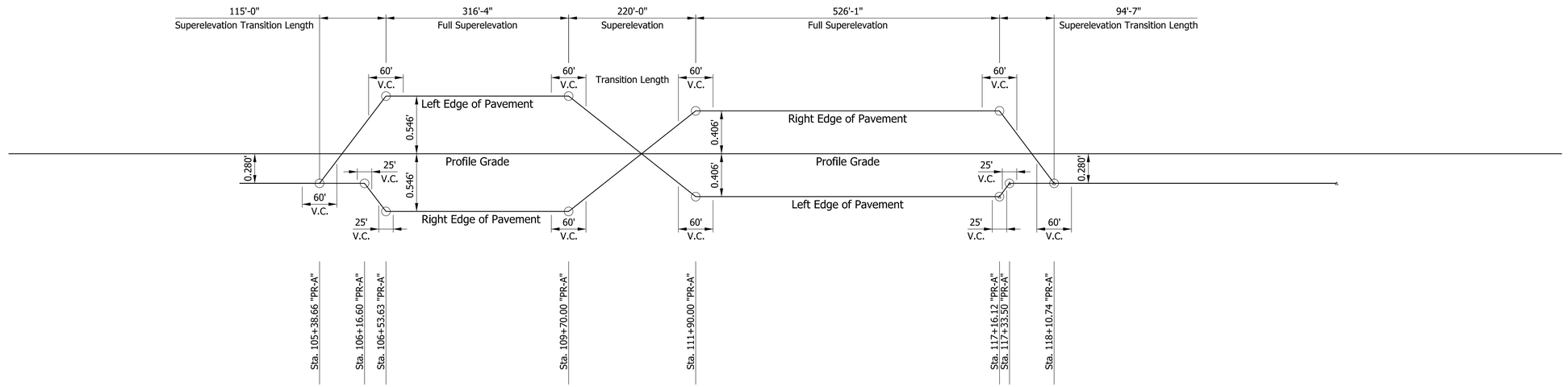
PLAN AND PROFILE
STA. 625+00 "PR-A" - STA. 632+00 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50' H 1" = 10' V	2100235
SURVEY BOOK	SHEETS
	51 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Plan and Profile_50_36.dgn

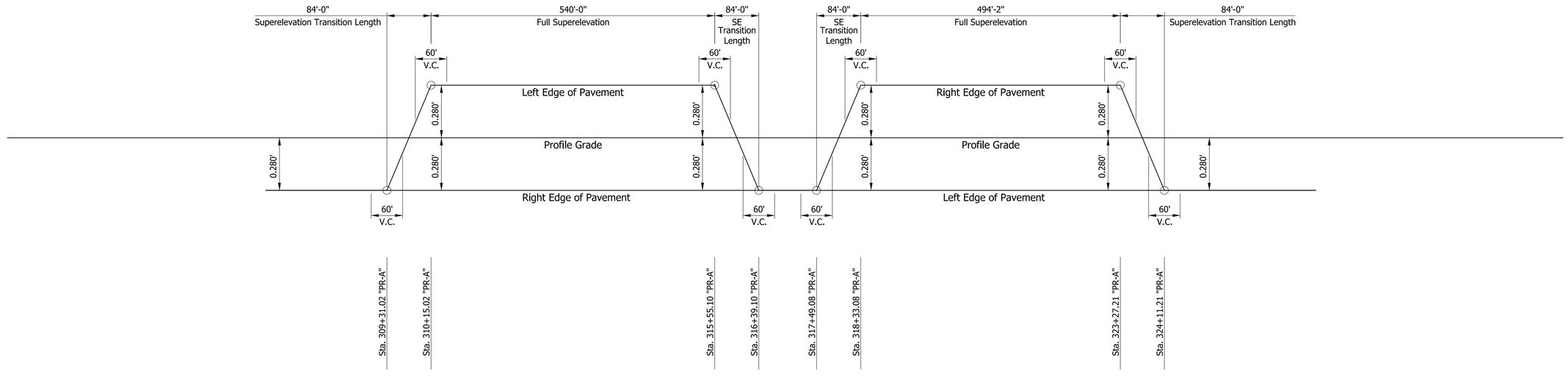
P.I. Sta.: 108+14.80
S.E.: 3.9%

P.I. Sta.: 114+57.01
S.E.: 2.9%



P.I. Sta.: 312+87.64
S.E.: 2.0%

P.I. Sta.: 320+80.86
S.E.: 2.0%



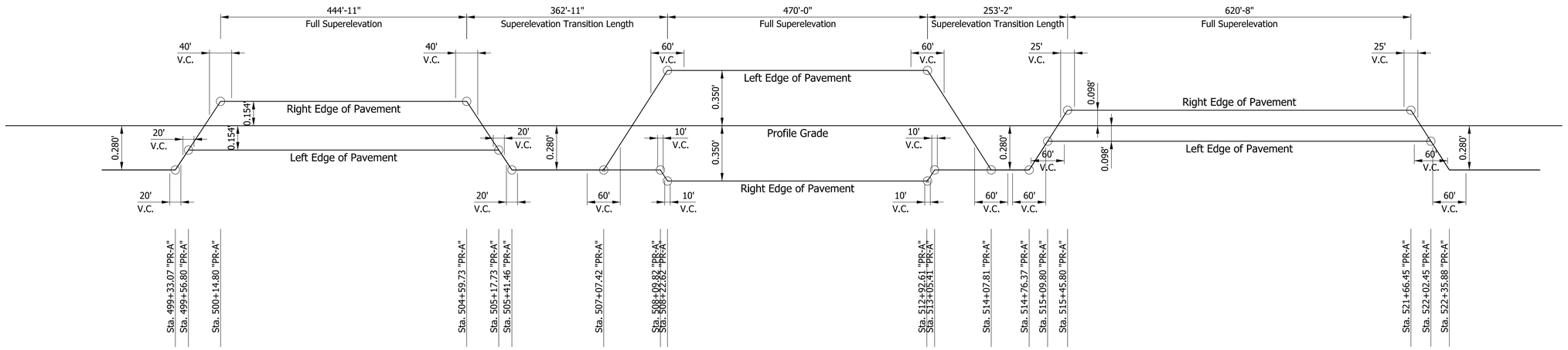
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE	INDIANA DEPARTMENT OF TRANSPORTATION		BRIDGE FILE
			N/A
		SCALE	DESIGNATION
		NO SCALE	2100235
DESIGNED: DMB 8/7/23 DRAWN: MWH 8/7/23	SUPERELEVATION DIAGRAMS	SURVEY BOOK	SHEETS
			52 of 132
CHECKED: WBB 8/7/23 CHECKED: WBB 8/7/23		CONTRACT	PROJECT
		R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht SE Transition Detail_01.dgn

P.I. Sta.: 502+37.46
S.E.: 1.1%

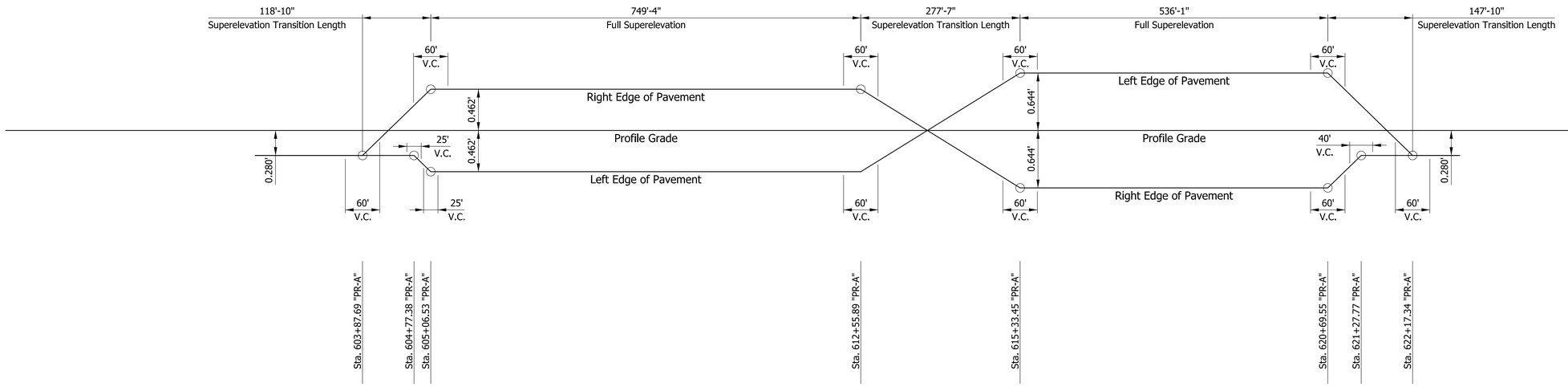
P.I. Sta.: 510+58.50
S.E.: 2.5%

P.I. Sta.: 518+56.41
S.E.: 0.7%



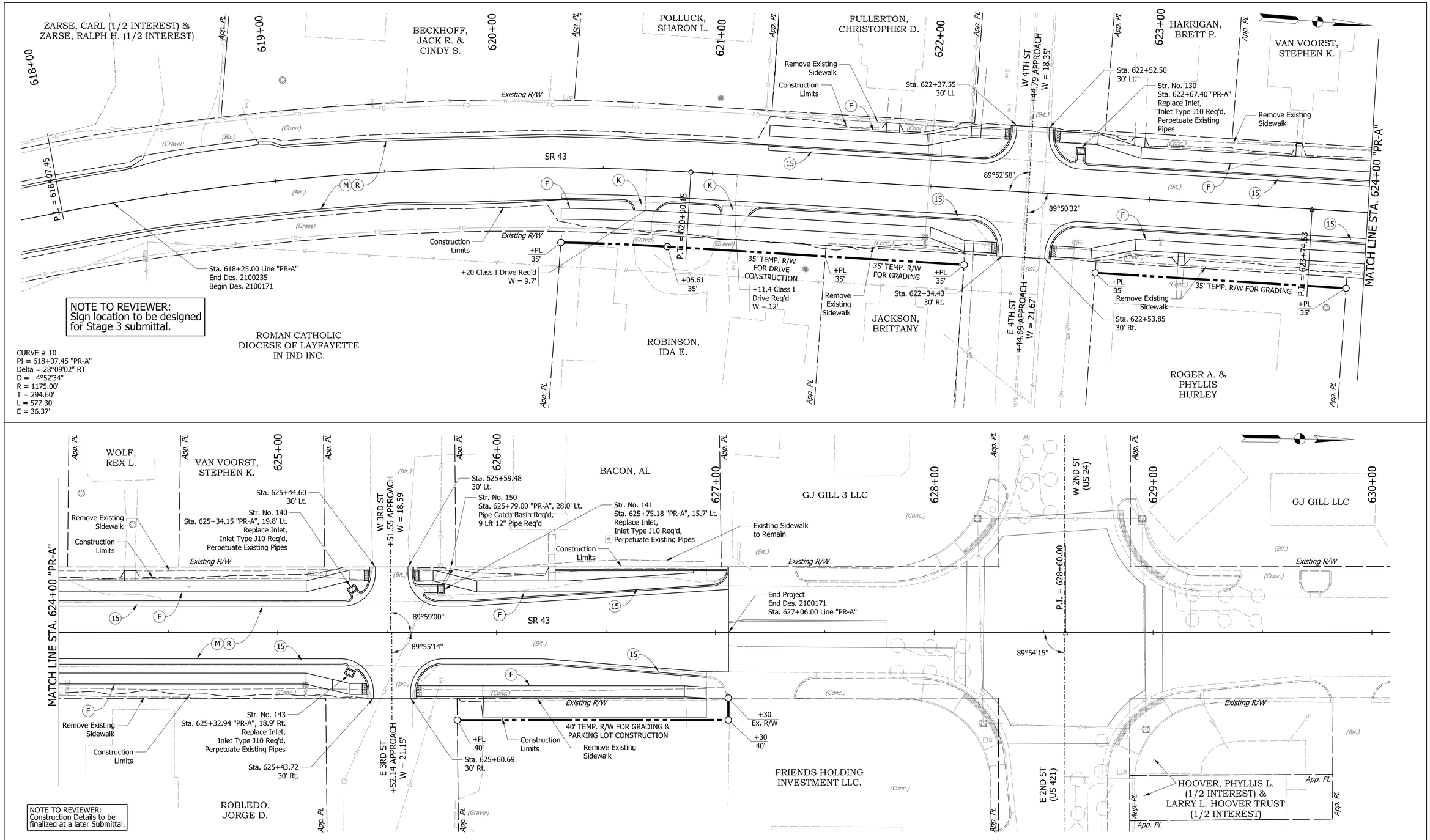
P.I. Sta.: 608+88.61
S.E.: 3.3%

P.I. Sta.: 618+07.25
S.E.: 4.6%



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE		INDIANA DEPARTMENT OF TRANSPORTATION	BRIDGE FILE: N/A
DESIGNED: DMB 8/7/23	DRAWN: MWH 8/7/23	SUPERELEVATION DIAGRAMS	SCALE: NO SCALE; DESIGNATION: 2100235
CHECKED: WBB 8/7/23	CHECKED: WBB 8/7/23		SURVEY BOOK; SHEETS: 53 of 132
			CONTRACT: R-43897; PROJECT: 2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht SE Transition Detail_02.dgn



LEGEND

- (F) Concrete Sidewalk
- (K) PCCP for Approaches, 6 in. on Dense Graded Subbase, 6 in.
- (M) Milling, Asphalt, 4 in
- (R) 165 lbs/sys QC/QA-HMA, 3, 70, Surface, 9.5mm 275 lbs/sys QC/QA-HMA, 3, 70, Intermedlate, 19.0mm
- (15) Combined Concrete Curb and Gutter

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

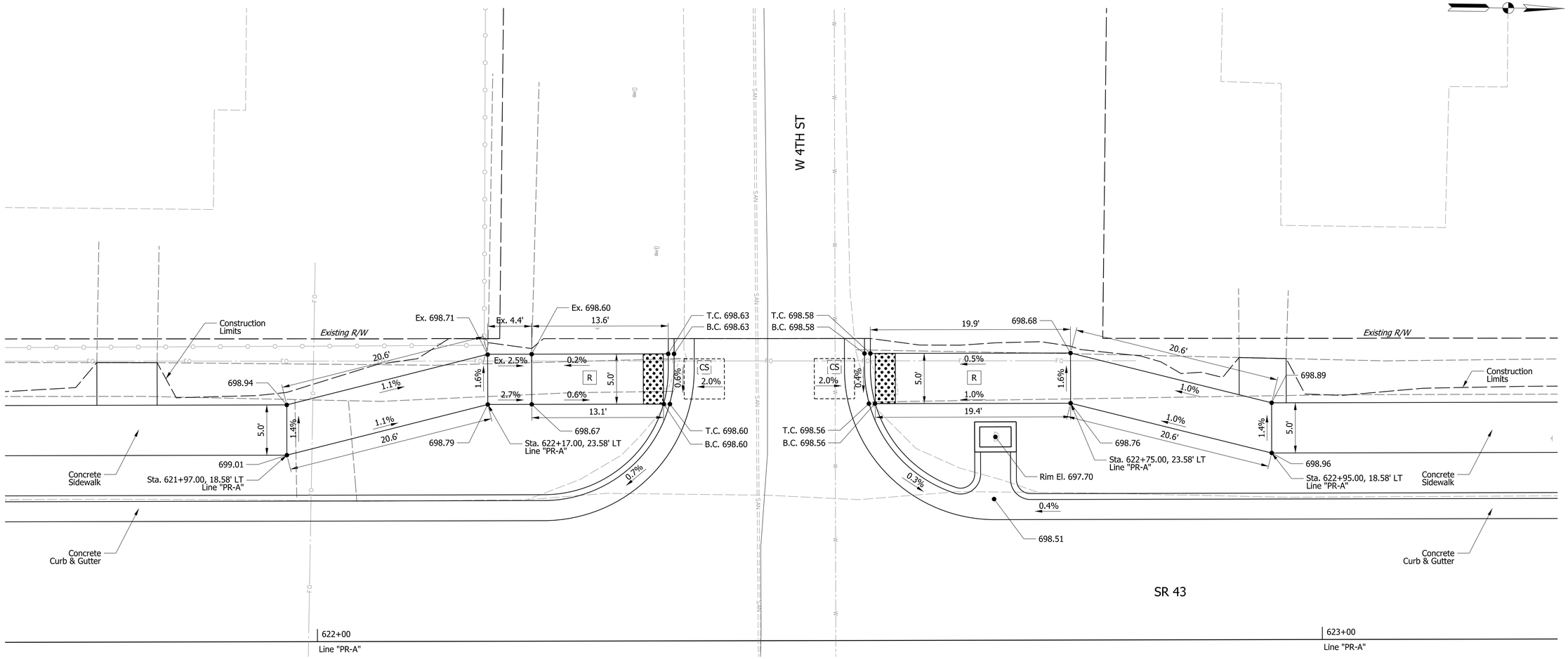
DESIGNED: DMB 2/7/23 | DRAWN: MWH 2/7/23
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 618+25 "PR-A" - STA. 626+96 "PR-A"

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 20'	2100235
SURVEY BOOK	SHEETS
	54 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Const_Det_20_01.dgn



LEGEND

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface
- Profile Milling
- R Ramp
- TS Turning Space
- CS Clear Space
- PC Pedestrian Clear Space
- FS Flared Side
- (F) Sidewalk, Concrete, 4"
- (MS) Mulched Seeding, U
- (O) 165 LBS/SYD HMA Surface on Approach Milling
- (P) HMA Patching, Type C 440 LBS/SYD HMA Intermediate, Type C, on 440 LBS/SYD HMA Base, Type C
- (13) Concrete Curb
- (14) Curb, Concrete, Modified
- (15) Concrete Curb and Gutter, Modified
- (16) Return Curb
- x.x% Proposed or Existing Slopes
- Proposed or Existing Elevations
- Ex. Existing Slope or Elevation
- T.C. Top of Curb
- B.C. Bottom of Curb
- Pedestrian Push Button

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

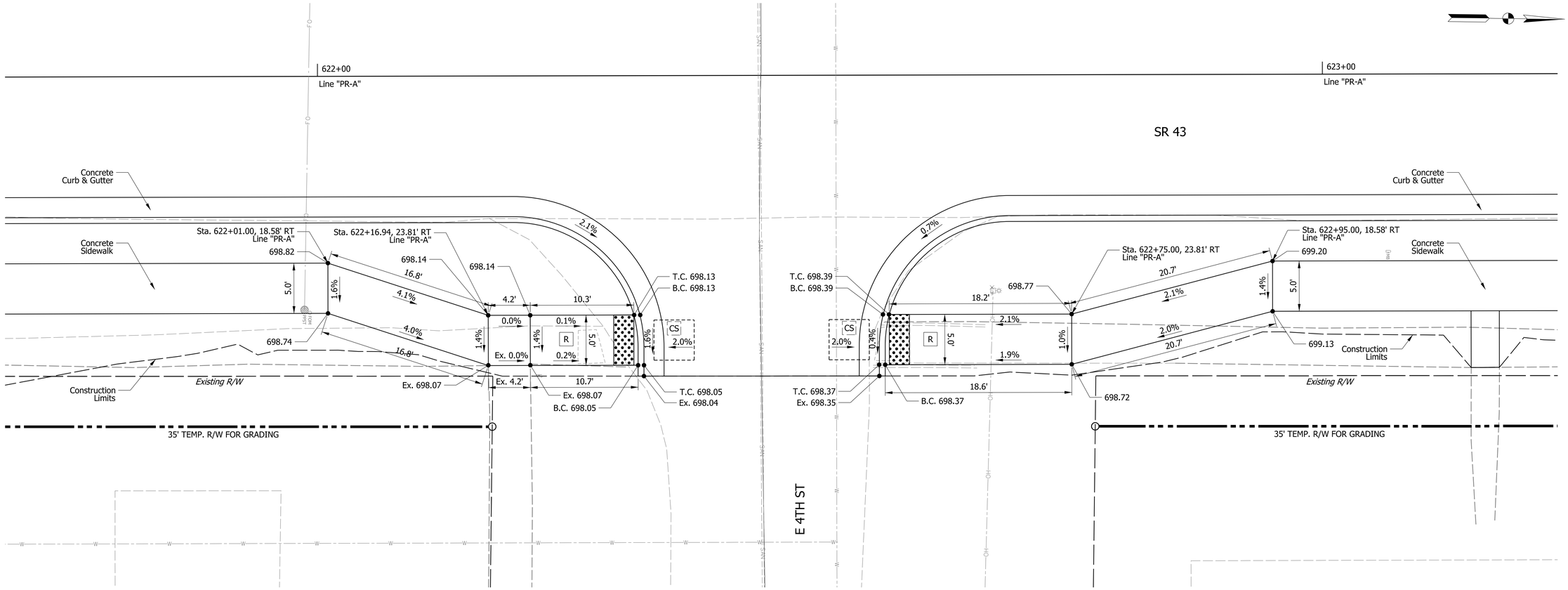
DESIGNED: DMB 4/27/23
DRAWN: MWH 4/27/23
CHECKED: WBB 4/27/23
CHECKED: WBB 4/27/23

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
SR 43 & W 4TH ST

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" =5'	2100235
SURVEY BOOK	SHEETS
	55 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Const_Det_5_01.dgn



LEGEND

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface
- Profile Milling
- R — Ramp
- TS — Turning Space
- CS — Clear Space
- PC — Pedestrian Clear Space
- FS — Flared Side
- (F) — Sidewalk, Concrete, 4"
- (MS) — Mulched Seeding, U
- (O) — 165 LBS/SYD HMA Surface on Approach Milling
- (P) — HMA Patching, Type C 440 LBS/SYD HMA Intermediate, Type C, on 440 LBS/SYD HMA Base, Type C
- (13) — Concrete Curb
- (14) — Curb, Concrete, Modified
- (15) — Concrete Curb and Gutter, Modified
- (16) — Return Curb
- x.x% — Proposed or Existing Slopes
- ● — Proposed or Existing Elevations
- Ex. — Existing Slope or Elevation
- T.C. — Top of Curb
- B.C. — Bottom of Curb
- Pedestrian Push Button

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

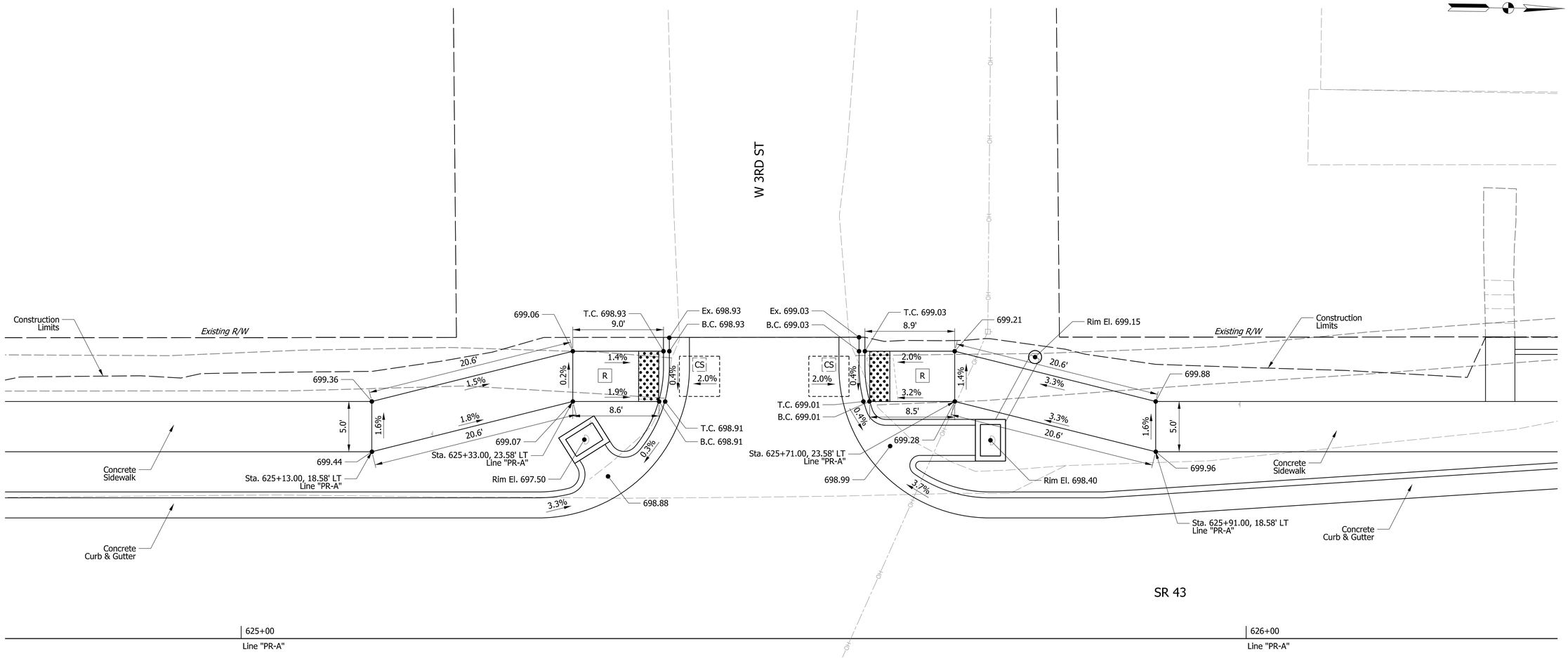
DESIGNED: DMB 4/27/23
DRAWN: MWH 4/27/23
CHECKED: WBB 4/27/23
CHECKED: WBB 4/27/23

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
SR 43 & E 4TH ST

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" =5'	2100235
SURVEY BOOK	SHEETS
	56 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Const_Det_5_02.dgn



LEGEND

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface
- Profile Milling
- R Ramp
- TS Turning Space
- CS Clear Space
- PC Pedestrian Clear Space
- FS Flared Side
- (F) Sidewalk, Concrete, 4"
- (MS) Mulched Seeding, U
- (O) 165 LBS/SYD HMA Surface on Approach Milling
- (P) HMA Patching, Type C 440 LBS/SYD HMA Intermediate, Type C, on 440 LBS/SYD HMA Base, Type C
- (13) Concrete Curb
- (14) Curb, Concrete, Modified
- (15) Concrete Curb and Gutter, Modified
- (16) Return Curb
- x.x% Proposed or Existing Slopes
- Proposed or Existing Elevations
- Ex. Existing Slope or Elevation
- T.C. Top of Curb
- B.C. Bottom of Curb
- Pedestrian Push Button

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

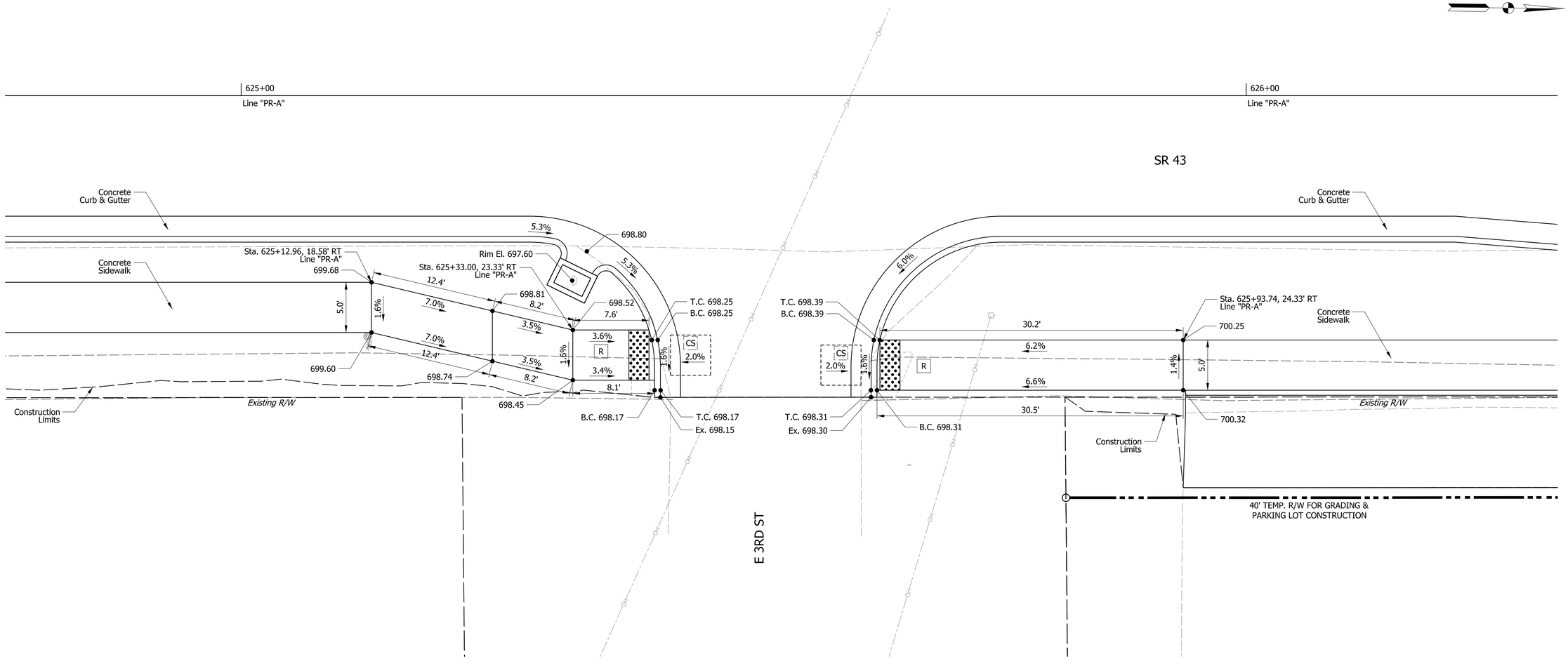
DESIGNED: DMB 4/27/23 | DRAWN: MWH 4/27/23
CHECKED: WBB 4/27/23 | CHECKED: WBB 4/27/23

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
SR 43 & W 3RD ST

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" =5'	2100235
SURVEY BOOK	SHEETS
	57 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Const_Det_5_03.dgn



LEGEND

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface
- Profile Milling
- R — Ramp
- TS — Turning Space
- CS — Clear Space
- PC — Pedestrian Clear Space
- FS — Flared Side
- (F) — Sidewalk, Concrete, 4"
- (MS) — Mulched Seeding, U
- (O) — 165 LBS/SYD HMA Surface on Approach Milling
- (P) — HMA Patching, Type C 440 LBS/SYD HMA Intermediate, Type C, on 440 LBS/SYD HMA Base, Type C
- (13) — Concrete Curb
- (14) — Curb, Concrete, Modified
- (15) — Concrete Curb and Gutter, Modified
- (16) — Return Curb
- x.x% — Proposed or Existing Slopes
- Proposed or Existing Elevations
- Ex. — Existing Slope or Elevation
- T.C. — Top of Curb
- B.C. — Bottom of Curb
- Pedestrian Push Button

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

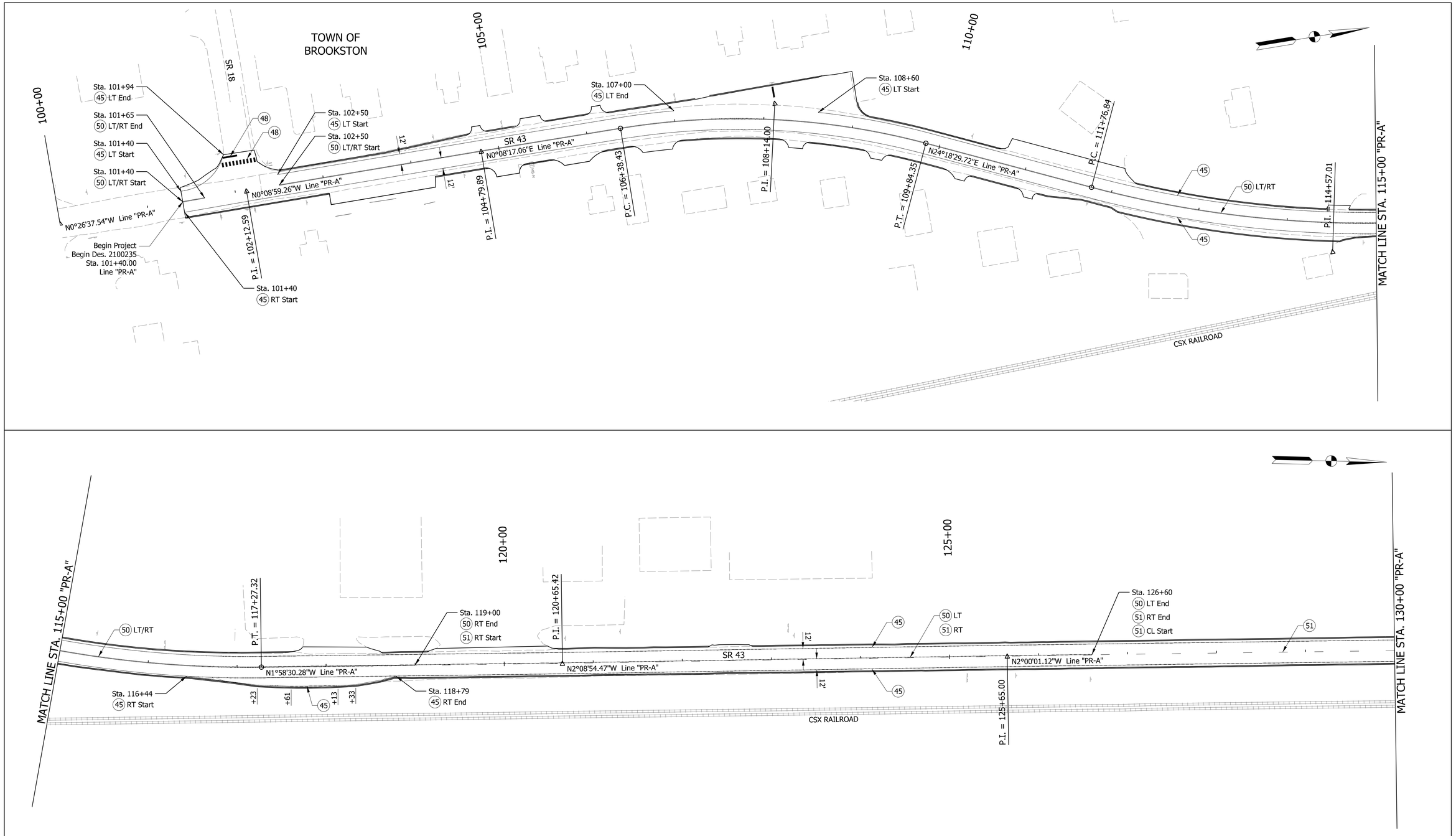
DESIGNED: DMB 4/27/23	DRAWN: MWH 4/27/23
CHECKED: WBB 4/27/23	CHECKED: WBB 4/27/23

INDIANA
DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS
SR 43 & E 3RD ST

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" =5'	2100235
SURVEY BOOK	SHEETS
	58 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht Const_Det_5_04.dgn



LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

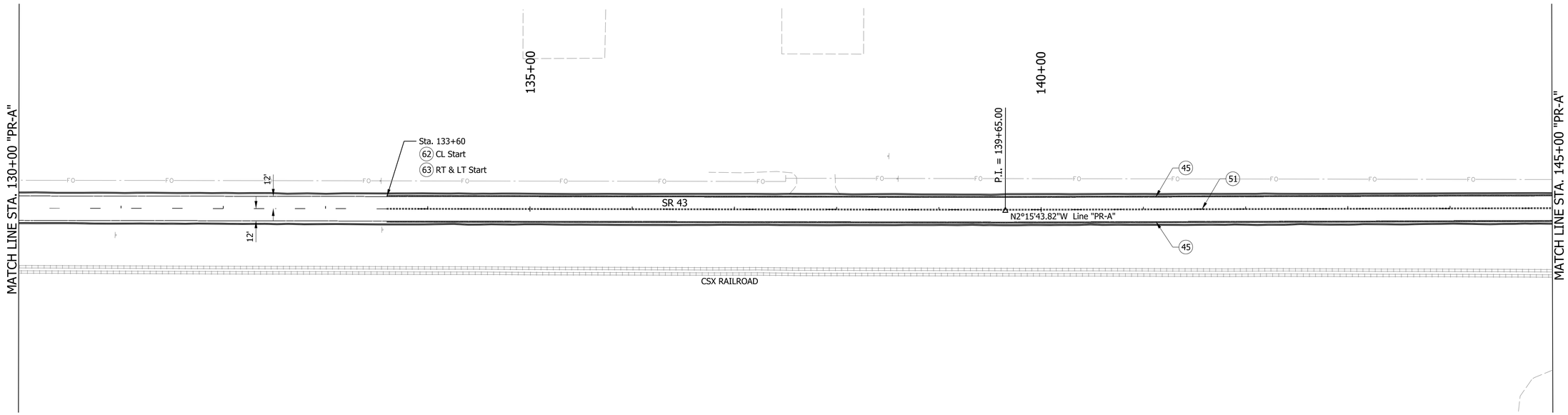
DESIGNED: DMB 1/11/23
DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

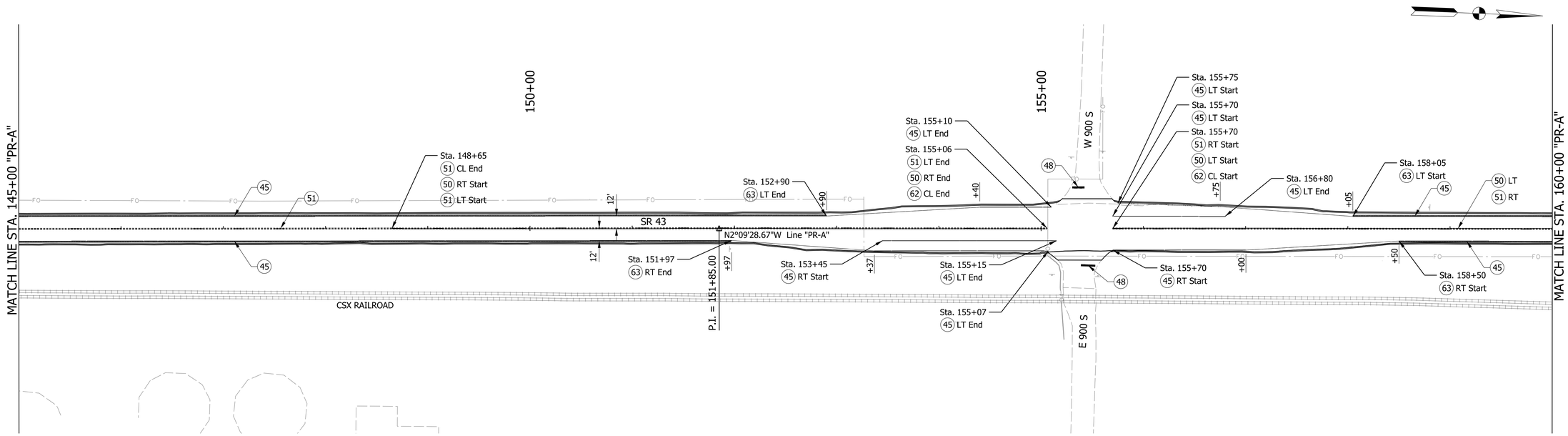
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	59 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_01.dgn





LEGEND

- 41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- 45 Line, Thermoplastic, Solid White, 6 in.
- 46 Line, Thermoplastic, Solid White, 8 in.
- 47 Line, Thermoplastic, Solid White, 12 in.
- 48 Line, Thermoplastic, Solid White, 24 in.
- 49 Line, Thermoplastic, Broken, White, 6 in.
- 50 Line, Thermoplastic, Solid Yellow, 6 in.
- 51 Line, Thermoplastic, Broken, Yellow, 6 in.
- 62 Milled HMA Corrugations, Sinusoidal (Centerline)
- 63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

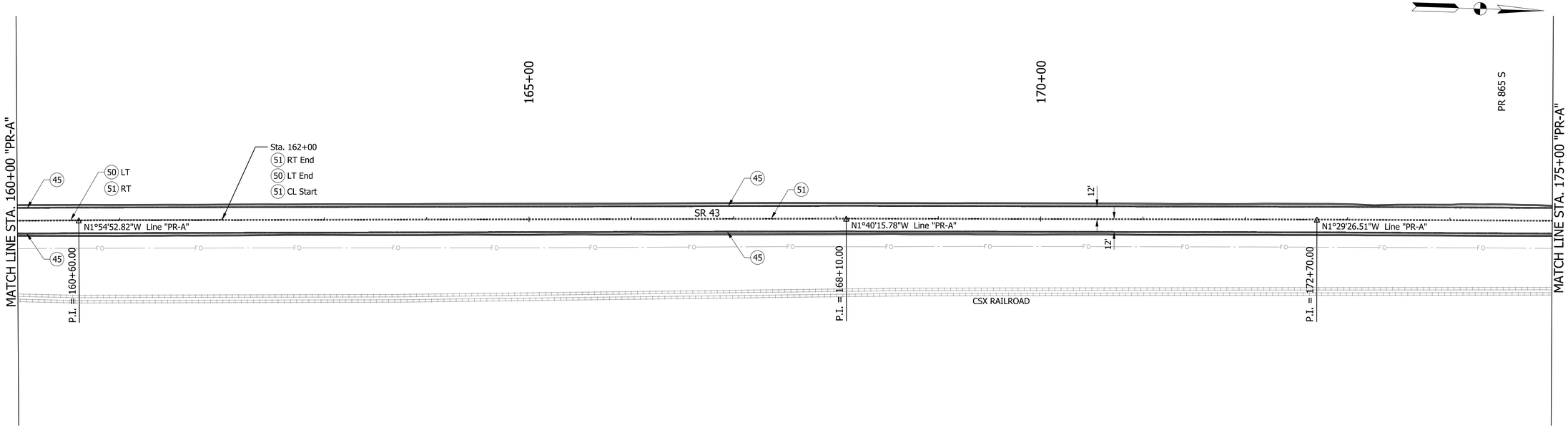
DESIGNED: DMB 1/11/23	DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

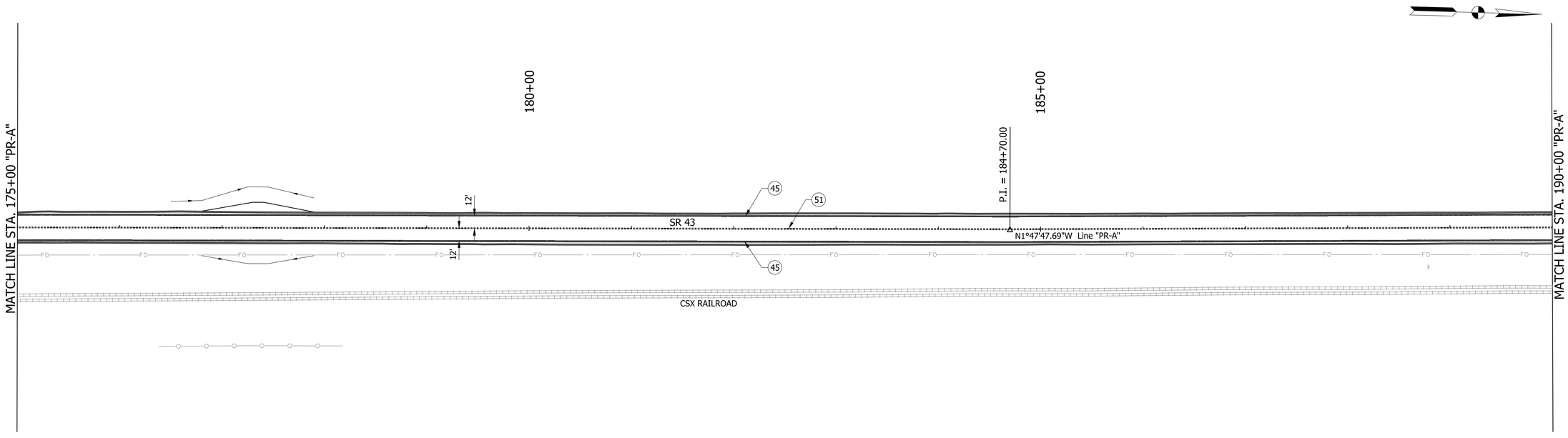
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	60 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_02.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

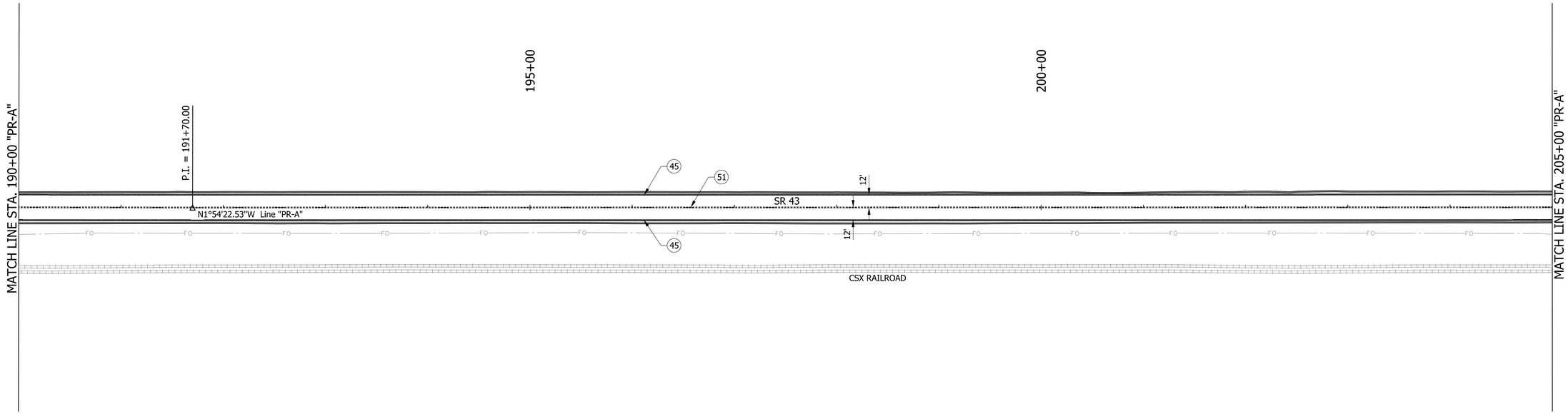
DESIGNED: DMB 1/11/23
DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

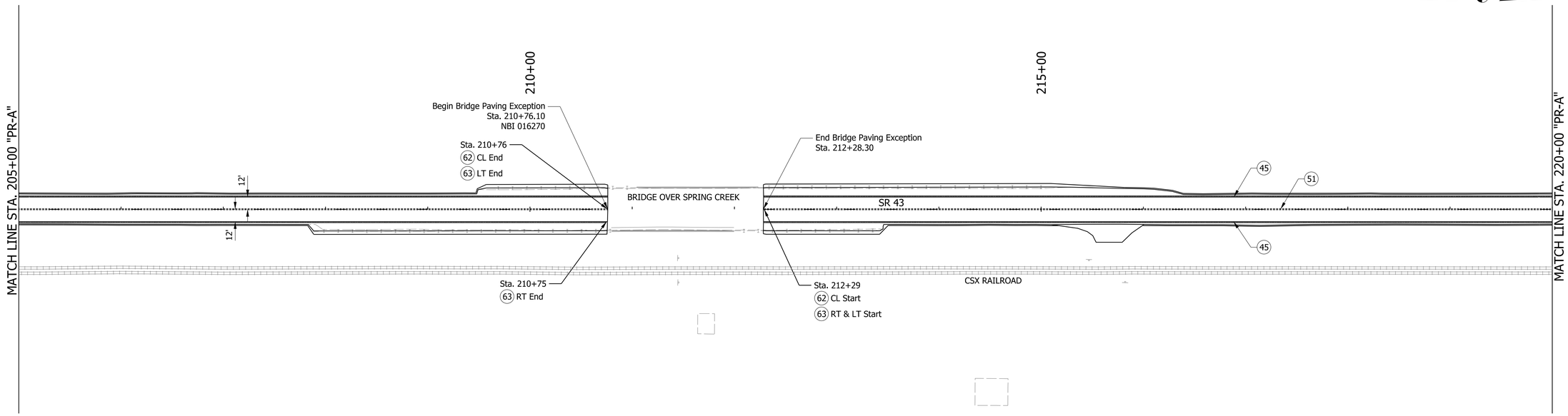
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	61 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_03.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 In.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

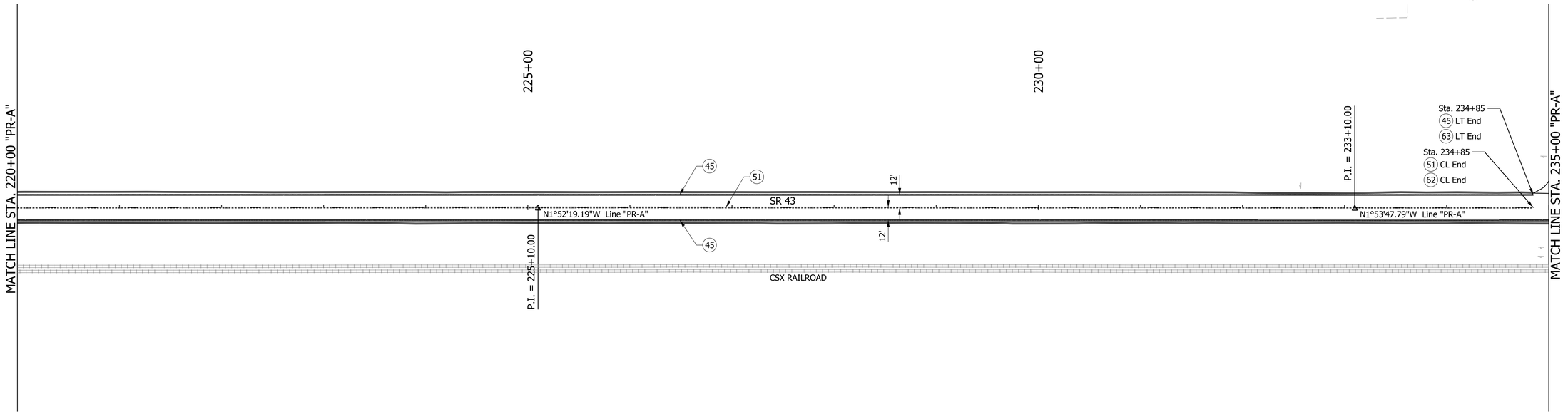
DESIGNED: DMB 1/11/23
DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

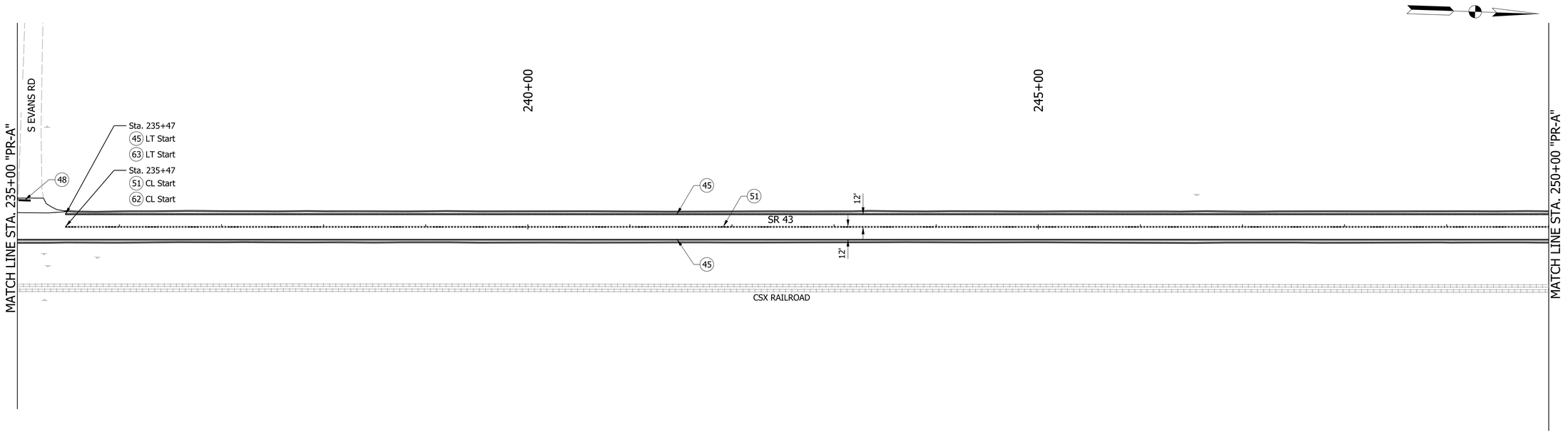
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	62 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_04.dgn





LEGEND

- 41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- 45 Line, Thermoplastic, Solid White, 6 in.
- 46 Line, Thermoplastic, Solid White, 8 in.
- 47 Line, Thermoplastic, Solid White, 12 in.
- 48 Line, Thermoplastic, Solid White, 24 in.
- 49 Line, Thermoplastic, Broken, White, 6 in.
- 50 Line, Thermoplastic, Solid Yellow, 6 in.
- 51 Line, Thermoplastic, Broken, Yellow, 6 in.
- 62 Milled HMA Corrugations, Sinusoidal (Centerline)
- 63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23

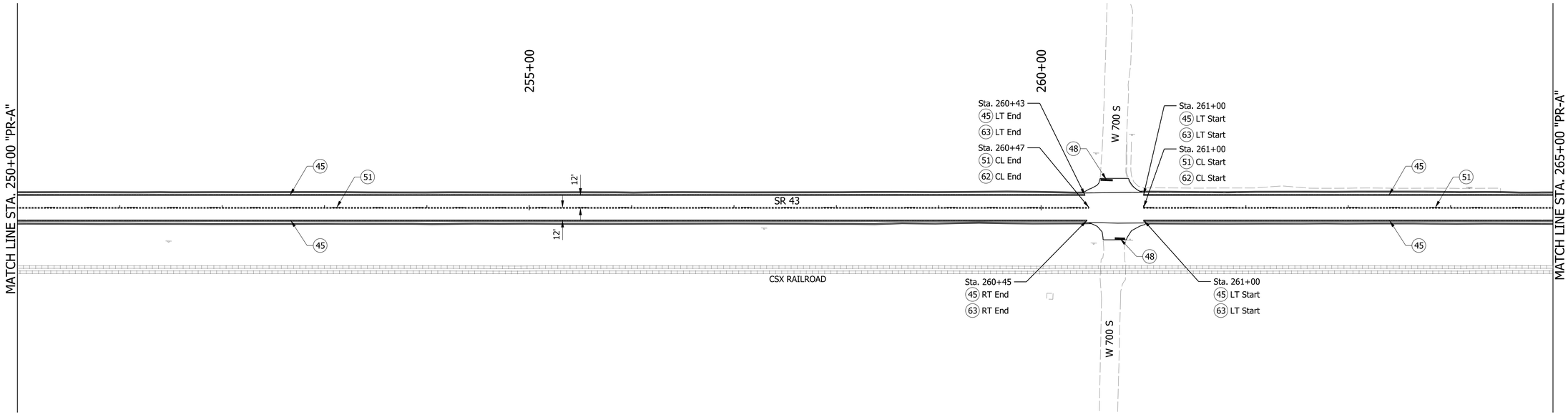
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

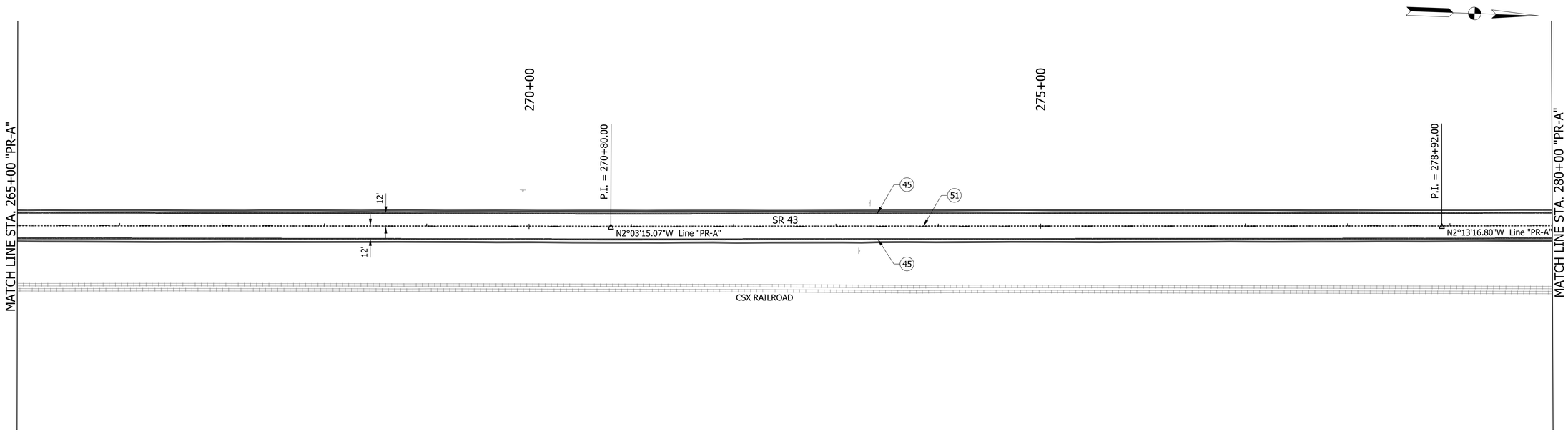
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	63 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_05.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

ONLY Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23

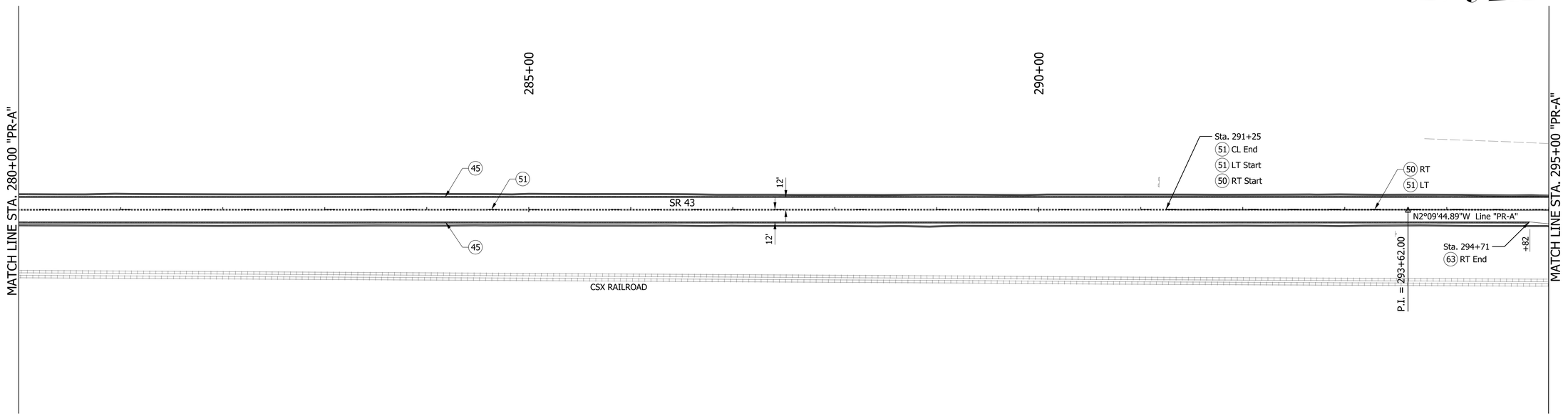
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

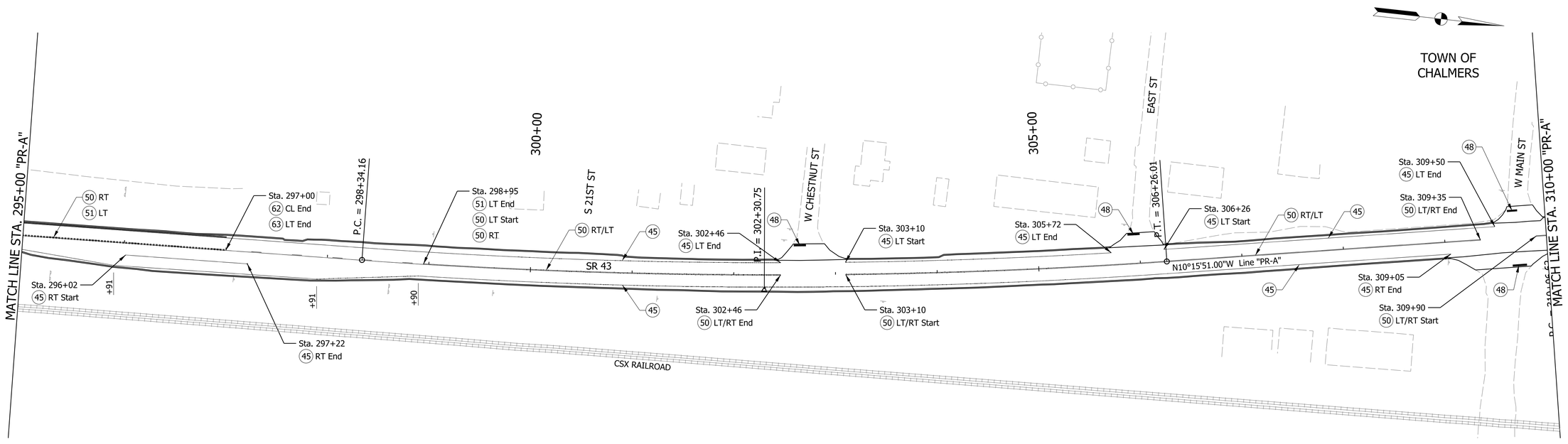
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	64 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_06.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

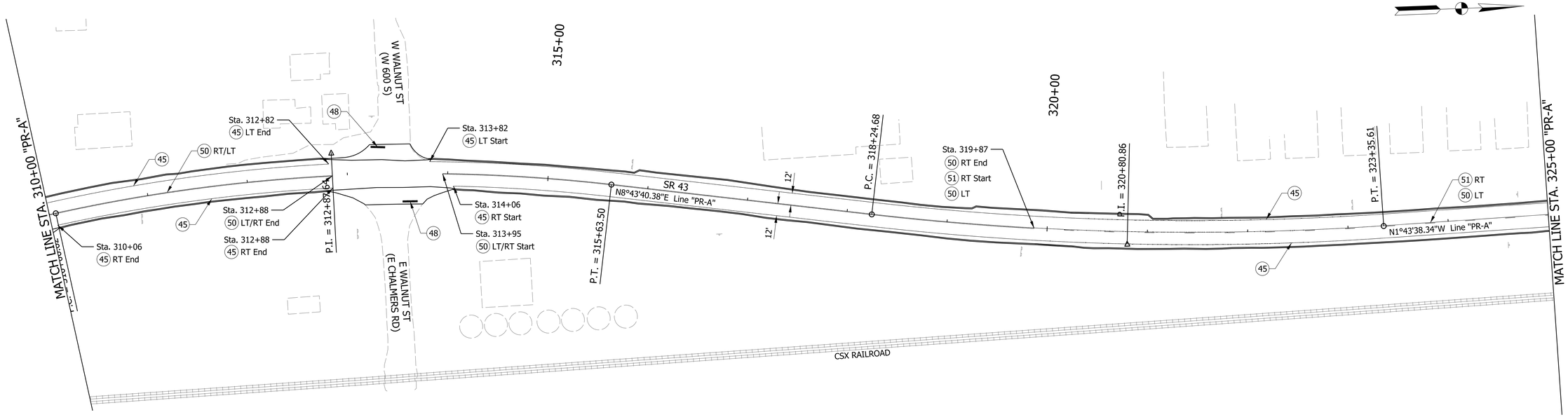
DESIGNED: DMB 1/11/23	DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

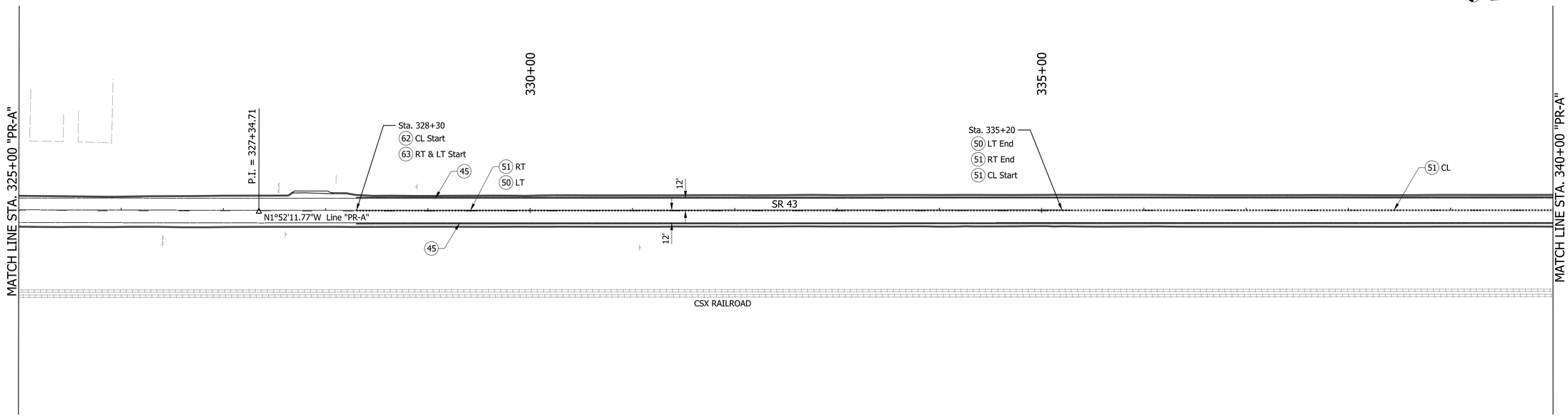
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	65 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_07.dgn





LEGEND

- 41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- 45 Line, Thermoplastic, Solid White, 6 in.
- 46 Line, Thermoplastic, Solid White, 8 in.
- 47 Line, Thermoplastic, Solid White, 12 in.
- 48 Line, Thermoplastic, Solid White, 24 in.
- 49 Line, Thermoplastic, Broken, White, 6 in.
- 50 Line, Thermoplastic, Solid Yellow, 6 in.
- 51 Line, Thermoplastic, Broken, Yellow, 6 in.
- 62 Milled HMA Corrugations, Sinusoidal (Centerline)
- 63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

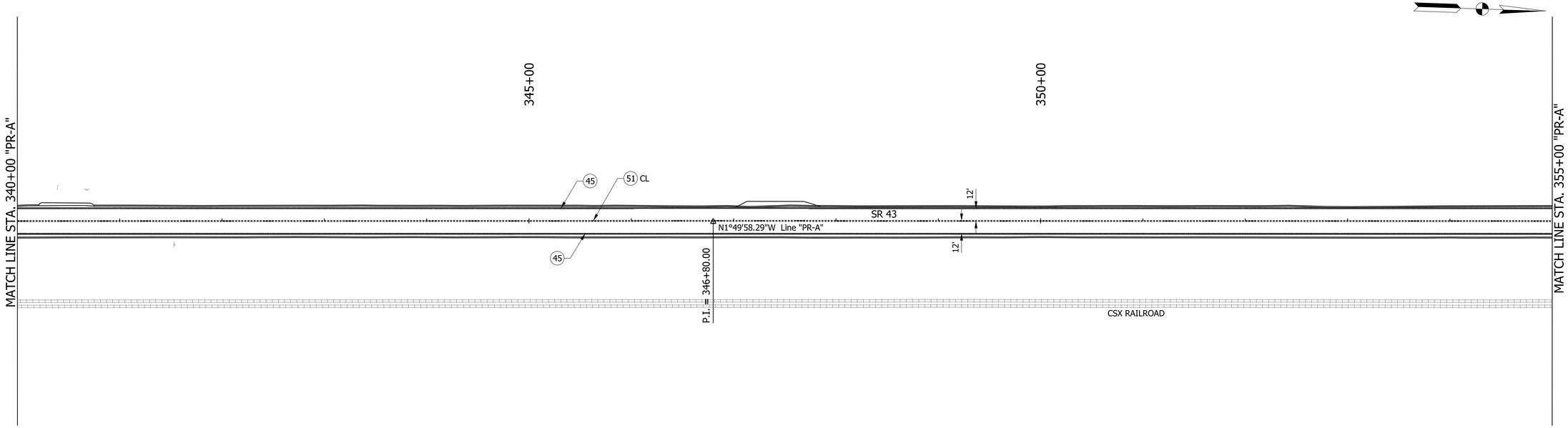
DESIGNED: DMB	1/11/23	DRAWN: MWH	1/11/23
CHECKED: WBB	3/24/23	CHECKED: WBB	3/24/23

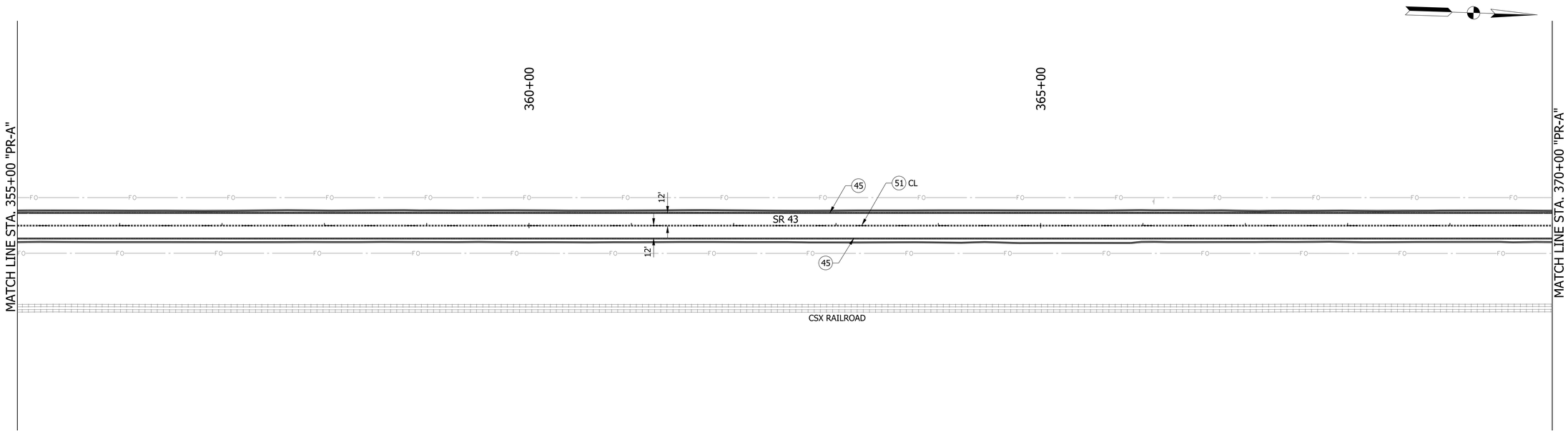
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	66 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_08.dgn





LEGEND

- (41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- (45) Line, Thermoplastic, Solid White, 6 in.
- (46) Line, Thermoplastic, Solid White, 8 in.
- (47) Line, Thermoplastic, Solid White, 12 In.
- (48) Line, Thermoplastic, Solid White, 24 in.
- (49) Line, Thermoplastic, Broken, White, 6 in.
- (50) Line, Thermoplastic, Solid Yellow, 6 in.
- (51) Line, Thermoplastic, Broken, Yellow, 6 in.
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

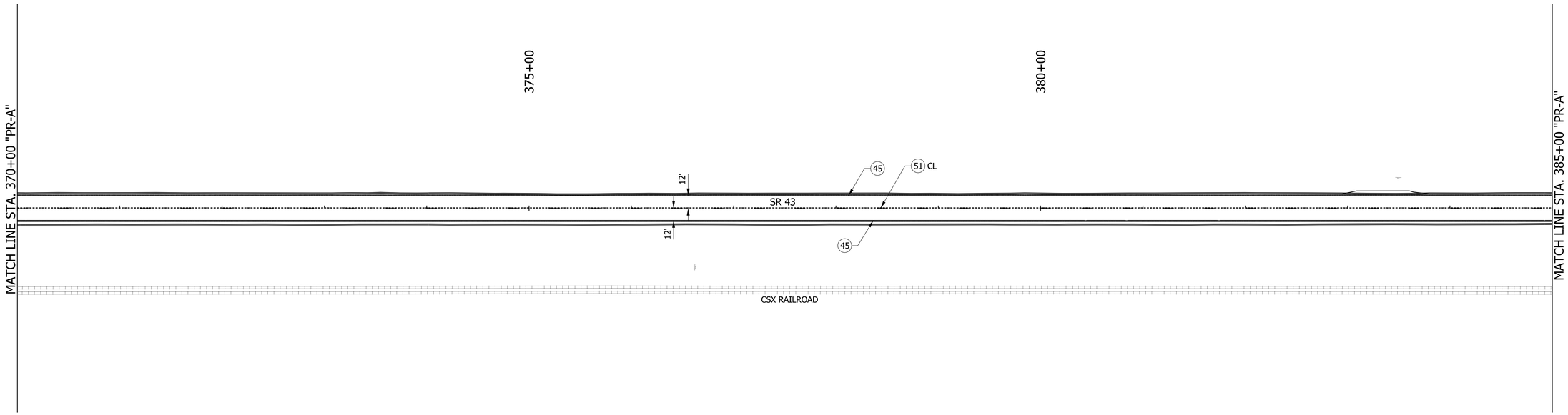
DESIGNED: DMB 1/11/23	DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

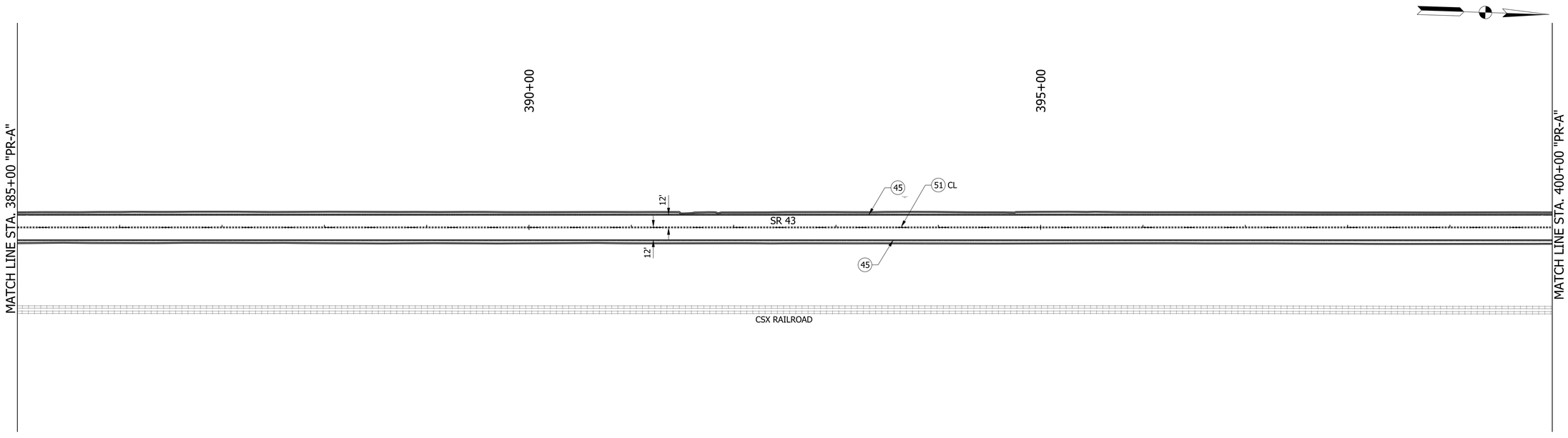
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	67 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_09.dgn





LEGEND

- (41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- (45) Line, Thermoplastic, Solid White, 6 in.
- (46) Line, Thermoplastic, Solid White, 8 in.
- (47) Line, Thermoplastic, Solid White, 12 in.
- (48) Line, Thermoplastic, Solid White, 24 in.
- (49) Line, Thermoplastic, Broken, White, 6 in.
- (50) Line, Thermoplastic, Solid Yellow, 6 in.
- (51) Line, Thermoplastic, Broken, Yellow, 6 in.
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23

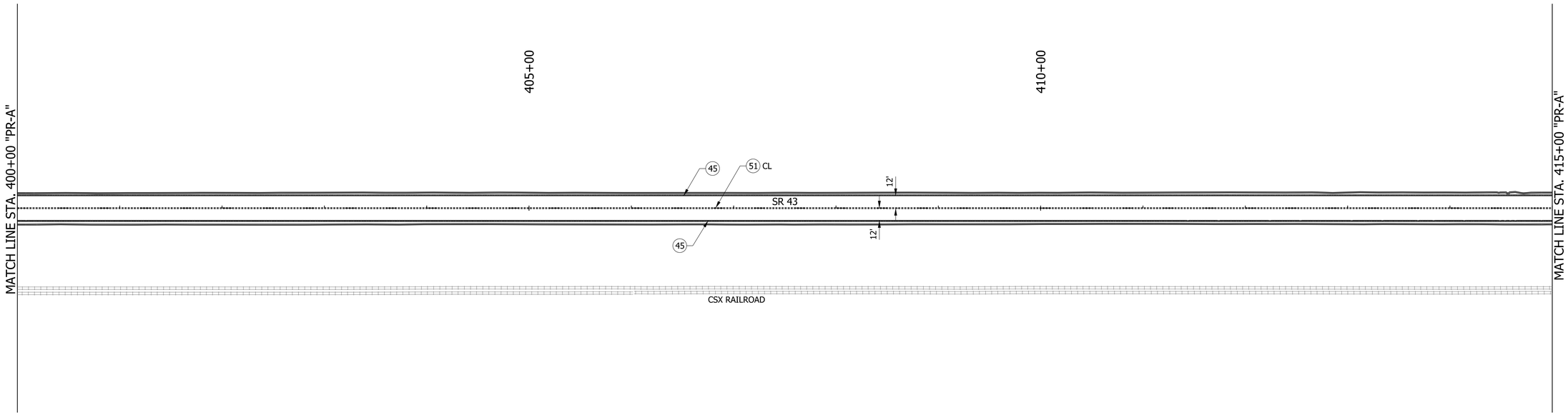
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

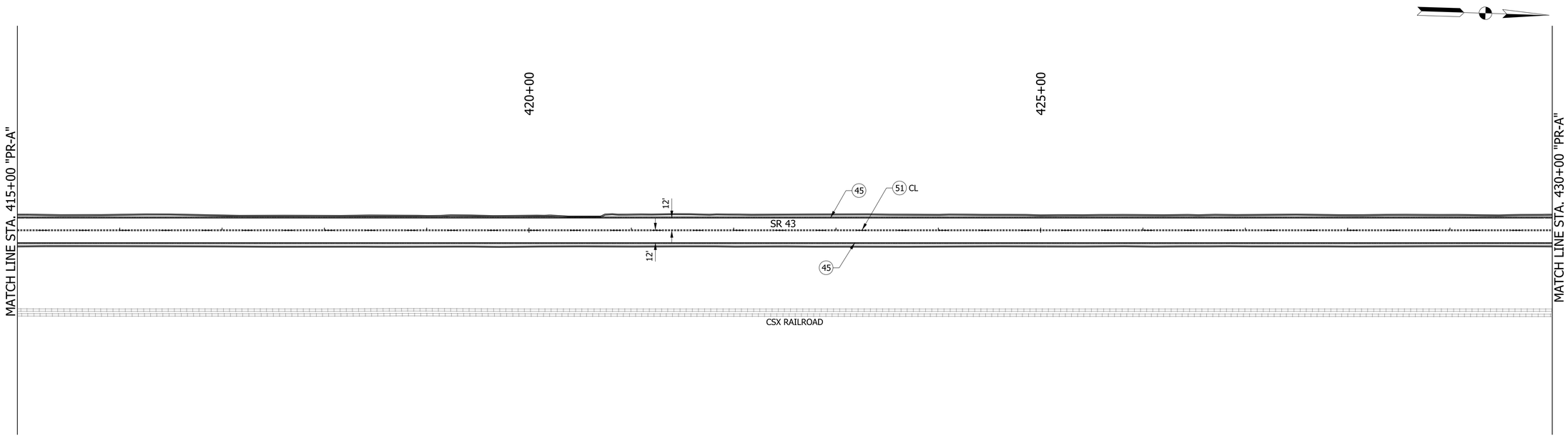
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	68 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_10.dgn





LEGEND

- (41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- (45) Line, Thermoplastic, Solid White, 6 in.
- (46) Line, Thermoplastic, Solid White, 8 in.
- (47) Line, Thermoplastic, Solid White, 12 in.
- (48) Line, Thermoplastic, Solid White, 24 in.
- (49) Line, Thermoplastic, Broken, White, 6 in.
- (50) Line, Thermoplastic, Solid Yellow, 6 in.
- (51) Line, Thermoplastic, Broken, Yellow, 6 in.
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

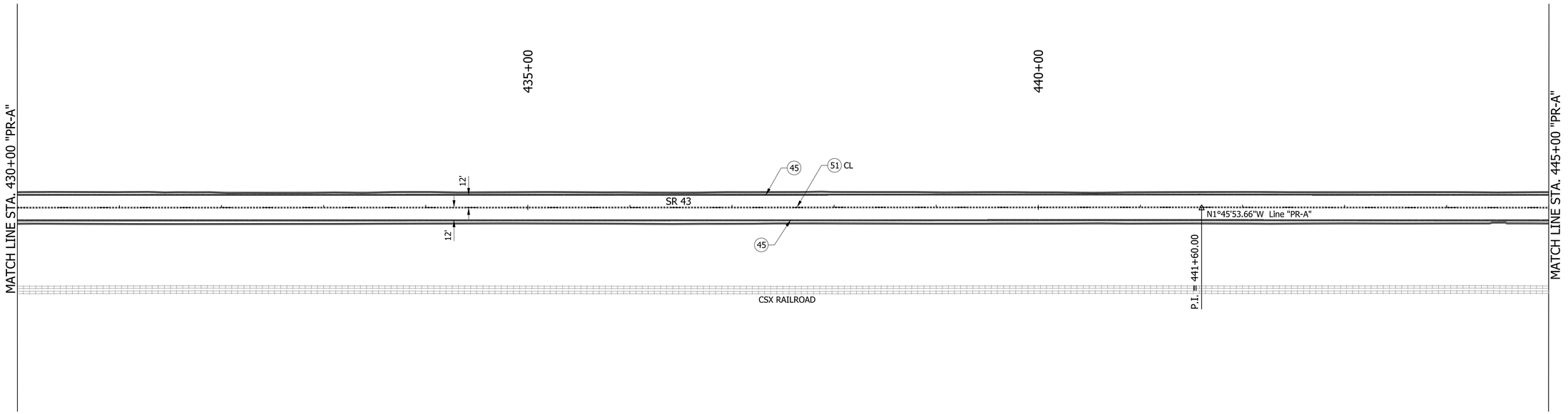
DESIGNED: DMB 1/11/23	DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

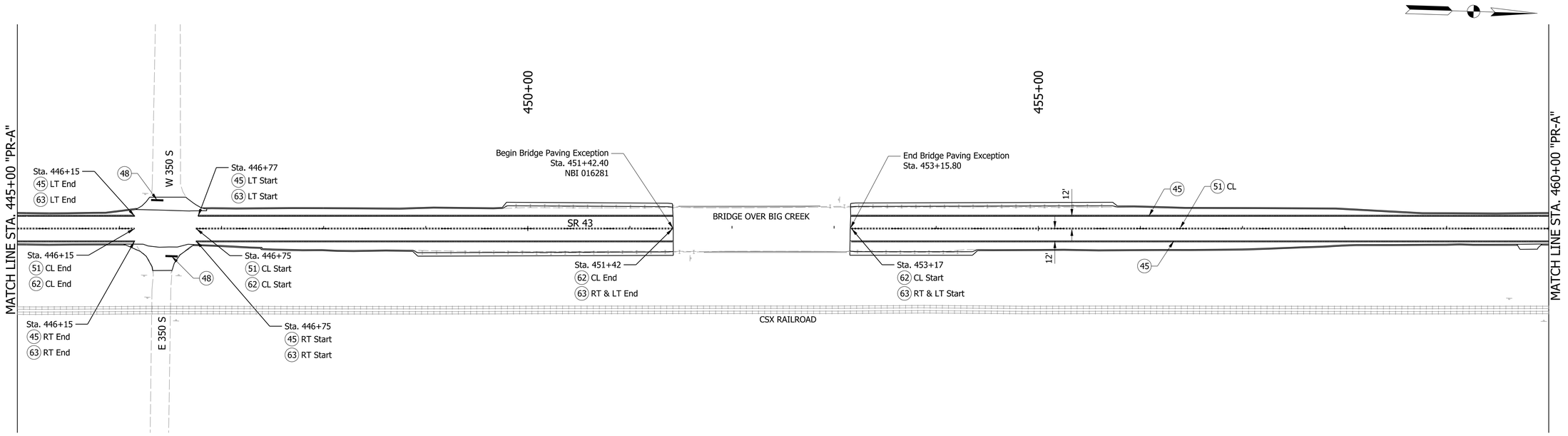
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	69 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_11.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

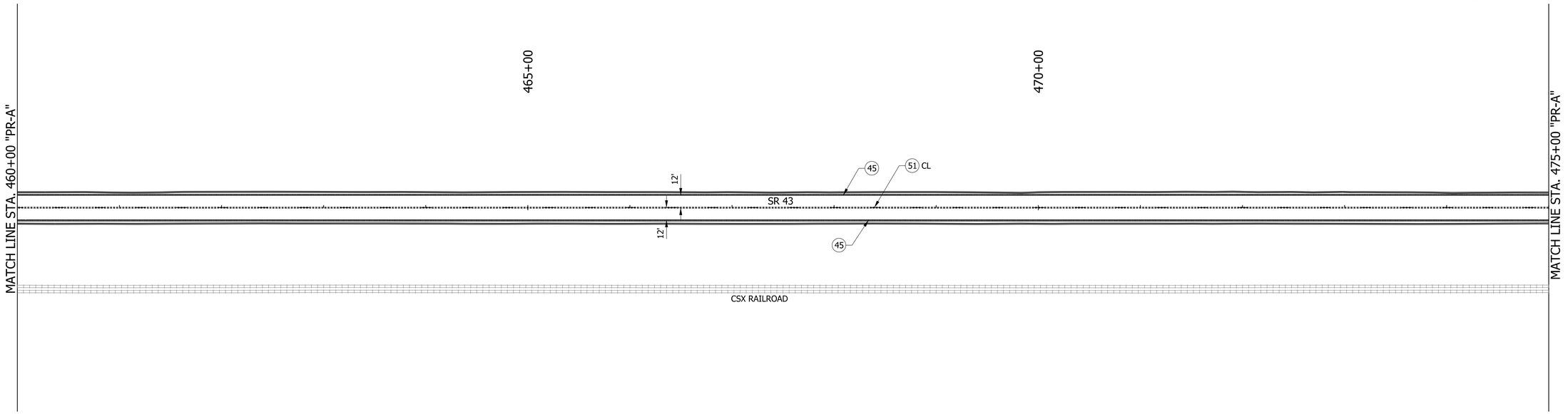
DESIGNED: DMB	1/11/23	DRAWN: MWH	1/11/23
CHECKED: WBB	3/24/23	CHECKED: WBB	3/24/23

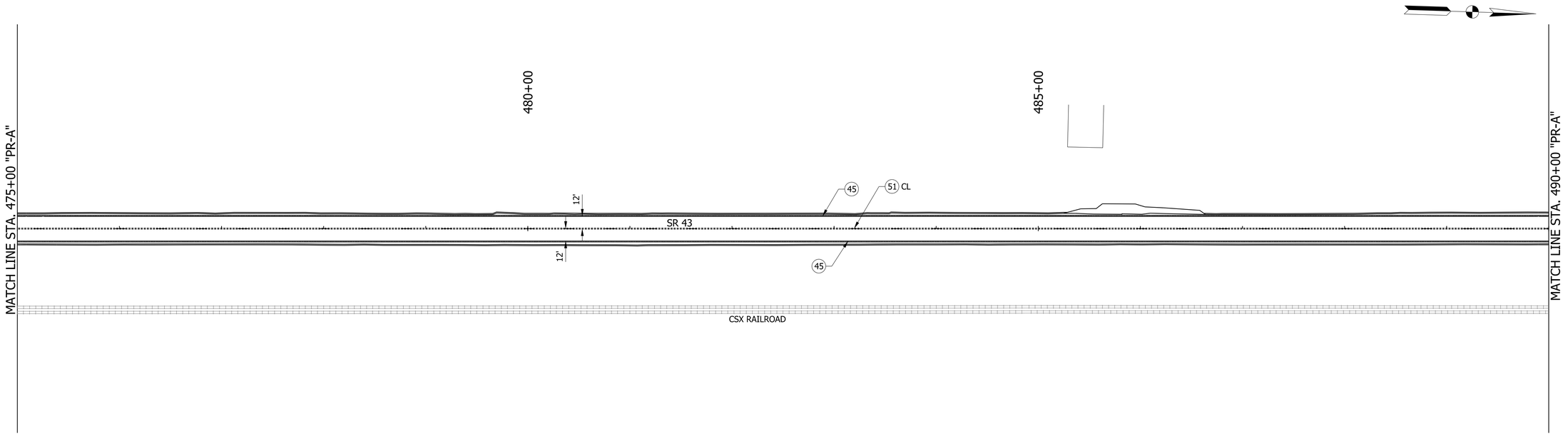
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	70 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_12.dgn





LEGEND

- (41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- (45) Line, Thermoplastic, Solid White, 6 in.
- (46) Line, Thermoplastic, Solid White, 8 in.
- (47) Line, Thermoplastic, Solid White, 12 in.
- (48) Line, Thermoplastic, Solid White, 24 in.
- (49) Line, Thermoplastic, Broken, White, 6 in.
- (50) Line, Thermoplastic, Solid Yellow, 6 in.
- (51) Line, Thermoplastic, Broken, Yellow, 6 in.
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER — DATE

DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23

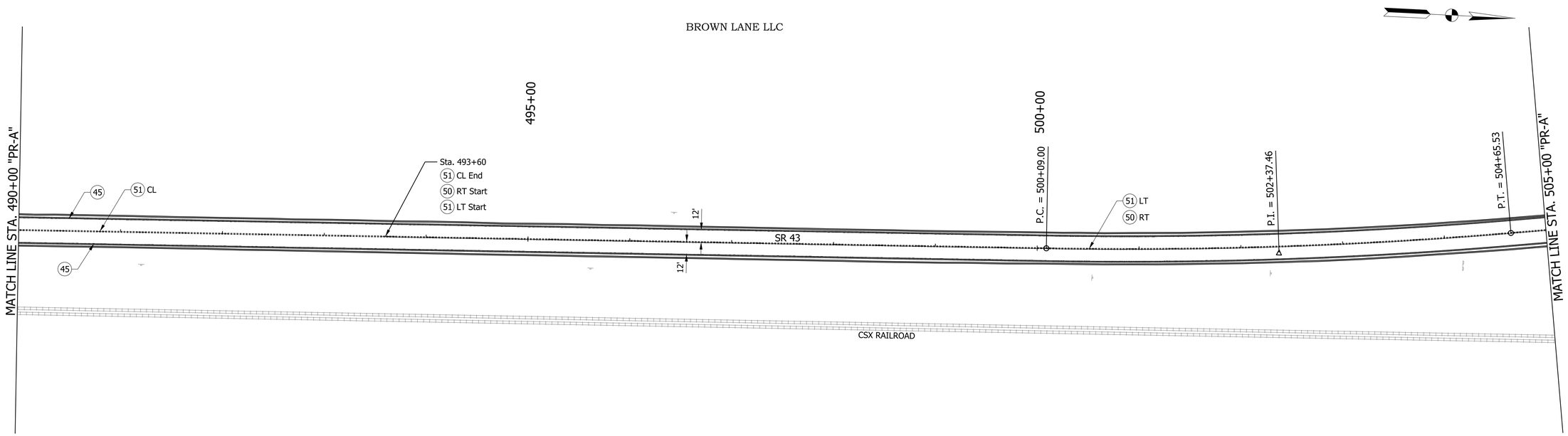
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

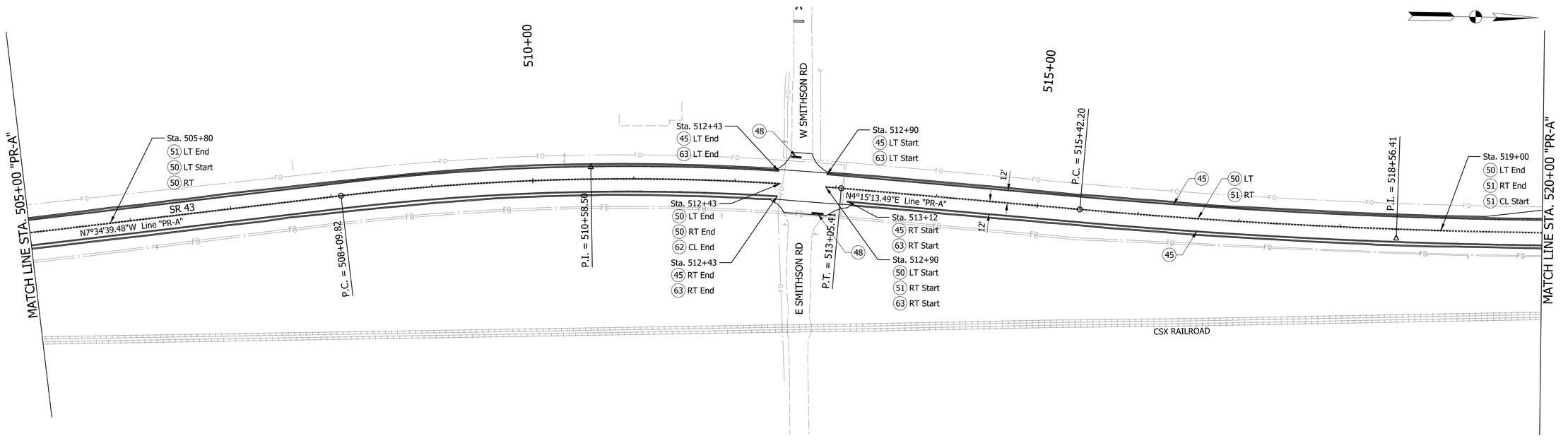
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	71 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_13.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

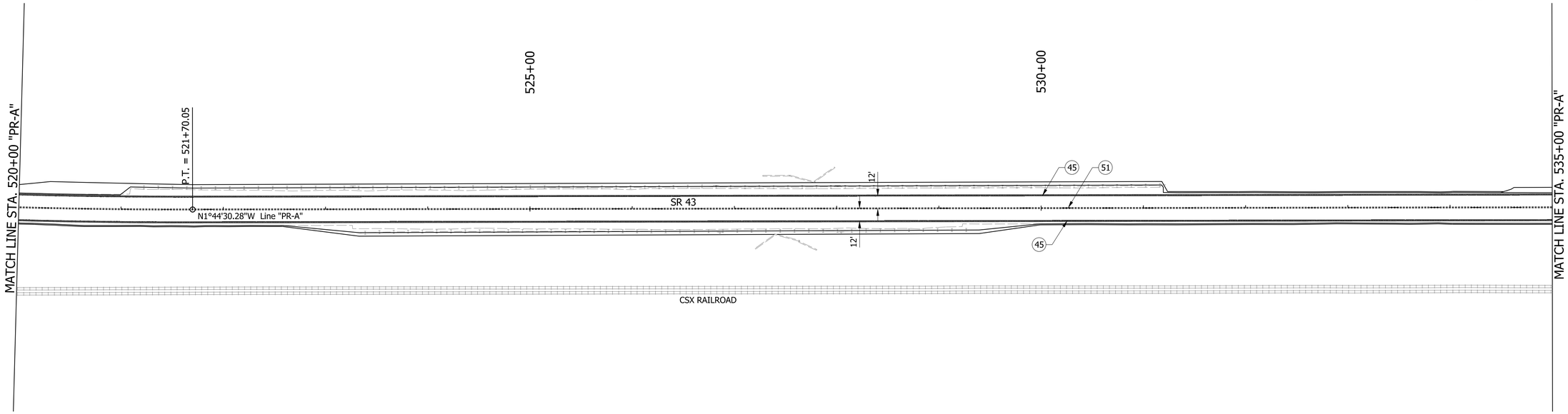
DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

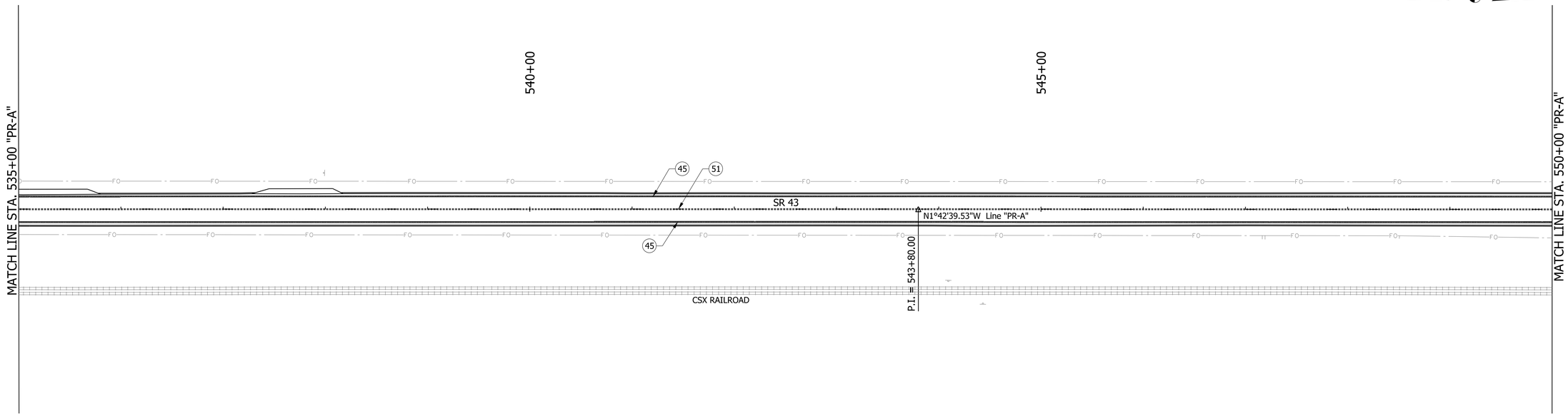
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	72 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_14.dgn





LEGEND

- (41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- (45) Line, Thermoplastic, Solid White, 6 in.
- (46) Line, Thermoplastic, Solid White, 8 in.
- (47) Line, Thermoplastic, Solid White, 12 In.
- (48) Line, Thermoplastic, Solid White, 24 in.
- (49) Line, Thermoplastic, Broken, White, 6 in.
- (50) Line, Thermoplastic, Solid Yellow, 6 in.
- (51) Line, Thermoplastic, Broken, Yellow, 6 in.
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

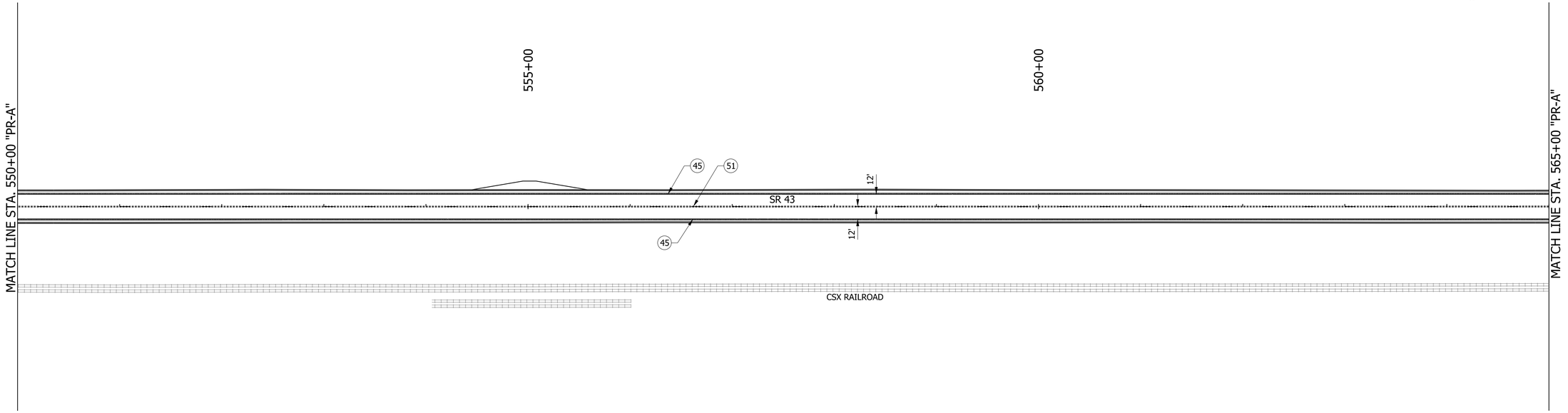
DESIGNED: DMB	1/11/23	DRAWN: MWH	1/11/23
CHECKED: WBB	3/24/23	CHECKED: WBB	3/24/23

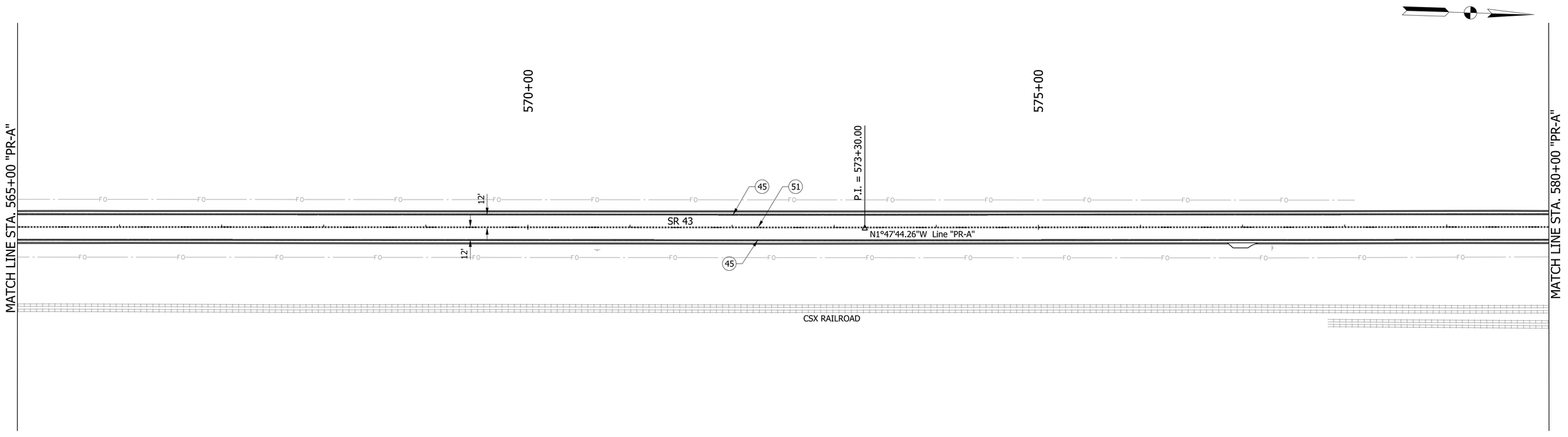
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	73 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_15.dgn





LEGEND

(41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
(45) Line, Thermoplastic, Solid White, 6 in.
(46) Line, Thermoplastic, Solid White, 8 in.
(47) Line, Thermoplastic, Solid White, 12 in.
(48) Line, Thermoplastic, Solid White, 24 in.
(49) Line, Thermoplastic, Broken, White, 6 in.
(50) Line, Thermoplastic, Solid Yellow, 6 in.
(51) Line, Thermoplastic, Broken, Yellow, 6 in.
(62) Milled HMA Corrugations, Sinusoidal (Centerline)
(63) Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

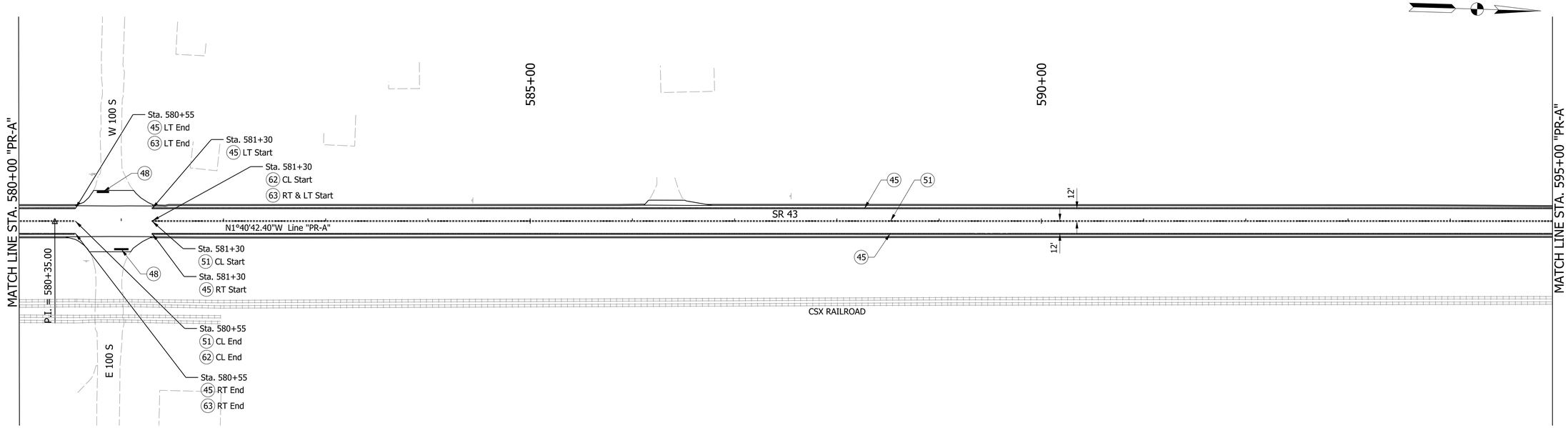
DESIGNED: DMB 1/11/23	DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

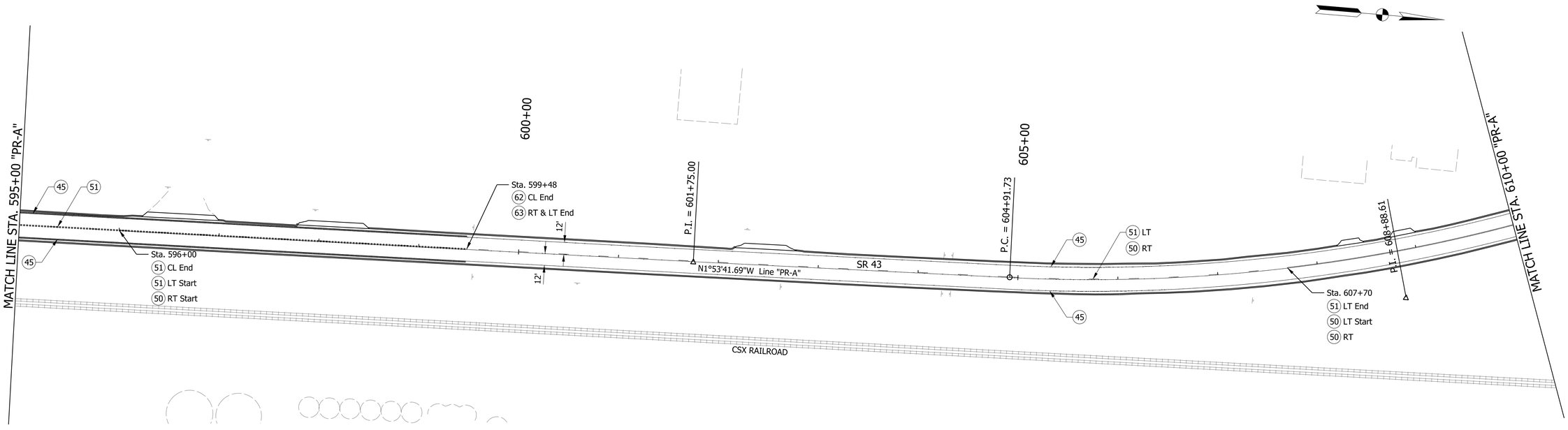
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	74 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\2Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_16.dgn





LEGEND

- 41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- 45 Line, Thermoplastic, Solid White, 6 in.
- 46 Line, Thermoplastic, Solid White, 8 in.
- 47 Line, Thermoplastic, Solid White, 12 in.
- 48 Line, Thermoplastic, Solid White, 24 in.
- 49 Line, Thermoplastic, Broken, White, 6 in.
- 50 Line, Thermoplastic, Solid Yellow, 6 in.
- 51 Line, Thermoplastic, Broken, Yellow, 6 in.
- 62 Milled HMA Corrugations, Sinusoidal (Centerline)
- 63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23

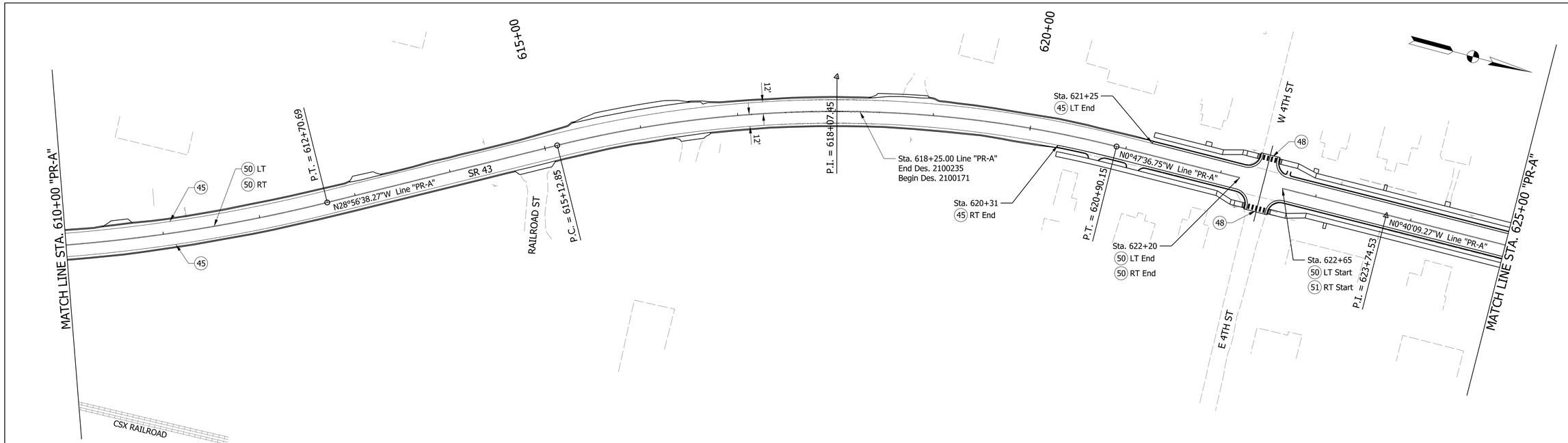
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

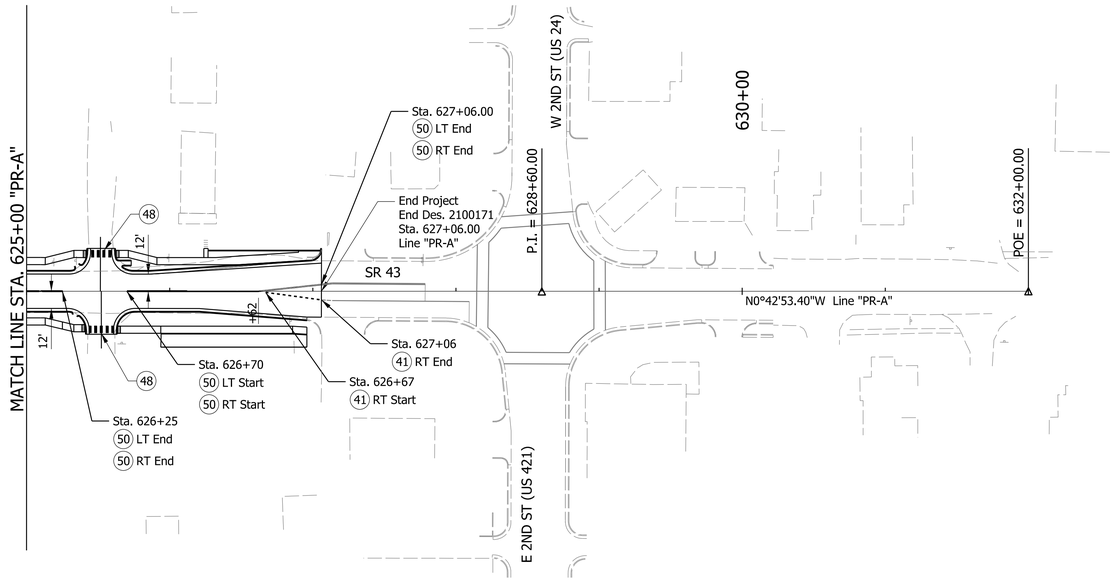
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	75 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_17.dgn





LEGEND

- (41) Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
- (45) Line, Thermoplastic, Solid White, 6 in.
- (46) Line, Thermoplastic, Solid White, 8 in.
- (47) Line, Thermoplastic, Solid White, 12 in.
- (48) Line, Thermoplastic, Solid White, 24 in.
- (49) LIne, Thermoplastic, Broken, White, 6 in.
- (50) Line, Thermoplastic, Solid Yellow, 6 in.
- (51) Line, Thermoplastic, Broken, Yellow, 6 in.
- (62) Milled HMA Corrugations, Sinusoidal (Centerline)
- (63) Milled HMA Corrugations, Sinusoidal (Edgeline)
- Transverse Marking Thermoplastic Lane Indication Arrow
- ONLY — Transverse Marking Thermoplastic Word ONLY
- Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

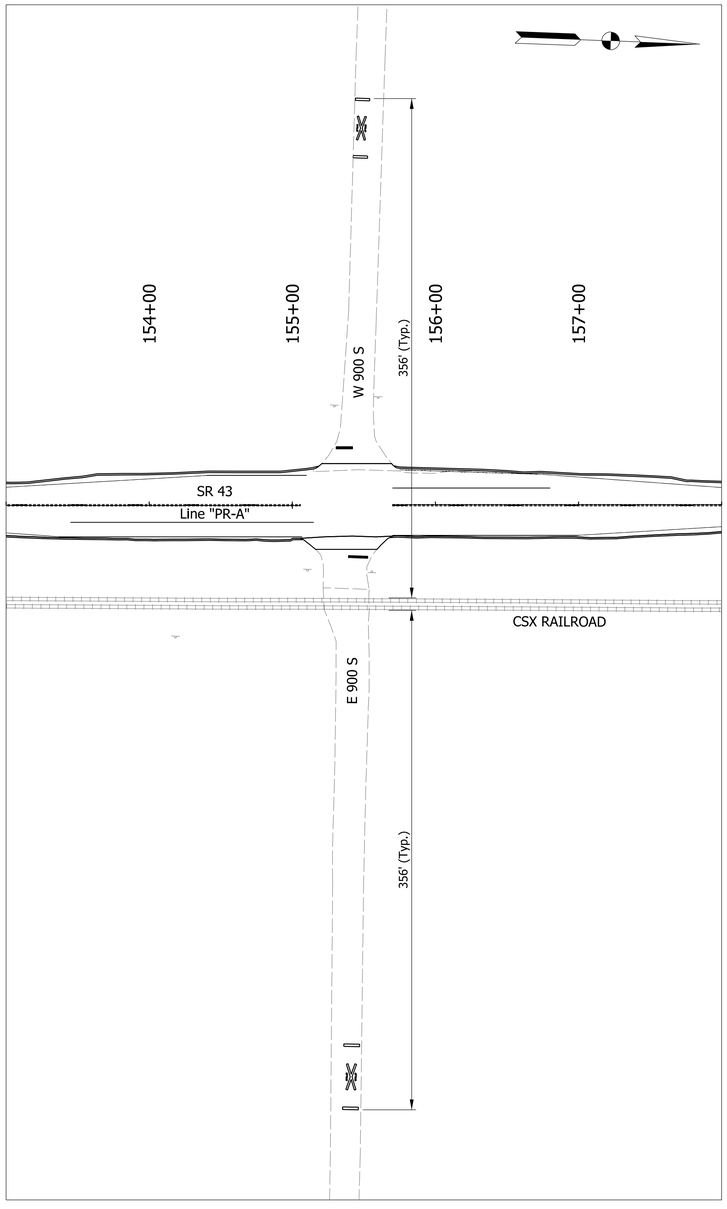
DESIGNED: DMB 1/11/23 | DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

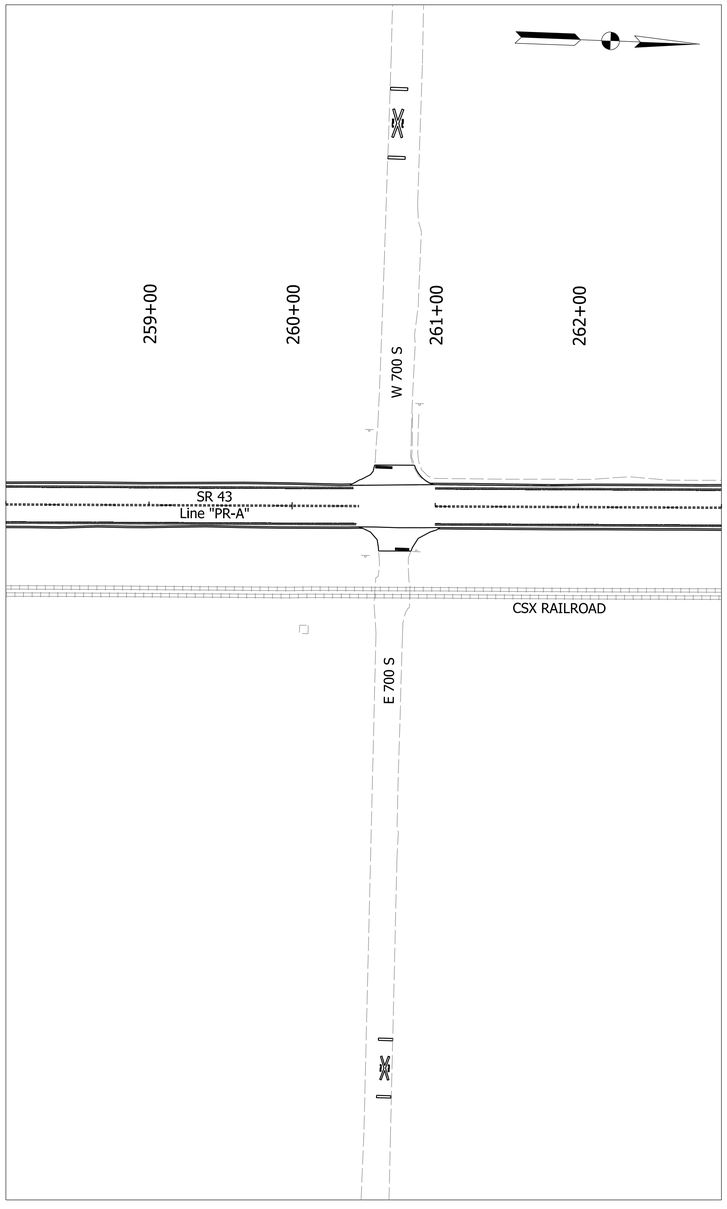
INDIANA
DEPARTMENT OF TRANSPORTATION

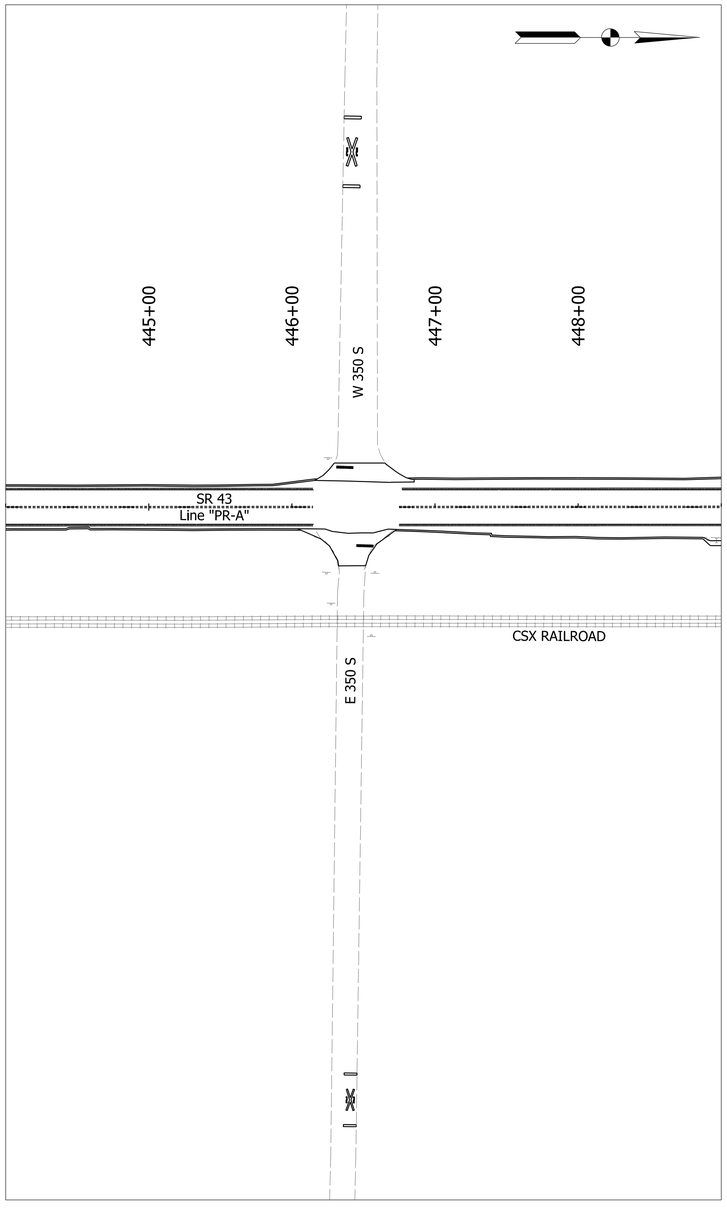
PAVEMENT MARKING AND
TRAFFIC SIGN DETAILS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	76 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_18.dgn







LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

ONLY Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

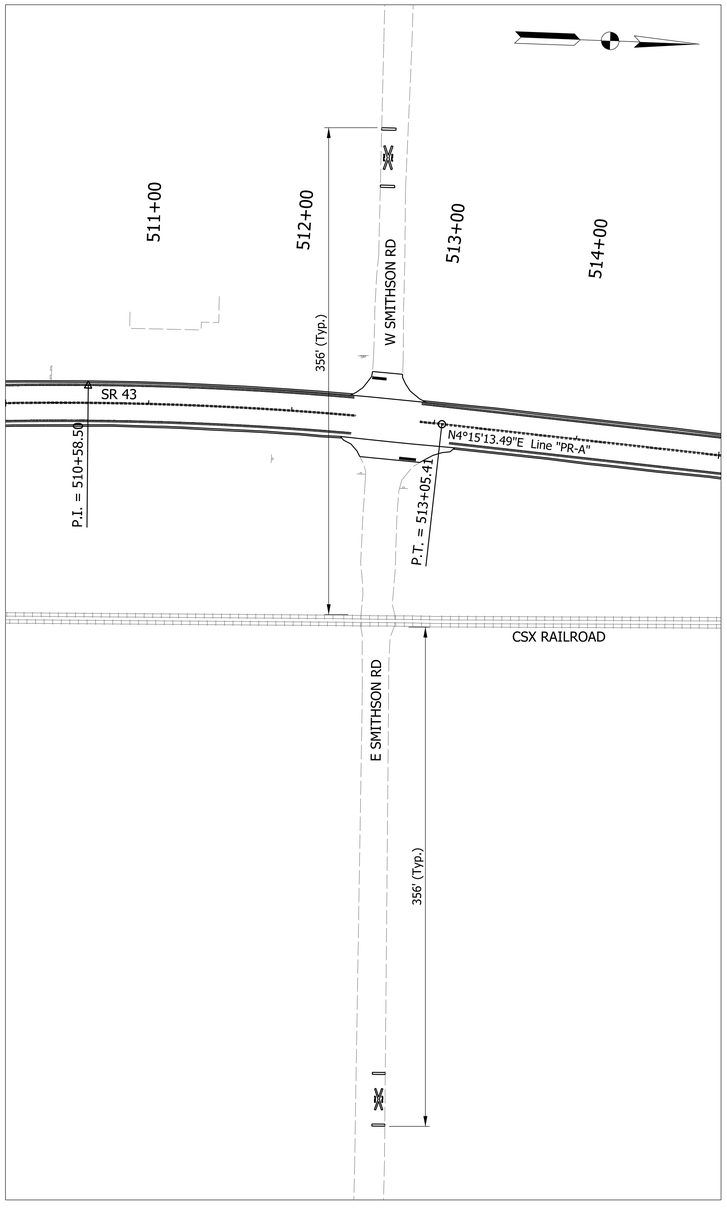
DESIGNED: DMB 1/11/23
DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

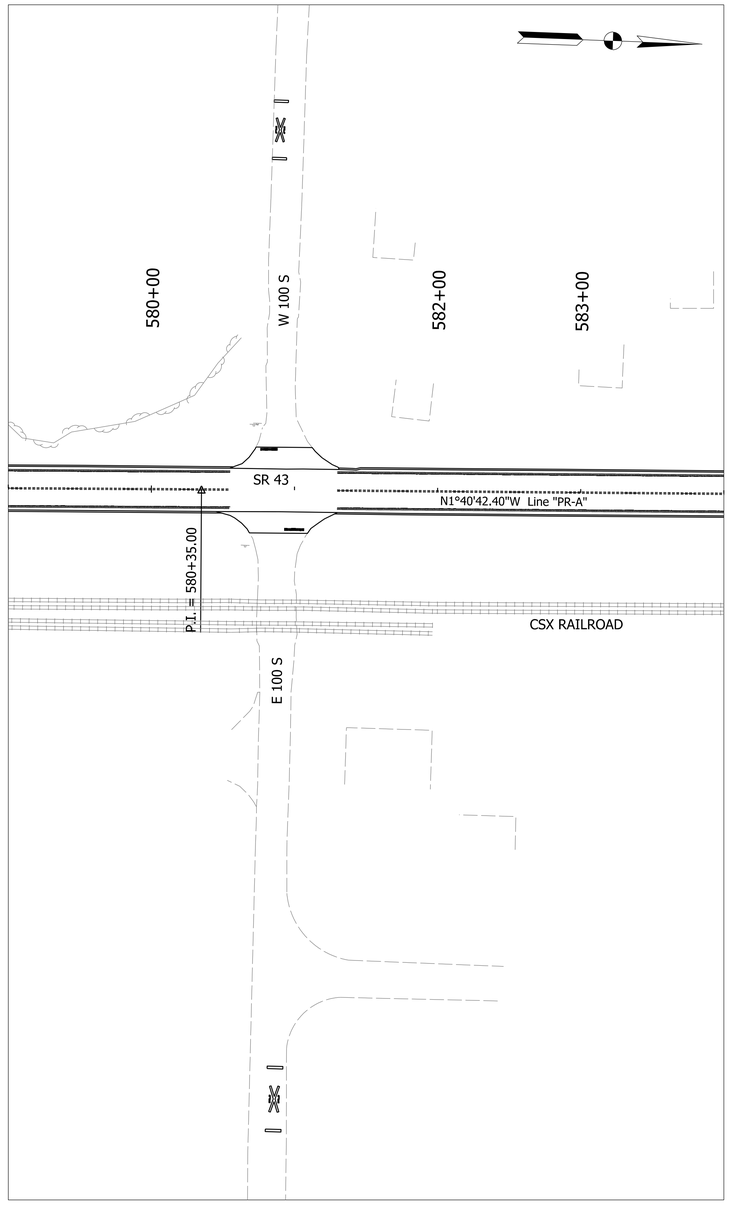
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS
RAILROAD CROSSINGS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	77 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_19.dgn





LEGEND

41 Line, Thermoplastic, Dotted White, 10 in. (3' Line, 9" Gap)
45 Line, Thermoplastic, Solid White, 6 in.
46 Line, Thermoplastic, Solid White, 8 in.
47 Line, Thermoplastic, Solid White, 12 in.
48 Line, Thermoplastic, Solid White, 24 in.
49 Line, Thermoplastic, Broken, White, 6 in.
50 Line, Thermoplastic, Solid Yellow, 6 in.
51 Line, Thermoplastic, Broken, Yellow, 6 in.
62 Milled HMA Corrugations, Sinusoidal (Centerline)
63 Milled HMA Corrugations, Sinusoidal (Edgeline)

Transverse Marking Thermoplastic Lane Indication Arrow

ONLY — Transverse Marking Thermoplastic Word ONLY

Transverse Marking Thermoplastic Railroad Crossing

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: DMB 1/11/23	DRAWN: MWH 1/11/23
CHECKED: WBB 3/24/23	CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAILS
RAILROAD CROSSINGS

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
1" = 50'	2100235
SURVEY BOOK	SHEETS
	78 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht PMrkgSignDet_20.dgn

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION: STATION	LOCATION: LEFT	LOCATION: RIGHT	LOCATION: CROSS	LOCATION: OFFSET	SIZE	DESCRIPTION: PIPE TYPE	DESCRIPTION: MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE	LENGTH	VIDEO INSPECTION LENGTH	SKEW	COVER: MIN	COVER: MAX	FLOW LINE: UP STREAM	FLOW LINE: DOWN STREAM	SUMP DEPTH	TOP OF CASTING	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL TYPE 2	STRUCTURE BACKFILL TYPE __	FLOWABLE BACKFILL TYPE __	FLOWABLE BACKFILL TYPE __	UNDERCUT: EXCAVATION	UNDERCUT: COMPACTED AGGREGATE NO. 5 __ IN.	UNDERCUT: COMPACTED AGGREGATE NO. 53 __ IN.	GEOTEXTILES for TYPE ___	GEOTEXTILES for RIPRAP TYPE 1B	REVETMENT RIPRAP	SCOUR PROTECTION: GEOTEXTILES for RIPRAP TYPE 3	SCOUR PROTECTION: REVETMENT RIPRAP	SCOUR PROTECTION: CLASS I RIPRAP	CONCRETE, CLASS A, FOR STR.	PIPE, REMOVE	VIDEO INSPECTION	PIPE END SECTION	GRATED BOX END SECTION: TYPE	GRATED BOX END SECTION: SLOPE	GRATED BOX END SECTION: EA.	CONNECT TO STR.	CULVERT ASSET ID	REMARKS
					FT	IN.			LFT	LFT		FT	FT	ELEV.	ELEV.	IN.	ELEV.	YRS				CYS	CYS	CYS	CYS	CYS.	TONS	TONS	TONS	SYS	TON	SYS.	TONS	TONS	CYS	LFT	LFT	EA.	TYPE	SLOPE	EA.			
10	128+13.65 "PR-A"			X	0.0	24"		Type 1	44.5			2.84	3.34	682.71	682.03					7	0											23	10.00					2					CLV-64399	
20	177+35.40 "PR-A"			X	0.0	7' x 4'		Box Culvert	57.0			1.00	1.48	681.50	681.25					7	0											87	43.00										CLV-64400	
30	202+64.51 "PR-A"			X	0.0	18"		Type 1	52.0			4.90	4.94	684.28	684.03					7	0											20	9.00					2					CLV-64401	
40	237+58.84 "PR-A"			X	0.0	24"		Type 1	42.5			2.79	3.79	696.89	695.90					7	0											25	11.00					2					CLV-64402	
50	264+49.04 "PR-A"			X	0.0	24"		Type 1	51.0			2.89	2.98	698.30	696.60					7	0											19	8.00					2					CLV-64403	
60	287+25.83 "PR-A"			X	0.0	24"		Type 1	45.5			2.01	2.67	695.18	694.60					7	0											20	9.00					2					CLV-64404	
80	342+76.77 "PR-A"			X	0.0	15" Rise 21" Span		Type 1	39.0			1.01	1.06	702.58	702.54					7	0											23	10.00					2					CLV-64405	
90	349+76.88 "PR-A"			X	0.0	15" Rise 21" Span		Type 1	40.5			1.03	1.05	703.21	703.17					7	0											22	10.00					2					CLV-64406	
100	424+78.48 "PR-A"			X	0.0	15" Rise 21" Span		Type 1	40.0			1.00	1.35	686.45	686.12					7	0											24	11.00					2					CLV-64407	
110	446+41.21 "PR-A"		X		37.1	30"		Type 1	39.0			2.19	2.38	681.14	680.96					7	0											36	18.00					2					CLV-64408	
120	555+01.56 "PR-A"			X	0.0	4' x 4'		Box Culvert	57.0			0.47	0.93	682.95	682.78					7	0											66	30.00										CLV-64409	
								TOTALS	508																							365.0	169.0					18						

MONUMENT TABLE

LOCATION	POINT	MONUMENT TYPE	TYPE "B" EACH	TYPE "C" EACH	TYPE "D" EACH	SECTION CORNER EACH
Sta. 13+72.90 Line "A"	PC	B	1			
Sta. 15+49.99 Line "A"	PI	B	1			
Sta. 17+21.71 Line "A"	PT	B	1			
Sta. 19+25.31 Line "A"	PC	B	1			
Sta. 24+50.98 Line "A"	PT	B	1			
Sta. 44+73.08 Line "A"	PC	B	1			
Sta. 49+73.07 Line "A"	PI	B	1			
Sta. 54+73.07 Line "A"	PT	B	1			
Sta. 57+94.77 Line "A"	PC	B	1			
Sta. 62+94.77 Line "A"	PI	B	1			
Sta. 67+94.76 Line "A"	PT	B	1			
Sta. 75+14.07 Line "A"	PC	B	1			
Sta. 80+14.07 Line "A"	PI	B	1			
Sta. 85+14.06 Line "A"	PT	B	1			
Sta. 86+84.37 Line "A"	PC	B	1			
Sta. 91+84.38 Line "A"	PI	B	1			
Sta. 96+84.37 Line "A"	PT	B	1			
Sta. 176+27.78 Line "A"	PC	B	1			
Sta. 181+28.17 Line "A"	PI	B	1			
Sta. 186+28.56 Line "A"	PT	B	1			
Sta. 205+53.12 Line "A"	PI	B	1			
Sta. 205+69.00 Line "B"	PC	B	1			
Sta. 209+78.04 Line "B"	PI	B	1			
Sta. 213+85.70 Line "B"	PT	B	1			
Sta. 217+24.60 Line "B"	PC	B	1			
Sta. 220+24.40 Line "B"	PI	C		1		
Sta. 223+18.52 Line "B"	PT	B	1			
Sta. 225+48.25 Line "B"	PC	B	1			
Sta. 228+19.94 Line "B"	PI	B	1			
Sta. 230+90.02 Line "B"	PT	B	1			
Sta. 244+00.00 Line "A"	PI	B	1			
Sta. 348+77.40 Line "A"	PI	B	1			
Sta. 406+76.10 Line "A"	PC	B	1			
Sta. 409+84.73 Line "A"	PI	B	1			
Sta. 412+92.76 Line "A"	PT	B	1			
Sta. 415+05.76 Line "A"	PC	B	1			
Sta. 417+71.08 Line "A"	PI	B	1			
Sta. 420+34.34 Line "A"	PT	B	1			
Sta. 422+57.54 Line "A"	PC	B	1			
Sta. 425+62.82 Line "A"	PI	B	1			
Sta. 428+67.54 Line "A"	PT	B	1			
Sta. 512+11.17 Line "A"	PC	B	1			
Sta. 519+95.46 Line "A"	PT	B	1			
Sta. 522+36.36 Line "A"	PC	B	1			
Sta. 528+05.61 Line "A"	PT	B	1			
TOTALS		44	1	0	0	

R/W MARKER TABLE

STATION	LINE	LEFT	RIGHT	OFFSET (FT)	EACH
34+50.00	"A"	●		30.00	1
34+70.00	"A"	●		50.00	1
36+57.73	"A"	●		50.00	1
36+57.31	"A"	●		30.00	1
84+00.00	"A"	●		40.00	1
84+00.00	"A"	●		55.00	1
85+50.00	"A"	●		55.00	1
85+60.00	"A"	●		40.06	1
109+00.00	"A"	●		30.00	1
109+20.00	"A"	●		55.00	1
110+80.00	"A"	●		55.00	1
111+00.00	"A"	●		30.00	1
142+27.89	"A"	●		30.00	1
142+29.03	"A"	●		60.00	1
145+80.00	"A"	●		60.00	1
146+16.00	"A"	●		30.00	1
170+90.00	"A"	●		30.00	1
171+10.00	"A"	●		50.00	1
172+80.00	"A"	●		50.00	1
173+00.00	"A"	●		30.00	1
193+50.00	"A"	●		30.00	1
193+70.00	"A"	●		50.00	1
195+50.00	"A"	●		50.00	1
195+70.00	"A"	●		30.00	1
247+53.48	"A"	●		30.00	1
247+53.93	"A"	●		50.00	1
260+64.19	"A"	●		50.00	1
260+63.70	"A"	●		30.00	1
330+80.00	"A"	●		30.00	1
331+05.00	"A"	●		50.00	1
332+95.00	"A"	●		50.00	1
333+20.00	"A"	●		30.00	1
460+00.00	"A"	●		30.02	1
461+20.00	"A"	●		50.00	1
463+30.00	"A"	●		50.00	1
463+50.00	"A"	●		30.02	1
TOTALS					**36**

REVIEWER NOTE:
Data Tables to be finalized
at a later stage.

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: DMB 11/1/22
DRAWN: MWH 11/1/22
CHECKED: WBB 3/24/23
CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

SUMMARY
TABLES

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
NO SCALE	2100235
SURVEY BOOK	SHEETS
	79 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\2Jobs\22H0004A\CAD\Road\Sheet\Sht RoadSummary_01.dgn

PAVEMENT MARKINGS SUMMARY TABLE

Lines & SRPMs

Start Station	End Station	SB		Centerline	NB		Line, Multi-Component,							Grooving for Pavement Markings	Temp. Pavement Markings, 4 in	Temp. Pavement Markings, Removable, 4 in	SRPMs, Remove	SRPMs
		Edge Line	Lane Lines		Lane Lines	Edge Line	Solid, Yellow, 6 in	Broken, Yellow, 6 in	Solid, White, 6 in	Broken, White, 4 in	Dotted, White, 4 in	Solid, Yellow, 8 in	Solid, White, 8 in					
							(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(ea)	(ea)
101+40 "PR-A"	101+65 "PR-A"	Yes		No Passing Both		Yes	50		50							50	1	1
101+65 "PR-A"	102+10 "PR-A"	Yes							45									
101+65 "PR-A"	102+50 "PR-A"	No				Yes			85						9			
102+50 "PR-A"	107+00 "PR-A"	Yes		No Passing Both		Yes	900		900						45	900	12	12
107+00 "PR-A"	108+60 "PR-A"	No		No Passing Both		Yes	320		160						16	320	4	4
108+60 "PR-A"	119+00 "PR-A"	Yes		No Passing Both		Yes	2080		2080						104	2080	26	26
106+40 "PR-A"	108+80 "PR-A"				Passing Blister				240							240	6	
119+00 "PR-A"	126+60 "PR-A"	Yes		Passing NB		Yes	760	190	1520						76	950	19	19
126+60 "PR-A"	148+65 "PR-A"	Yes		Passing Both		Yes		560	4410						221	560	28	19
148+65 "PR-A"	155+10 "PR-A"	Yes		Passing SB		Yes	645	170	1290						65	815	17	17
153+45 "PR-A"	155+15 "PR-A"				RT Turn				170							170	5	
155+70 "PR-A"	162+00 "PR-A"	Yes		Passing NB		Yes	630	160	1260						63	790	16	16
155+70 "PR-A"	156+80 "PR-A"		RT Turn						110							110	3	
162+00 "PR-A"	234+85 "PR-A"	Yes		Passing Both		Yes		1830	14570						729	1830	92	61
234+85 "PR-A"	235+47 "PR-A"	No				Yes			62						6			
235+47 "PR-A"	260+45 "PR-A"	Yes		Passing Both		Yes		630	4996						250	630	32	21
261+00 "PR-A"	291+25 "PR-A"	Yes		Passing Both		Yes		760	6050						303	760	38	26
291+25 "PR-A"	298+95 "PR-A"	Yes		Passing SB		Yes	770	200	1540						77	970	20	20
296+00 "PR-A"	297+20 "PR-A"				Passing Blister				120							120	3	
298+95 "PR-A"	302+46 "PR-A"	Yes		No Passing Both		Yes	702		702						35	702	9	9
302+46 "PR-A"	303+10 "PR-A"	No				Yes			64						7			
303+10 "PR-A"	305+72 "PR-A"	Yes		No Passing Both		Yes	524		524						26	524	7	7
305+72 "PR-A"	306+24 "PR-A"	No		No Passing Both		Yes	104		52						6	104	2	2
306+24 "PR-A"	309+05 "PR-A"	Yes		No Passing Both		Yes	562		562						28	562	8	8
309+05 "PR-A"	309+35 "PR-A"	Yes		No Passing Both			60		30						3	60	1	1
309+35 "PR-A"	309+50 "PR-A"	Yes				No			15						2			
309+95 "PR-A"	312+85 "PR-A"	Yes		No Passing Both		Yes	580		580						29	580	8	8
313+95 "PR-A"	319+77 "PR-A"	Yes		No Passing Both		Yes	1164		1164						59	1164	15	15
319+77 "PR-A"	335+20 "PR-A"	Yes		Passing NB		Yes	1543	390	3086						155	1933	39	39
335+20 "PR-A"	446+15 "PR-A"	Yes		Passing Both		Yes		2780	22190						1110	2780	139	93
446+75 "PR-A"	493+60 "PR-A"	Yes		Passing Both		Yes		1180	9370						469	1180	59	40
493+60 "PR-A"	505+80 "PR-A"	Yes		Passing SB		Yes	1220	310	2440						122	1530	31	31
505+80 "PR-A"	512+45 "PR-A"	Yes		No Passing Both		Yes	1330		1330						67	1330	17	17
512+90 "PR-A"	519+00 "PR-A"	Yes		Passing NB		Yes	610	160	1220						61	770	16	16
519+00 "PR-A"	580+55 "PR-A"	Yes		Passing Both		Yes		1540	12310						616	1540	77	52
581+30 "PR-A"	596+00 "PR-A"	Yes		Passing Both		Yes		370	2940						147	370	19	13
596+00 "PR-A"	607+70 "PR-A"	Yes		Passing SB		Yes	1170	300	2340						117	1470	30	30
607+70 "PR-A"	618+25 "PR-A"	Yes		No Passing Both		Yes	2110		2110						106	2110	27	27
						Totals	**17834**	**11530**	**102687**						**5125**	**30004**	**826**	**650**

PAVEMENT MARKINGS SUMMARY TABLE

Transverse Markings & Pavement Message Markings

Start Station	End Station	Transverse Marking, Multi-Component,					PMM, Multi-Component,			Remarks
		Stop Line, White, 24 in	Crosswalk Line, White, 24 in	Solid, Cross-hatch Line, Yellow, 12 in	Solid, Cross-hatch Line, Yellow, 24 in	Solid, Cross-hatch Line, White, 12 in	Lane Indication Arrow	Word (ONLY)	Word (RXR)	
		(lft)	(lft)	(lft)	(lft)	(lft)	(ea)	(ea)	(ea)	
101+93 "PR-A"	102+30 "PR-A"	16	50							
108+10 "PR-A"		12								
155+30 "PR-A"	155+42 "PR-A"	12								
155+39 "PR-A"	155+53 "PR-A"	14								
155+50 "PR-A"		42							2	Railroad Crossing
235+01 "PR-A"	235+13 "PR-A"	12								
260+58 "PR-A"	260+70 "PR-A"	12								
260+72 "PR-A"	260+82 "PR-A"	10								
260+70 "PR-A"		44							2	Railroad Crossing
302+59 "PR-A"	302+71 "PR-A"	12								
305+89 "PR-A"	306+01 "PR-A"	12								
309+63 "PR-A"	309+73 "PR-A"	10								
309+65 "PR-A"	309+79 "PR-A"	14								
313+24 "PR-A"	313+38 "PR-A"	14								
313+55 "PR-A"	313+70 "PR-A"	15								
446+31 "PR-A"	446+43 "PR-A"	12								
446+45 "PR-A"	446+57 "PR-A"	12								
446+40 "PR-A"		42							2	Railroad Crossing
512+54 "PR-A"	512+64 "PR-A"	10								
512+78 "PR-A"	512+90 "PR-A"	12								
512+50 "PR-A"		38							2	Railroad Crossing
580+76 "PR-A"	580+88 "PR-A"	12								
580+93 "PR-A"	581+07 "PR-A"	14								
580+80 "PR-A"		42							2	Railroad Crossing
	Totals	**445**	**50**	**0**	**0**	**0**	**0**	**0**	**10**	

PAVEMENT MARKINGS SUMMARY TABLE

Lines & SRPMs

Start Station	End Station	SB		Centerline	NB		Line, Multi-Component,							Grooving for Pavement Markings	Temp. Pavement Markings, 4 in	Temp. Pavement Markings, Removable, 4 in	SRPMs, Remove	SRPMs
		Edge Line	Lane Lines		Lane Lines	Edge Line	Solid, Yellow, 6 in	Broken, Yellow, 6 in	Solid, White, 6 in	Broken, White, 4 in	Dotted, White, 4 in	Solid, Yellow, 8 in	Solid, White, 8 in					
							(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(ea)	(ea)
618+25 "PR-A"	620+31 "PR-A"	Yes		No Passing Both		Yes	412		412					824	21	412	6	6
620+31 "PR-A"	621+25 "PR-A"	Yes		No Passing Both		No	188		94					282	10	188	3	3
621+25 "PR-A"	622+20 "PR-A"	No		No Passing Both		No	190							190	10	190	3	3
622+65 "PR-A"	625+25 "PR-A"	No		No Passing Both		No	520							520	26	520	7	7
625+70 "PR-A"	627+06 "PR-A"	Yes		No Passing Both		No	275		102					377	13	250	4	4
						Totals	**1585**		**608**					**2193**	**80**	**1560**	**23**	**23**

PAVEMENT MARKINGS SUMMARY TABLE

Transverse Markings & Pavement Message Markings

Start Station	End Station	Transverse Marking, Multi-Component,					PMM, Multi-Component,			Remarks
		Stop Line, White, 24 in	Crosswalk Line, White, 24 in	Solid, Cross-hatch Line, Yellow, 12 in	Solid, Cross-hatch Line, Yellow, 24 in	Solid, Cross-hatch Line, White, 12 in	Lane Indication Arrow	Word (ONLY)	Word (RXR)	
		(lft)	(lft)	(lft)	(lft)	(lft)	(ea)	(ea)	(ea)	
622+38 "PR-A"	622+52 "PR-A"		20							
622+35 "PR-A"	622+53 "PR-A"		25							
625+45 "PR-A"	625+59 "PR-A"		20							
625+43 "PR-A"	625+61 "PR-A"		25							
	Totals	**0**	**90**	**0**	**0**	**0**	**0**	**0**	**0**	

REVIEWER NOTE:
Data Tables to be finalized
at a later stage.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: DMB 11/1/22 | DRAWN: MWH 11/1/22

CHECKED: WBB 3/24/23 | CHECKED: WBB 3/24/23

INDIANA
DEPARTMENT OF TRANSPORTATION

SUMMARY
TABLES

	BRIDGE FILE
	N/A
SCALE	DESIGNATION
NO SCALE	2100235
SURVEY BOOK	SHEETS
	80 of 132
CONTRACT	PROJECT
R-43897	2100235

I:\22Jobs\22H0004A\CAD\Road\Sheet\Sht RoadSummary_02.dgn

Appendix C
Early Coordination

INDIANA DEPARTMENT OF TRANSPORTATION

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

Eric Holcomb, Governor
Michael Smith, Commissioner

May 31, 2023

Re: Des. No. 2100235 & 2100171
HMA Overlay
State Road (SR) 43
White County, Indiana

Sample Early Coordination Letter

To Whom It May Concern:

The Indiana Department of Transportation, with federal funding, intends to proceed with the aforementioned project in White County. This letter is part of the early coordination phase of the environmental review process, in which 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 the study of the project's environmental impacts.

This project is located on SR 43, from the North Junction of SR 18 to United States (US) 24/421, in White County, Indiana. This section of SR 43 is classified as a Rural Other Principal Arterial. The existing SR 43 carries two lanes, one northbound and one southbound. This project is needed due to the deteriorated condition of the pavement along SR 43, which exhibits significant deterioration including cracking and potholing. The draft purpose is to restore the roadway to a new condition and increase its service life.

The proposed project will meet the purpose and need by milling the existing asphalt and overlaying it with hot mix asphalt (HMA) surface material, and completing partial- or full-depth patching as needed. In addition to the HMA overlay activities, work will occur to repair or upgrade adjacent curb ramps to bring them into compliance with the Americans with Disabilities Act (ADA) and replace or repair eleven small structures (each less than 48'') under SR 43, and eleven storm sewer inlets. Some work within existing waterways will likely be required to replace the small structures. The proposed work will likely require a maintenance of traffic plan involving partial (phased) closures, daytime flaggers, and brief (less than 30 days) full closures. Construction is anticipated to begin in Summer 2025 and be completed in one construction season.

Land use in the vicinity of the project is a mix of residential, commercial, agricultural, and wind farming. A railroad is located adjacent to the eastern shoulder of SR 43 and runs parallel to the highway for the duration of the project area. This project is expected to require the purchase of approximately 1.53 acres of permanent right-of-way (ROW) and less than 0.1 acre of temporary ROW. Coordination is ongoing to determine location and timing of necessary utility relocations, if any. Excavation to a depth of approximately 5 feet below the ground surface (ft-bgs) will occur at the locations requiring curb ramp updates. Excavation for small structures will be to a maximum depth of 12 ft-bgs. A waters and wetland determination will be completed to identify water resources that may be present, and coordination with the INDOT Ecology & Waterway Permitting Office (EWPO) will

occur. This project qualifies for the application of the United States Fish and Wildlife Service (USFWS) range-wide programmatic informal consultation for the Indiana bat and northern long-eared bat. Project details will be submitted through the USFWS Information for Planning and Consultation (IPaC) website. Coordination will occur with INDOT Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results the evaluation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to respond is required, a reasonable amount of time may be granted upon request. If you have any questions regarding this matter, please contact Lisa Vale, Environmental Scientist, H.W. Lochner, Inc. at lvale@hwlochner.com or 219-393-8841, or Jacqueline Hockaday, Project Manager, INDOT LaPorte District at jhockaday@indot.in.gov or 574-601-9352.

Thank you in advance for your input.

Sincerely,

Lisa Vale
Environmental Scientist
H.W. Lochner, Inc.

Attachments: Recipient List
Topographic Map
Aerial Maps
Photo Log

INDIANA DEPARTMENT OF TRANSPORTATION

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

Eric Holcomb, Governor
Michael Smith, Commissioner

The following agencies received Early Coordination Letters

Kari Carmany-George
Federal Highway Administration
Federal Office Building, Room 254
575 N Pennsylvania St
Indianapolis, IN 46204
(Electronic Coordination)

Jacqueline Hockaday
INDOT LaPorte District Office
Project Manager
315 Boyd Boulevard
LaPorte, IN 46350
(Electronic Coordination)

Stewart Michels
INDOT LaPorte District Office
Environmental Section Manager
315 Boyd Boulevard
LaPorte, IN 46350
(Electronic Coordination)

Sam Anderson
INDOT Utilities and Railroad
Utilities and Railroad Director
100 N. Senate Ave. IGCN 758-UT/RR
Indianapolis, IN 46204
(Electronic Coordination)

Field Environmental Officer, Chicago Regional
Office US Dept. of Housing and Urban Development
(HUD) Metcalf Federal Building
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604
(Electronic Coordination)

Regional Environmental Coordinator
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, NE 68102
(Electronic Coordination)

Indiana Geological and Water Survey
611 North Walnut Grove
Bloomington, IN 47405
(Electronic Coordination Submittal)

Indiana Department of Natural Resources
Division of Fish and Wildlife
Room W264, IGC South
402 West Washington Street
Indianapolis, IN 46204-2641
(Electronic Coordination)

Section Chief, Groundwater Section
Indiana Department of Environmental Management
100 N. Senate Avenue
Indianapolis, IN 46204
(Electronic Coordination)

Section Chief, Wetlands and Stormwater Programs
Indiana Department of Environmental Management
100 N. Senate Avenue
Indianapolis, IN 46204
(Electronic Communication)

Institutional Controls
Indiana Department of Environmental Management
(Electronic Coordination)

Ms. Deborah Snyder
US Army Corps of Engineers (USACE)
Department of the Army
Louisville District, Indianapolis Regulatory Office
8902 Otis Ave., Suite S106B
Indianapolis, IN 46216
(Electronic Communication)

State Conservationist
Natural Resources Conservation Service
6013 Lakeside Blvd.
Indianapolis, IN 46278
(Electronic Communication)

Pam Cochran
City of Reynolds Town Clerk
307 S. Washington Street
Reynolds, IN 47980
(Electronic Communication)

Honey Creek Township Volunteer Fire Department
301 S. Washington Street
Reynolds, IN 47980
(Electronic Communication)

City of Chalmers Town Clerk
205 W. Walnut Street
Chalmers, IN 47929
(Electronic Communication)

Chalmers Community Volunteer Fire Department
205 E. Walnut Street
Chalmers, IN 47929
(Electronic Communication)

City of Brookston Town Clerk
205 E. 3rd Street
Brookton, IN 47923
(Electronic Communication)

Prairie Township Volunteer Fire Department
501 South Street
Brookston, IN 47923
P.O. Box 484
(Electronic Communication)

Edwin Buswell, AICP
Executive Director
Kankakee-Iroquois Regional Planning Commission
(KIRPC)
115 E. 4th Street, PO Box 127
Monon, IN 47959
(Electronic Communication)

Brad Ward
Surveyor
White County Drainage Board
Surveyors Office
P.O Box 357
Monticello, IN 47960
(Electronic Communication)

Mike Kyburz
Superintendent
White County Highway Department
P.O. Box 67
Reynolds, IN 47980
(Electronic Communication)

White County Soil & Water Conservation District
103 S Country Ln.
Monticello, IN 47960
(Electronic Communication)

Jim Raynolds
White County Environmental Officer
902 Foxwood Ct Monticello, IN 47960
(Electronic Communication)

Monticello Fire Department
911 W. South Street Monicello, IN 47960
(Electronic Communication)

Joe Rogers
Executive Director
White County Area Plan Office
P.O. Box 851 Monticello, IN 47960
(Electronic Communication

Raymond Kramer
White County Council
110 N Main Street
Monticello, IN 47960
(Electronic Communication)

Donya Tirpak
White County Commissioners
110 N. Main Street, Room 204
Monticello, IN 47960
(Electronic Communication)

Chris Springer
Director
White County Emergency Management
1007 O'Conner Blvd
P.O. Box 873
Monticello, IN 47960
(Electronic Communication)

April Hall
Transportation Director
Frontier School Corporation
126 E Main Street
Chalmers, IN 47929
(Electronic Communication)

Dean Cook
Director of Transportation
North White School Corporation
402 E Broadway St.
Monon, IN 47959
(Electronic Coordination)

Reynolds Water Works
P.O. Box 214
Reynolds, IN 47980
(Electronic Communication)

Brookston Water Department
P.O. Box 238
Brookston, IN 47923
(Electronic Communication)

Chalmers Water Works
P.O. Box 827
Chalmers, IN 47929
(Electronic Communication)

From: Michels, Stewart <SMichels@indot.IN.gov>
Sent: Monday, June 12, 2023 5:24 PM
To: Vale, Lisa <lvale@hwlochner.com>
Cc: Hockaday, Jacqueline R <JHockaday@indot.IN.gov>
Subject: RE: Early Coordination Packet - INDOT Project Des. 2100235 & 2100171 SR 43

Lisa,

Thank you for providing a copy of the early coordination letter for Des 2100235 & 2100171 to the LaPorte District Environmental Services. We do not have any comment at this time. Thank you, again, for contacting us.

Regards,
Stew

Stewart Michels
Environment Manager Supervisor
INDOT - LaPorte District
315 East Boyd Blvd.
LaPorte IN 46350
Office: (219) 325-7560
Cell: (219) 402-7315
Email: Smichels@INDOT.IN.gov

From: Michels, Stewart <SMichels@indot.IN.gov>
Sent: Tuesday, November 28, 2023 2:54:57 PM
To: Jason Rowley <jrowley@hanson-inc.com>; Vale, Lisa <lvale@hwlochner.com>; Hockaday, Jacqueline R <JHockaday@indot.IN.gov>
Cc: Mike DiFranco <MDiFranco@hanson-inc.com>; Ritzler, Julie <JRitzler@indot.IN.gov>; Wahl, Cassie <CWahl@indot.IN.gov>
Subject: RE: Des 2100235 SR 43- STIP Coordination

Jason,
I reached out to our funding manager (Julie Ritzler) and she has indicated that RoW will be purchased with 100% state funds (attached). So, as long as that 100% State funding of RoW (the next phase) is explained in the environmental document, we will be able to approve it. Central Office concurred that since the PE funds were previously authorized in FY 23 and are presumably spent, there is no need to carry those over.
Best,
Stew

From: Ritzler, Julie
To: Michels, Stewart
Cc: Hockaday, Jacqueline R
Subject: RE: Des 2100235 SR 43- STIP Coordination
Date: Wednesday, November 15, 2023 12:45:40 PM

Yes, all the phases were included in the previous STIP. They do not need to be included in the new STIP as PE was Federally Authorized on 1/19/23. RW at this point is all 100% state as it falls under the $100,000 threshold.

Hope this helps!

Julie L. Ritzler
Program/Funding Manager
Capital Program Management
Indiana Department of Transportation
315 East Boyd Boulevard
LaPorte, IN 46350

Cell: (219)851-0227
Email: JRitzler@indot.in.gov

United States Department of Agriculture
Farm Production and Conservation
Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
317-295-5800

June 28, 2023

Lisa Vale
286 W. Johnson Road, Suite D
La Porte, Indiana 46350

Dear Ms. Vale:

The proposed HMA overlay project, SR 43 from the North Junction of Sr 18 to Us 24/421 in White County, Indiana (Des. No. 2100235 & 2100171), as referred to in your letter received May 31, 2023, 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 John Allen at 317-295-5859 or john.allen@usda.gov.

Sincerely,

JOHN ALLEN

Digitally signed by JOHN ALLEN
Date: 2023.06.28 20:32:37 -04'00'

JOHN ALLEN
State Soil Scientist

Enclosers

USDA is an equal opportunity provider, employer, and lender.

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request May 31, 2023	
Name of Project DES2100235 2100171 SR43		Federal Agency Involved Federal Highway Administration	
Proposed Land Use Right-of-Way		County and State White County, Indiana	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS	Person Completing Form: JRA
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated	Average Farm Size 525 ac
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 318353 % 98	Amount of Farmland As Defined in FPPA Acres: 27328 % 84	
Name of Land Evaluation System Used LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS 6/28/23	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.77			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	0.77			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.77			
B. Total Acres Statewide Important or Local Important Farmland	0.00			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	35			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	89			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	0			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	12			
6. Distance To Urban Support Services	(15)	10			
7. Size Of Present Farm Unit Compared To Average	(10)	10			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	3			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	60	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	89	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	60	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	149	0	0	0

Site Selected: Site A	Date Of Selection July 10, 2023	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

The existing asphalt pavement on this portion of SR 43 requires replacement due to severe block cracking, transverse cracking, and longitudinal joint damage. Deteriorated inlets and small culverts beneath SR 43 within the project area will be replaced.

Name of Federal agency representative completing this form: Bridgette Murray	Date: 07/10/2023

(See Instructions on reverse side) **Form AD-1006 (03-02)**

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

June 8, 2023

H.W. Lochner, Inc.
Attention: Lisa Vale
286 W. Johnson Road, Suite D
La Porte, IN 46350

Dear Lisa Vale:

Re: Wellhead Protection Area
Proximity Determination
Des No 2100235 & 2100171
HMA Overlay
State Road (SR) 43
White County, Indiana

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

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

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

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

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

From: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Sent: Thursday, June 8, 2023 3:37 PM
To: Vale, Lisa <lvale@hwlochner.com>
Cc: Hockaday, Jacqueline R <JHockaday@indot.IN.gov>
Subject: RE: Early Coordination Packet - INDOT Project Des. 2100235 & 2100171 SR 43

Hi Lisa,

Find attached to this email a response to the proximity request for Des No 2100235 & 2100171.

Des No 2100235 & 2100171 are located in Brookston Water Department's, Chalmers Water Works', and Reynolds Water Works' Wellhead Protection (WHP) Areas.

•The contact for Brookston Water Department is Joseph Butz and they can be reached at butz219@comcast.net and 765-563-3171.

•The contact for Chalmers Water Works is Renee Collier and they can be reached at clerktreasurer@chalmers.in.gov and 219-984-5494.

•The contact for Reynolds Water Works is Robert Hall and they can be reached at reynoldsutilitiessuper@gmail.com and 219-207-9035.

Let me know what questions you have.

Sincerely,

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

THIS IS NOT A PERMIT

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

DNR#: ER-25658

Request Received: May 31, 2023

Requestor:
Lisa Vale
HW Lochner, Inc
286 West Johnson Road, Suite D
La Porte, IN 46350

Project:
SR 43 HMA overlay and replacement/repair of 11 small structures, from the North Junction of SR 18 to US 24/421; Des #2100235 & 2100171

County/Site Info: White County

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

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

Regulatory Assessment:
This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile, unless it qualifies under the INDOT and IDNR Memorandum of Understanding for Maintenance Activity Exemption, dated March 1997. Please include a copy of this letter with the permit application, if required.

Natural Heritage Database:
The Natural Heritage Program's data have been checked. The following bird species have been documented within 0.5 miles of the project.

- Upland Sandpiper (*Bartramia longicauda*), State endangered
- Black Tern (*Chlidonias niger*), State endangered

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

A) Heritage Species:
Suitable habitat for the above-mentioned species does not exist in the project area. No significant negative impacts are expected.

B) Pavement Rehabilitation:
Pavement rehabilitation projects typically do not have a significant impact on fish, wildlife, and botanical resources as long as best management practices (BMPs) are in place to limit the migration of Polycyclic

aromatic hydrocarbons (PAHs) into local waterways. PAHs are a byproduct of asphalt and coal tar based sealants and negatively impact aquatic systems. The use of sealants that are free of petroleum and coal tar based products is encouraged whenever possible. Contaminated road runoff can significantly impact the aquatic environment through increased turbidity and release of sediment into the stream which can be harmful to fish and other aquatic organisms, their eggs, and their food supply. Where possible, road runoff should be directed to riprap turnouts and sediment filtration prior to entering a stream to reduce impacts to aquatic species. We recommend the use of pollutant trapping technology such as storm drain inserts to reduce the runoff of roadside pollutants.

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

D) Wildlife Passage:
Small drainage structures can provide wildlife passage opportunities for small wildlife species under the roadway which helps to improve roadway safety and reduce wildlife vehicle interactions. The new/replacement/rehabilitated crossing structures, and any bank stabilization under or around the structures, must not create conditions that are less favorable for wildlife passage when compared to existing conditions. Upgrading wildlife passage for replacement/rehabilitated structures is recommended whenever possible to improve wildlife/vehicle safety. Bank lines must be maintained or restored within structures to allow for wildlife passage above the ordinary high water mark whenever possible. All wildlife passage designs must include a smooth level pathway a minimum of 1-3 feet in width composed of natural substrate (soil, sand, gravel, etc.) or compacted aggregate fill over riprap (#2, #53, #73, etc.) tied into existing elevations both upstream and downstream. The width and location of the wildlife pathway is dependent on the wildlife species using the area. There are a number of techniques and materials for incorporating wildlife passage into the design of a crossing structure if maintaining or restoring banklines is not possible. Coordination with a Regional Environmental Biologist to address wildlife passage issues before submitting a permit application (if required) is encouraged to avoid delays in the permitting process. The following links are good resources to consider in the design of stream crossing structures to maintain fish and wildlife passage:
https://www.fs.usda.gov/wildlifecrossings/library/index.php,
https://www.fhwa.dot.gov/clas/ctip/wildlife_crossing_structures/,
https://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf,
https://www.fs.usda.gov/ccrc/tool/fishxing-fish-passage-learning-systems.

E) Streambank / Streambed Stabilization:
Some form of bank and/or streambed stabilization is almost always needed with the construction, repair, replacement, or modification of a stream channel or crossing structure. For streambank stabilization and erosion control, regrading to a stable slope (2:1 or shallower) and establishing native vegetation along the banks are typically the most effective techniques. A variety of methods to accomplish this include: planting plugs, whips, container stock, seeding, and live stakes. In addition to vegetation establishment, some additional level of bioengineered bank stabilization may be needed under certain circumstances (inability to regrade to a stable slope, flow velocities that exceed the limits of vegetation alone, etc.). Combining vegetation with any of the following bank stabilization methods can provide additional bank protection while not compromising benefits to fish, wildlife, and botanical resources: geotextiles (erosion control blankets and/or turf reinforcement mats 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), vegetated geogrids or soil lifts, fiber rolls, glacial stone, or riprap. Information about bioengineering techniques can be found at the following link to a USDA/NRCS document that outlines many different bioengineering techniques

for streambank stabilization: https://efotg.sc.egov.usda.gov/references/public/IA/Chapter-16_Streambank_and_Shoreline_Protection.pdf.

Riprap or other hard bank stabilization materials should be used only at the toe of the sideslopes up to the ordinary high water mark (OHWM) with the exception of areas directly under bridges for instance. The banks above the OHWM should be restored, stabilized, and revegetated using geotextiles and a mixture of grasses, sedges, wildflowers, shrubs, and trees native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion. For streambed stabilization or scour protection, riprap or other stabilization materials should not be placed in the active stream channel above the existing streambed or flowline elevation unless specifically designed and installed for grade control and aquatic organism passage. This is to prevent obstructions to the movement of aquatic organisms upstream and downstream.

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

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the waterbody or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
3. 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.

Contact Staff:
Our agency appreciates this opportunity to be of service. Please contact me at mbuffington@dnr.in.gov or (317) 233-4666 if we can be of further assistance.

Matt Buffington

Date: June 29, 2023

Matt Buffington
Environmental Unit Supervisor
Division of Fish and Wildlife

INDIANA GEOLOGICAL & WATER SURVEY
INDIANA UNIVERSITY

Organization and Project Information

Project ID:
Des. ID: Des 2100235 and 2100171
Project Title: SR 43 - HMA Overlay, Minor Structural - White County
Name of Organization: H.W. Lochner, Inc
Requested by: Bridgette Murray

Environmental Assessment Report

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

*Map layers from the Indiana Geological and Water Survey and Indiana Map

DISCLAIMER:

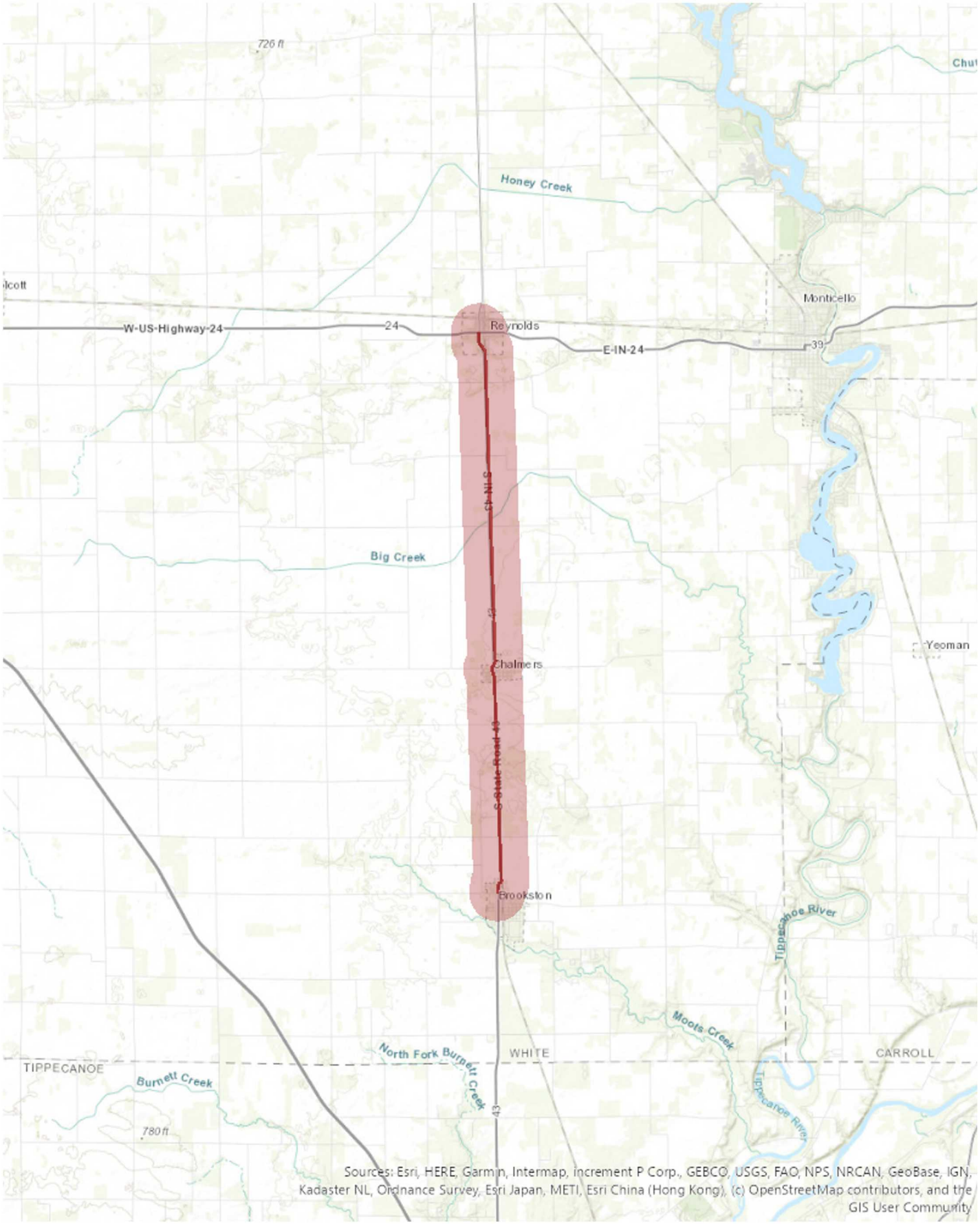
This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties 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: July 27, 2023

Copyright © 2015 The Trustees of Indiana University, Copyright Complaints

Privacy Notice



Copyright © 2015 The Trustees of Indiana University, Copyright Complaints

Privacy Notice

Metadata:

- https://igws.indiana.edu/pdms/
- https://portal.igs.indiana.edu/arcgis/rest/services/Seismic_Earthquake_Liquefaction_Potential/MapServer/info/metadata
- https://portal.igs.indiana.edu/arcgis/rest/services/Industrial_Minerals_SandAndGravel_Resources/MapServer/info/metadata
- https://portal.igs.indiana.edu/arcgis/rest/services/Bedrock_Geology/MapServer/info/metadata

Copyright © 2015 The Trustees of Indiana University, Copyright Complaints

Privacy Notice

From: Ken Smith <ksmith@municipalcivil.com>
Sent: Friday, June 2, 2023 12:21 PM
To: Mike DiFranco <MDiFranco@hanson-inc.com>; Vale, Lisa <lvale@hwlochner.com>
Cc: jhockaday@indot.in.gov; clerktreasurer@chalmers.in.gov
Subject: RE: Chalmers

They are, it appears they are outside your project limits, but I just wanted to confirm. Thank you for the coordination.

From: Mike DiFranco
Sent: Friday, June 02, 2023 12:05 PM
To: Vale, Lisa <lvale@hwlochner.com>; Ken Smith <ksmith@municipalcivil.com>
Cc: jhockaday@indot.in.gov; clerktreasurer@chalmers.in.gov
Subject: RE: Chalmers

Lisa,

Ken spoke with Derek Betz last fall about the pavement markings.

Ken,

Are the thermoplastic pavement markings that you are referring to for the railroad crossing? If they are, our paving should not disturb them.
Please advise.

From: Ken Smith <ksmith@municipalcivil.com>
Sent: Friday, June 2, 2023 7:50 AM
To: Vale, Lisa <lvale@hwlochner.com>
Cc: clerktreasurer@chalmers.in.gov
Subject: RE: Chalmers

Lisa

We have reviewed the documents provided for the early coordination for the SR43 resurfacing project. After reviewing the scope of work, the location of storm drains and other town assets and infrastructure, Chalmers has no utilities, buildings or infrastructure that would be affected or that will impact the project. Should any coordination be needed prior to or during the project, please contact the town @ (219) 984-5494.

Thank you.
Ken Smith P.E.
ph 765 427 4670

From: Vale, Lisa <lvale@hwlochner.com>
Sent: Thursday, June 1, 2023 5:45 PM
To: Ken Smith <ksmith@municipalcivil.com>
Cc: jhockaday@indot.in.gov; clerktreasurer@chalmers.in.gov; Mike DiFranco <MDiFranco@hanson-inc.com>
Subject: RE: Chalmers
Hi Ken,

Thanks for reaching out, to answer your question, I am a sub consultant to Hanson for these two Des. 2100235 and 2100171 projects and am working with Hanson as I am responsible for the project's

environmental documentation task. So, I can confirm that I am reaching out to you about the same two projects that they were previously coordinating with you on.

This coordination I sent is required for the environmental document on the projects and is therefore totally separate from the asset info and utility coordination that was also needed for the projects. My coordination packet is just to allow all involved parties to read more on the project and address any concerns or questions you may have.

Let me know if you have any more questions or need anything else. I also cc'd Mike DiFranco on this email as he can answer any questions regarding the Hanson coordination that is taking place as well.

Mike, if you could reply or further coordinate about the thermoplastic markings request that would be appreciated.

Thank you have a good evening!

Best,
Lisa
Lisa Vale
Environmental Scientist
LOCHNER
286 W. Johnson Road, Suite D
La Porte, IN 46350
C 219.393.8841

From: Ken Smith <ksmith@municipalcivil.com>
Sent: Thursday, June 1, 2023 3:46 PM
To: Vale, Lisa <lvale@hwlochner.com>
Cc: jhockaday@indot.in.gov; clerktreasurer@chalmers.in.gov
Subject: Chalmers
I have received your email from the town's clerk concerning repaving. We have sent to Hanson, multiple emails, work plans, drawings, electric water storm and sanitary drawings etc. Attached

Then we received another request last month for what appears to be the same information, from Hanson, now the town received this early coordination letter.

We are a little confused how many projects are coming through Chalmers, (and Brookston and Reynolds). Is this all for one project and the consultants are changing, or can you advise the town? Any information would be appreciated, since we think we've responded and sent what was requested to Hanson several times.

Also, please know last fall the town had RR thermoplastic warning pavement markings placed on Walton and Main Streets, between the tracks and SR43, if these areas are disturbed we would request the thermoplastic markings be replaced.

Thank you.

Ken Smith P.E.
ph 765 427 4670

United States Department of the Interior

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

In Reply Refer To: July 10, 2023
Project Code: 2023-0022994
Project Name: Des 2100235 & 2100171 - HMA Overlay, Minor Structural - SR 43 - White County

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

To Whom It May Concern:

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

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

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

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/

s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

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

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

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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

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

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

Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2023-0022994

Project Name: Des 2100235 & 2100171 - HMA Overlay, Minor Structural - SR 43 - White County

Project Type: Road/Hwy - Maintenance/Modification

Project Description: Des 2100235 and 2100171 are adjacent hot mix asphalt (HMA) overlay projects on SR 43 in White County. Des 2100235 begins at the intersection of the north junction of SR 18 with SR 43 in the Town of Brookston and continues northward to 0.2-mile south of the intersection of US 24/421 with SR 43 in the Town of Reynolds. Des 2100171 then begins and continues 0.2 mile north to the intersection of SR 43 and US 24/421. The projects will address the deteriorated condition of the pavement along SR 43, update select curb ramp locations to comply with American with Disabilities Act (ADA) standards, install new sidewalk, and repair deteriorated culverts and inlets within the project area.

The project scope includes milling the existing asphalt and overlaying it with HMA surface material, and completing partial- or full-depth patching as needed. In addition to HMA overlay activities, work will occur to repair or upgrade adjacent curb ramps to bring them into compliance with current ADA requirements and to replace or repair eleven small structures (each less than 48") and eleven storm sewer inlets.

Land use in the vicinity of the project include a mix of residential, commercial, agricultural, and wind farming. Suitable summer habitat exists adjacent to portions of the project area; however, no suitable summer habitat exists within 1000 feet of locations where small structure work will occur. All work associated with this project will remain within 100 feet of the existing roadways.

No tree clearing or trimming will occur. No permanent lighting will be added or altered as part of the project. Temporary lighting may be necessary during construction. If temporary lighting is utilized, the lighting will be directed down and away from potential bat habitat. A review of the USFWS database for Indiana bat and Northern long-eared bat, completed by INDOT LaPorte District on November 9, 2022, determined there are no roosting, hibernacula, or capture sites in or within 0.5 mile of the project area.

Construction is anticipated to begin Spring 2025.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.6773665,-86.87057526186507,14z



Counties: White County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

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

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

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

---

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

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

CLAMS

NAME	STATUS
Round Hickorynut *Obovaria subrotunda*	Threatened

There is **final** critical habitat for this species.
Species profile: https://ecos.fws.gov/ecp/species/9879

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

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

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

MIGRATORY BIRDS

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

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

---

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

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Henslow's Sparrow *Ammodramus henslowii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

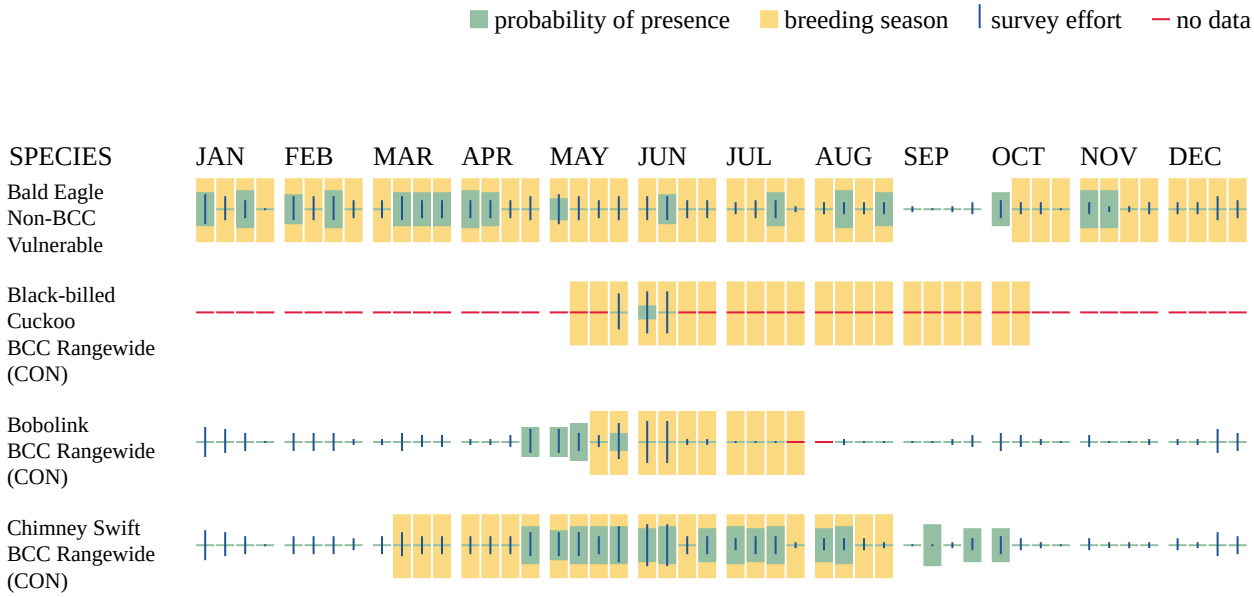
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

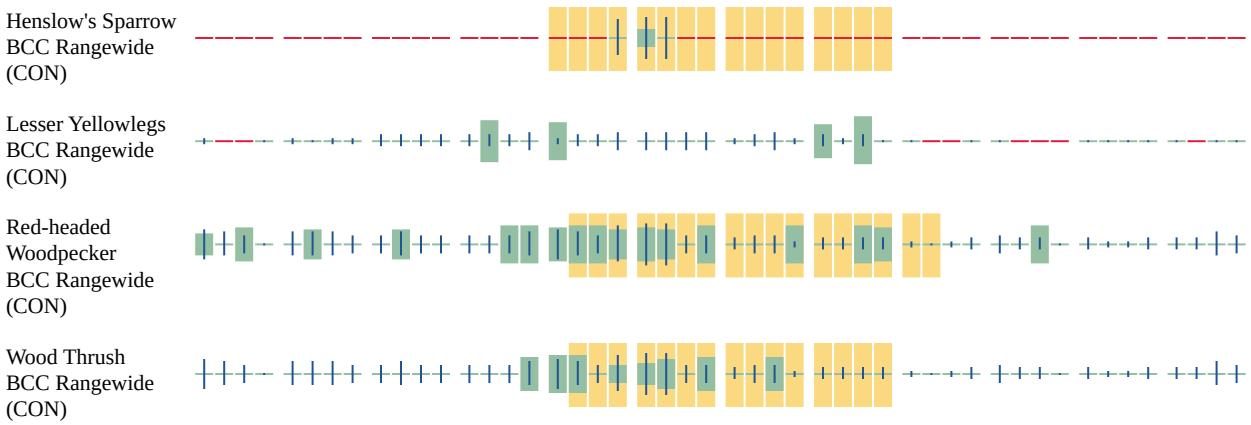
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides

birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

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

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

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

RIVERINE

- R2UBHx
- R5UBFx

FRESHWATER EMERGENT WETLAND

- PEM1A

IPAC USER CONTACT INFORMATION

Agency: H.W. Lochner, Inc.
Name: Bridgette Murray
Address: 286 W. Johnson Road
Address Line 2: Suite D
City: LaPorte
State: IN
Zip: 46350
Email bmurray@hwlochner.com
Phone: 2193244903

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Indiana Department of Transportation

United States Department of the Interior

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

In Reply Refer To: July 11, 2023
Project code: 2023-0022994
Project Name: Des 2100235 & 2100171 - HMA Overlay, Minor Structural - SR 43 - White County

Subject: Concurrence verification letter for the 'Des 2100235 & 2100171 - HMA Overlay, Minor Structural - SR 43 - White County' project under the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (NLEB).

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated July 11, 2023 to verify that the **Des 2100235 & 2100171 - HMA Overlay, Minor Structural - SR 43 - White County** (Proposed Action) may rely on the concurrence provided in the amended February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion (dated March 23, 2023) for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

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

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

Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

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

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

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

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

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

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

PROJECT DESCRIPTION

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

NAME

Des 2100235 & 2100171 - HMA Overlay, Minor Structural - SR 43 - White County

DESCRIPTION

Des 2100235 and 2100171 are adjacent hot mix asphalt (HMA) overlay projects on SR 43 in White County. Des 2100235 begins at the intersection of the north junction of SR 18 with SR 43 in the Town of Brookston and continues northward to 0.2-mile south of the intersection of US 24/421 with SR 43 in the Town of Reynolds. Des 2100171 then begins and continues 0.2 mile north to the intersection of SR 43 and US 24/421. The projects will address the deteriorated condition of the pavement along SR 43, update select curb ramp locations to comply with American with Disabilities Act (ADA) standards, install new sidewalk, and repair deteriorated culverts and inlets within the project area.

The project scope includes milling the existing asphalt and overlaying it with HMA surface material, and completing partial- or full-depth patching as needed. In addition to HMA overlay activities, work will occur to repair or upgrade adjacent curb ramps to bring them into compliance with current ADA requirements and to replace or repair eleven small structures (each less than 48") and eleven storm sewer inlets.

Land use in the vicinity of the project include a mix of residential, commercial, agricultural, and wind farming. Suitable summer habitat exists adjacent to portions of the project area; however, no suitable summer habitat exists within 1000 feet of locations where small structure work will occur. All work associated with this project will remain within 100 feet of the existing roadways.

No tree clearing or trimming will occur. No permanent lighting will be added or altered as part of the project. Temporary lighting may be necessary during construction. If temporary lighting is utilized, the lighting will be directed down and away from potential bat habitat. A review of the USFWS database for Indiana bat and Northern long-eared bat, completed by INDOT LaPorte District on November 9, 2022, determined there are no roosting, hibernacula, or capture sites in or within 0.5 mile of the project area.

Construction is anticipated to begin Spring 2025.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.6773665,-86.87057526186507,14z



DETERMINATION KEY RESULT

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

QUALIFICATION INTERVIEW

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

   [1] See Indiana bat species profile

   Automatically answered
   Yes

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

   [1] See northern long-eared bat species profile

   Automatically answered
   Yes

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

   A) Federal Highway Administration (FHWA)

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

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

   No

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

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

   No

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

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

   No

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

   No

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

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

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

   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.

   No

10. 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

11. 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

12. 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

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

    No

14. Does the project include slash pile burning?

    No

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

    Yes

16. 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.

    No

17. 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

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

    Yes

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

    Yes

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

    No

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

    No

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

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

    Yes

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

    No

24. 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

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

    Automatically answered
    Yes, because the bridge is more than 1,000 feet from the nearest suitable habitat and is therefore considered unsuitable for use by bats

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

    Yes

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

    Yes

PROJECT QUESTIONNAIRE

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

   Yes

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

   No

3. Please describe the proposed bridge work:

   11 small structures (culverts) will be repaired or replaced
   11 storm sewer inlets will be repaired or replaced

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

   Spring 2025

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment 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.

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

This key was last updated in IPaC on June 14, 2023. Keys are subject to periodic revision.

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

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

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Cassie Wahl
Address: 315 East Boyd Blvd
City: LaPorte
State: IN
Zip: 46350
Email cwahl@indot.in.gov
Phone: 2193257509

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Indiana Department of Transportation

WHITE COUNTY AREA PLAN COMMISSION

Jenilynne Kyburz **Phone: 574/583-7355** **P.O. Box 851**
Executive Director **Monticello, IN 47960**

September 21, 2023

Indiana Department of Transportation
Attn: Lisa Vale
100 N. Senate Avenue
Room N758-ES
Indianapolis, IN 46204

Ph: (219) 393-8841
E-mail: lvale@hwlochner.com

Ref: INDOT Des No.: 2100235 & 2100171;
HMA Overlay
State Road 43
White County, Indiana

Lisa Vale correspondence dated September 20, 2023

Dear Ms. Vale,

I am in receipt of your request for feedback environmental concerns of the construction activities related to the above referenced project. I have reviewed the documents and have only two concerns related to the proposed project.

1) **Any right-of-way taking requires submission to our office of an appropriate application for each taking which must include a survey or acceptable engineering drawing providing the legal boundaries of the tract of land to be incorporated into the right-of-way.**
2) **Based on the right-of-way taking, certain structures such as signs, buildings or other common structures may be made out of compliance. Should that occur, we would like to have those situations identified so that we may notify the applicable property owners of the creation of these non-conforming circumstances.**

Other than those two issues, I do not see these activities causing a concern for the White County Area Plan Department.

Sincerely,

Jenilynne Kyburz
Executive Director
White County Area Plan

Appendix D
Section 106 of the NHPA

SECTION 1

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

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

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

Original Submission Date: April 17, 2023 **Amended Submission Date*: October 6, 2023**

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

Submitted By (Provide Name and Firm/Organization): Lisa Vale / H.W. Lochner, Inc.

Project Designation Number: 2100235 (lead) & 2100171

Route Number: SR 43

Feature crossed (if applicable): Spring Creek, Big Creek, Rosen Treter Ditch

City/Township: Reynolds / Chalmers / Brookston **County:** White

Project Description:*

**Provide a full project description—include the same level of specificity and detail as expected in the NEPA document—in order to ensure a timely review by INDOT-CRO staff. For bridge and culvert projects, include specific details on the rehab or replacement including potential changes to width, height and materials. Be sure to include the specific elements listed below as applicable.*

The project, sponsored by INDOT Crawfordsville District, involves SR 43 from the north junction of SR 18 to US 24/421, from the town of Brookston to the town of Reynolds and passing through the town of Chalmers, in White County, IN. SR 43 is a Rural Principal Arterial consisting of two lanes, one northbound and one southbound.

Des 2100171 is bundled with Des 2100235, with one environmental document being completed for both projects. The scope of work includes milling the existing asphalt and installing a hot mix asphalt (HMA) overlay. In addition to the HMA overlay activities, two intersections will have ADA curb ramp work completed in order to meet ADA-compliant standards. A total of six storm sewer inlets and eleven small structures (each less than 48") will be replaced in kind. New sidewalk will be installed along both sides of SR 43 within the town of Reynolds, beginning 150 feet north of 3rd Street and ending 110 feet south of 4th Street on the west side and 207 feet south on the east side. New curb will be added to SR 43 as part of the sidewalk construction. Existing guardrail associated with large culverts over Spring Creek, Big Creek, and Rosen Treter Ditch will be removed and replaced in kind. The structures carrying Spring Creek and Big Creek are excluded as paving exceptions. New guardrail will be installed at two of the replacement culverts along the east of SR 43.

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

New sidewalk will be installed along both sides of SR 43 within the town of Reynolds, beginning 150 feet north of 3rd Street and ending 110 feet south of 4th Street on the west side and 207 feet south on the east side. New curb will be added to SR 43 as part of the sidewalk construction. Curb ramps will be installed at following intersections within the project area:

Intersection	Quadrants	Depth of excavation (feet below ground surface (ft-bgs))
SR 43 and 3rd Street	All four (4) corners	5 ft-bgs
SR 43 and 4th Street	All four (4) corners	5 ft-bgs

For bridge or small structure projects, please list feature crossed, structure number, NBI number, and structure type:

The following small structures and inlets will be replaced as part of this project (as the structures are all less than 48", NBI number is not applicable):

Culvert No.	Feature Crossed	Structure Type
CLV-64399	SR 43	Corrugated metal pipe (CMP)
CLV-64400	SR 43	Concrete box culvert (BC)
CLV-64401	SR 43	Concrete cylinder pipe (CCP)
CLV-64402	SR 43	CMP
CLV-64403	SR 43	CCP
CLV-64404	SR 43	CCP
CLV-64405	SR 43	CMP
CLV-64406	SR 43	CCP
CLV-64407	SR 43	CCP
CLV-64408	SR 43	Concrete pipe w/ corrugated plastic liner
CLV-64409	SR 43	Reinforced concrete BC
INCB-54959	SR 43	Storm sewer Inlet
INCB-54958	SR 43	Storm sewer Inlet
INCB-54957	SR 43	Storm sewer Inlet
INCB-54956	SR 43	Storm sewer Inlet
STR-150	SR 43	Catch Basin

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

☐ **Yes** ☐ **No**

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

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

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

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

Right-of-way (ROW) acquisition will be necessary for some areas of excavation outside the existing pavement. All new permanent ROW will be to facilitate the replacement of culverts under and along SR 43 and the installation of new curb ramps and sidewalk; all temporary ROW will be to facilitate the construction of new sidewalk within the town of Reynolds. All ROW locations are adjacent to the existing road or sidewalk and within previously disturbed soils. Total new permanent ROW is 1.53 acres; total temporary ROW is 0.06 acre. New permanent ROW is shown in blue on the project maps and temporary ROW is shown in purple.

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

Archaeology (check one):

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

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

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

B1: Replacement, repair, or installation of curbs, curb ramps, or sidewalks, including when such projects are associated with roadway work such as surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking, 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 satisfied *(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. Copes of any archaeological reports prepared for the project will be provided to the Division of Historic Preservation and Archaeology (DHPA) and any archaeological site form information will be entered directly into the State Historic Architectural and Archaeological Database (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 two conditions listed below must be satisfied *(EITHER Condition i or Condition ii must be satisfied):*

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

ii. Work occurs adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource under one of the two additional conditions listed below *(EITHER Condition a or Condition b must be met and fieldwork and documentation must be completed as described below):*

a. No unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and historic brick or stone retaining walls are present in the project area adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *OR*

b. Unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and historic brick or stone retaining walls are present in the project area adjacent to or within a National Register-listed or National Register-eligible individual above-ground resource or district and ANY ONE of the conditions *(1, 2, or 3)* listed below must be fulfilled:

1. Unusual features described above will not be impacted by the project. Firm commitments regarding the avoidance of these features must be listed in the MPPA determination form and the NEPA document and must be entered into the INDOT Project Commitments Database. These projects will also be flagged for quality assurance reviews by INDOT Cultural Resources Office during/after project construction.
2. Unusual features described above have been determined not to contribute to the significance of the historic resource by INDOT Cultural Resources Office in consultation with the SHPO based on an analysis and justification prepared by their staff or review of such information from other qualified professional historians.
3. Impacts to unusual features described above have been determined by INDOT Cultural Resources Office to be so minimal that they do not diminish any of the characteristics that contribute to the significance of the historic resource, based on an analysis and justification prepared by their staff or review of such information from other qualified professional historians.

B-4. Installation of new safety appurtenances, including but not limited to, guardrails, barriers, glare screens, and crash attenuators, 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.

B9: 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. Copes of any archaeological reports prepared for the project will be provided to the Division of Historic Preservation and Archaeology (DHPA) and any archaeological site form information will be entered directly into the State Historic Architectural and Archaeological Database (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 the 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 Qualifications 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 brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions *(BOTH Condition a and Condition b must be satisfied):*

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

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

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

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

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

Part II: Completed by INDOT-CRO

Amendments will be shown in red font.

Information reviewed (please check all that apply):

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

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

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

Bridge inspection information/BIAS ☒ Historic Bridge Inventory Database ☐

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

Other (please specify): Multiple Property Documentation Form (MPDF) *Residential Planning and Development in Indiana, 1940-1973* (Higgins, 2018); INDOT Bridge and Drainage Assets Viewer database; ***Waters Report****: SR 43 in White County, Indiana/HMA Overlay with Minor Structural Improvements/From Reynolds Junction of US 24 and US 421 to Brookston North Junction of SR 18 and SR 42/Des. No. 2100234 (Lead) & 2100171; Prepared for INDOT LaPorte District by Compliance*

Field Services (CFS), Inc.; Killian, February 10, 2023"; **INDOT MPPA Determination Form/Des. No. 0500277**/SR 43/HMA Overlay from US 24 to SR 18 through the towns of Reynolds, Chalmers & Brookston; October 2008**; INDOT MPPA Determination Form/Des. No. 1601134/Various Routes**: Town of Camden/Carroll Co.: SR 218/Main St.; Town of Flora/Carroll Co.; SR 75/Sycamore Street; Town of Monon/White Co.; SR 16/Broadway Street; Town of Reynolds, White Co.; US 421/Market Street; SR 43/Kenton Street; January 27, 2017;

Jackson, Christopher and Galen K. Smith
2023 A Phase Ia Archaeological Reconnaissance Survey for the Proposed SR 43 HMA Overlay Minor Structural (INDOT Des. Nos. 2200235 and 2100171), North Junction of SR 18 to 0.2 Miles South of US Highway 24/421, Big Creek, Honey Creek, and Prairie Townships, White County, Indiana. SJCA, Inc., Indianapolis. Document on file at INDOT CRO.

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

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

Additional Comments:

Above-ground Resources

An INDOT-CRO historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for White County. No listed resources are present near the project area.

The *White County Interim Report* (1993) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. The National Register & IHSSI information is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The SHAARD information was checked against the interim report hard-copy maps. The project route does not pass through any historic districts; in addition, no IHSSI-surveyed resources with ratings higher than 'contributing' are recorded adjacent to the project.

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

An INDOT-CRO historian performed a desktop review of the project area. The project is routed along a state highway that passes through small town commercial and residential areas, though rural areas and agricultural fields are also present along the project area. Due to the scope of work being limited to the current roadbed and the curbs/curb ramps, only those properties that immediately border the project area have any potential for impacts.

The sidewalk portion of the project falls under Condition B-i of Category B-1 of the MPPA due to the scope of work being limited to the existing roadbed and curb ramp and new sidewalk construction outside of and not adjacent to a National Register listed or eligible bridge, property, or historic district. The majority of the properties adjacent

to locations where curb ramp work will occur date from late nineteenth to early-twentieth century. There is no evidence that any properties adjacent to the project area are eligible to the National Register based on a review of available online street-view imagery and aerial photography. No further review is required.

Town of Reynolds Intersections	Quadrants	Depth of excavation (feet below ground surface (ft-bgs))
SR 43 and US 24/421	All four (4) corners	5 ft-bgs
SR 43 and 3rd Street	All four (4) corners	5 ft-bgs
SR 43 and 4th Street	All four (4) corners	5 ft-bgs

The structures proposed for replacement (Table below) are not included in the INDOT BIAS database, due to all having diameters of less than 48 inches.

Culvert No.	Feature Crossed	Structure Type
CLV-64399	SR 43	Corrugated metal pipe (CMP)
CLV-64400	SR 43	Concrete box culvert (BC)
CLV-64401	SR 43	Concrete cylinder pipe (CCP)
CLV-64402	SR 43	CMP
CLV-64403	SR 43	CCP
CLV-64404	SR 43	CCP
INCB-54961	SR 43	Storm sewer Inlet
INCB-54960	SR 43	Storm sewer Inlet
INCB-54954	SR 43	Storm sewer Inlet
INCB-54951	SR 43	Storm sewer Inlet
INCB-54952	SR 43	Storm sewer Inlet
INCB-54953	SR 43	Storm sewer Inlet
CLV-64405	SR 43	CMP
CLV-64406	SR 43	CCP
CLV-64407	SR 43	CCP
CLV-64408	SR 43	Concrete pipe w/ corrugated plastic liner
CLV-64409	SR 43	Reinforced concrete BC
INCB-54959	SR 43	Storm sewer Inlet
INCB-54958	SR 43	Storm sewer Inlet
INCB-54957	SR 43	Storm sewer Inlet
INCB-54956	SR 43	Storm sewer Inlet
INCB-54956	SR 43	Storm sewer Inlet

Structure No. 10/CLV 64399

According to the 2023 Waters Report, the structure is located approximately 0.51 mile south of the intersection of SR 43 and W 900 S in Prairie Township. The structure is a 1.5 ft. diameter by 65 ft. long metal pipe. A modern commercial complex is located in the southeast corner of the intersection. No other above-ground structures are present. No unusual features are present that may be impacted by the project.

Structure No. 20/CLV-64400

According to the 2023 Waters Report, the structure is located approximately 0.42 mile north of the intersection of SR 43 and W 900 S .in Prairie Township. The subject structure is a 3-foot-span by 2-foot-rise by 55 feet long box culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 30/INDOT CLV-64401

According to the 2023 Waters Report, the structure is located approximately 0.9 mile north of the intersection of SR 43 and W 900 S .in Prairie Township. The structure is a 15-inch diameter by 60-foot-long metal pipe culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 40/CLV-64402

According to the 2023 Waters Report, the structure is located approximately 0.44 mile south of the intersection of SR 43 and W 700 S .in Prairie Township. The subject structure is a 15-inch diameter by 50-foot-long metal pipe culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 50/CLV-64403

According to the 2023 Waters Report, the structure is located approximately 0.06 mile north of the intersection of SR 43 and W 700 S in Big Creek Township. The subject structure is a 15-inch diameter concrete pipe culvert. The area immediately adjacent to the subject structure consists of agricultural fields on the east side of SR 43 and a modern commercial facility to the west. No unusual features are present that may be impacted by the project.

Structure No. 60 /CLV-64404

According to the 2023 Waters Report, the structure is located approximately 0.51 mile north of the intersection of SR 43 and W 700 S in Big Creek Township. The subject structure is a 15-inch diameter by 50-foot-long concrete pipe culvert. The area immediately adjacent to the subject structure consists of agricultural fields on the east side of SR 43 and a modern commercial facility to the west. No unusual features are present that may be impacted by the project.

Structure No. 70-75/INCB 54951-54 & 60-61

According to the 2023 Waters Report, "…Structures 70 to 75 are located approximately at the intersection of SR 43 and Main Street in the Town of Chalmers…" The subject structures are storm inlets. There is no IHSSI-surveyed historic district in Chalmers and no surveyed scattered sites at the intersection. Three (3) of the four corners of the SR 43/Main Street intersection are vacant lots. A greatly altered mid-twentieth century service station is at the intersection's northwest corner; the resource lacks the necessary material integrity and historic significance to be recommended National Register-eligible. No unusual features are present that may be impacted by the project.

Structure No. 80/CLV-64405

According to the 2023 Waters Report, the structure is located approximately 0.55 mile north of the intersection of SR 43 and W 600 S (locally known as Walnut Street in Chalmers), in Big Creek Township. The subject structure is a one-foot diameter by 40-foot-long metal pipe culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 90/CLV-64406

According to the 2023 Waters Report, the structure is located approximately 0.71 mile north of the intersection of SR 43 and W 600 S in Big Creek Township. The subject structure is a 15-inch diameter by 60-foot-long box culvert. The area immediately adjacent to the subject structure consists of agricultural fields on the east side of SR 43. A highly altered c.1967 ranch house, which has been converted to a commercial business, is on the west side of SR 43. The resource does not appear to meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register. No unusual features are present that may be impacted by the project.

Structure No. 100/CLV-64407

According to the 2023 Waters Report, the structure is located approximately 0.41 mile south of the intersection of SR 43 and W 300 S .in Big Creek Township. The subject structure is a one-foot diameter by 40-foot-long concrete pipe culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 110/CLV-64408

According to the 2023 Waters Report, the structure is located at the intersection of SR 43 and W 350 S. The subject structure is a 2-foot diameter/35-foot-long plastic liner culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 120/CLV-64409

According to the 2023 Waters Report, the structure is located approximately 0.49 mile south of the intersection of SR 43 and W 100 S .in Honey Creek Township. The existing structure is a 15-inch span by 36-inch rise by 55-foot-long box culvert. The area immediately adjacent to the subject structure consists of agricultural fields. No unusual features are present that may be impacted by the project.

Structure No. 130/INCB-54959

Structure No. 130 is located at the intersection of SR 43 and E. 4th Street in the Town of Reynolds, Honey Creek Township. The existing inlet is recommended for casting furnish and adjustment to grade. No IHSSI-surveyed historic district exists in Reynolds. Above-ground resources at three of the intersection four corners are highly altered late-nineteenth century houses. Due to a collective lack of material integrity and historic significance, none of these resources would be recommended as eligible to the National Register. No unusual features are present that may be impacted by the project.

Structure No. 140-143/INCB-54956-59

Structure No. 130 is located at the intersection of SR 43 and E. 3rd Street in the Town of Reynolds, Honey Creek Township. The existing inlet is recommended for casting furnish and adjustment to grade. No IHSSI-surveyed historic district exists in Reynolds. Three of the intersection's four corners is the location of a vacant lot. A highly altered c. 1925 bungaloid house is near the northwest corner. Due to the resource's lack of material integrity and historic significance, it would be recommended as eligible to the National Register. No unusual features are present that may be impacted by the project.

The subject structures referenced above do not appear in the Bridge Inspection Application System (BIAS) due to their small size (less than four feet in diameter). Based on an examination of photos and descriptions included in the 2023 Waters Report, none of the above-referenced structures exhibit wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that they possess historical or engineering significance.

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

October 6, 2023 Amended Project Information:

New sidewalk will be installed along both sides of SR 43 within the town of Reynolds, beginning 150 feet north of 3rd Street and ending 110 feet south of 4th Street on the west side and 207 feet south on the east side. New curb will be added to SR 43 as part of the sidewalk construction.

Existing guardrail associated with large culverts over Spring Creek, Big Creek, and Rosen Treter Ditch will be removed and replaced in kind. The structures carrying Spring Creek and Big Creek are excluded as paving exceptions. New guardrail will be installed at two of the replacement culverts along the east of SR 43.

The following structure was added to the list of those to be replaced as part of the project:

STR-150	SR 43	Catch Basin

Regarding the October, 2023 amended project information *("…New sidewalk will be installed along both sides of SR 43 within the town of Reynolds, beginning 150 feet north of 3rd Street and ending 110 feet south of 4th Street on the west side and 207 feet south on the east side. New curb will be added to SR 43 as part of the sidewalk construction…"),* the previous (June 26, 2023) CRO review comments still apply (*"…The sidewalk portion of the project falls under Condition B-i of Category B-1 of the MPPA due to the scope of work being limited to the existing roadbed and curb ramp and new sidewalk construction outside of and not adjacent to a National Register listed or eligible bridge, property, or historic district. The majority of the properties adjacent to locations where curb ramp work will occur date from late nineteenth to early-twentieth century. There is no evidence that any properties adjacent to the project area are eligible to the National Register based on a review of available online street-view imagery and aerial photography…"*)

STR-150	SR 43	Catch Basin

Due to its apparent functional classification as a catch basin, the above structure was not included in BIAS. No information about the above structure could be located in the previously referenced 2023 Waters Report for this project. In addition, no information about STR-150 could be located in consultant project folders for the Des. No. in ProjectWise. Finally, no information on this structure was located in the INDOT Bridge and Drainage Assets Viewer.

It is therefore assumed by CRO that a good faith effort has been conducted by CRO to ascertain that , per the MPPA, *"…the structure exhibits no wood, stone or brick structures or parts therein..."* Any information to the contrary will be the responsibility of Lochner/DLZ.

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

Archaeological Resources

An INDOT CRO archaeologist who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 reviewed the Phase Ia field reconnaissance survey report completed for the project by Cultural Resource Analysts (Jackson and Smith 2023). Archaeological sites 12Wh36 and 12Wh202 were previously recorded within or adjacent to the project area. Both sites were investigated by pedestrian survey according to current standards and were found to be ineligible. Both sites are located in or near portions of the project area where the only work type is HMA overlay, so neither site location was reinvestigated and neither site location will be impacted.

Eleven survey areas totaling approximately 4.4 ac (1.8 ha) were investigated via a combination of systematic shovel probing (n=2), pedestrian survey, and visual inspection of obviously disturbed areas. No archaeological resources were documented and no additional investigation is recommended (Jackson and Smith 2023). The remainder of the approximately 32.4 ac (80.1 ha) project area consists only of HMA overlay and was not field investigated as work is limited to previously disturbed soils.

Regarding the October, 2023 amended project information *("…New sidewalk will be installed along both sides of SR 43 within the town of Reynolds, beginning 150 feet north of 3rd Street and ending 110 feet south of 4th Street on the west side and 207 feet south on the east side. New curb will be added to SR 43 as part of the sidewalk construction…")*, the additional proposed sidewalk is within the existing R/W and has been disturbed by previous sidewalk construction, grading, and pavement.

The remainder of the project remains within areas previously evaluated. ATherefore, there are no archaeological concerns provided that the project scope and footprint do not change.

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

INDOT-CRO staff reviewer(s): Susan Branigin and Matt Coon

INDOT Approval Date: June 26, 2023

Amendment Approval Date (if applicable): March 4, 2024

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

Please attach the following to this form:

- **General Location Map.** This map should allow the INDOT-CRO reviewer to quickly locate the project.
- **Aerial photography map(s) of project area.** This map must include project limits. It may also include SHAARD data, but SHAARD data is not required.

- **If bridge or small structure project, please attach photographs of bridge or small structure.** Photographs can be found in inspection reports located in INDOT's Bridge Inspection Application System (BIAS), as well as other project documents, such as engineering assessments or mini-scopes.

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

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



A Phase Ia Archaeological Reconnaissance Survey for the Proposed SR 43 HMA Overlay Minor Structural (INDOT Des. Nos. 2200235 and 2100171), North Junction of SR 18 to 0.2 Miles South of US 24/421, Big Creek, Honey Creek, and Prairie Townships, White County, Indiana

Archaeological short report

Lead Agency: Federal Highway Administration

Internal pages and attachments removed.

April 14, 2023

Prepared for:
Hanson Professional Services
6510 Telecom Drive, Suite 210
Indianapolis, Indiana 46278

SJCA

Christopher Jackson, M.S., RPA
Archaeologist, Historian/QP
SJCA Inc.
9102 North Meridian Street, Suite 200
Indianapolis, Indiana 46260

p. 317.566.0629 f. 866.422.2046 e. cjackson@sjcainc.com

INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R3 / 3-22)

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: dhpa@dnr.IN.gov

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

Name(s) of author(s)	Date *(month, day, year)*
Christopher Jackson and Galen K. Smith	April 14, 2023

Title of project
A Phase Ia Archaeological Reconnaissance Survey for the Proposed SR 43 HMA Overlay Minor Structural (INDOT Des. Nos. 2200235 and 2100171), North Junction of SR 18 to 0.2 Miles South of US Highway 24/421, Big Creek, Honey Creek, and Prairie Townships, White County, Indiana

This document is being used to report on the results of:
☐ Records check only ☒ Records check and Phase 1a archaeological reconnaissance
☐ An addendum to a previous archaeological report. *For an addendum, provide the following information.*

Name(s) of author(s) of previous report

Title of previous report

Date of previous report *(month, day, year)*	DHPA number

PROJECT OVERVIEW

Description of project
The project, sponsored by INDOT Crawfordsville District, involves State Road (SR) 43 from the north junction of SR 18 to United State Highway (US) 24/421, from the town of Brookston to the town of Reynolds and passing through the town of Chalmers, in White County, Indiana. SR 43 is a Rural Principal Arterial consisting of two lanes, one northbound and one southbound.

Des 2100171 is bundled with Des 2100235, with one environmental document being completed for both projects. The scope of work includes milling the existing asphalt and installing a hot mix asphalt (HMA) overlay. In addition to the HMA overlay activities, three intersections will have American with Disabilities Act (ADA) curb ramp work completed to meet ADA-compliant standards. A total of eleven storm sewer inlets and eleven small structures (each less than 48 inches) will be replaced in kind. A new sidewalk will be installed from 143 feet north of 3rd Street to 207 feet south of 4th Street, along the eastern side of SR 43, within the town of Reynolds.

INDOT designation number(s)	Project number	DHPA number	DHPA plan number
2100235 and 2100171			

Prepared for: *(Company / Institution / Agency)*
Hanson Professional Services

Name of contact
Jason Rowley

Address *(number and street, city, state, and ZIP code)*
6510 Telecom Drive, Suite 210 Indianapolis, Indiana 46278

Telephone number	E-mail address
(317) 293-9024	jrowley@hanson-inc.com

Name of principal investigator
Christopher Jackson

Name of company / institution
SJCA, Inc.

Address *(number and street, city, state, and ZIP code)*
9102 North Meridian Street, Suite 200 Indianapolis, Indiana 46260

Telephone number	E-mail address
(317) 566-0629	cjackson@sjcainc.com

Signature of principal investigator *(Required)*	Date *(month, day, year)*

PROJECT LOCATION

County	USGS 7.5' series topographic quadrangle	Civil township
White	Brookston, Brookston NW, and Monticello	Big Creek, Honey Creek, Prairie

Legal Location

RECOMMENDATIONS

Records check *(Check all that apply)*

- ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources.
- ☒ A Phase 1a archaeological reconnaissance is recommended.
- ☒ Based upon the records check results, a Phase 1a archaeological reconnaissance was recommended and has been conducted.
- ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.

Phase 1a archaeological reconnaissance *(Check all that apply)*

- ☒ It is recommended that the project be allowed to proceed as planned because the Phase 1a archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation.
- ☐ It is recommended that Phase 1c archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase 1a archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.

Other recommendations / commitments

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.

REQUIRED 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, including, if applicable, photographs documenting disturbances
- ☒ Project plans *(if available)*

Other attachments

References cited *(See short report instructions for required references to be consulted)*

Anderson, Stephen R., and Jessica Petrie
2020 *Phase I Cultural Resource Survey for the Indiana Crossroads Wind Project, White County, Indiana*. Tetra Tech. Submitted to EDP Renewables North America, Houston. Copies on file at Division of Historic Preservation and Archaeology, Indianapolis.

Baskin, Forster and Company
1876 *Illustrated Historical Atlas of the State of Indiana*. Baskin, Forster and Company, Chicago.

Beard, Thomas C.
1993 *Archaeological Field Reconnaissance: INDOT Project ST-081-8 ( ), Str. 43-91-7772, Bridge Replacement of SR 43 over Spring Creek, White County, Indiana*. Thomas C. Beard. Submitted to Indiana Department of Transportation, Indianapolis. Copies on file at Division of Historic Preservation and Archaeology, Indianapolis.

Appendix E
Red Flag and Hazardous Materials

INDIANA DEPARTMENT OF TRANSPORTATION

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

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

Eric Holcomb, Governor
Michael Smith, Commissioner

Date: May 18, 2023

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

From: Lisa Vale
H.W. Lochner
286 W. Johnson Rd, Suite D
La Porte, IN
lvale@hwlochner.com

Re: RED FLAG INVESTIGATION
DES #2100235 & 2100171, State Project
HMA Overlay, Minor Structural Improvements
SR 43, North Junction of SR 18 to US 24/421
White County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) has identified the need to address the deteriorated condition of the pavement along SR 43, update select curb ramp locations to comply with ADA standards, and repair deteriorated culverts and inlets within the project area. This project will have limited excavation activities associated with new curb ramps and small structure replacement. Des 2100171 is bundled with Des 2100235, with one Red Flag Investigation (RFI) being completed for both projects.

Des 2100171 spans SR 43 from 0.2 mile South of US 24/421 to the intersection of SR 43 and US 24/421. INDOT proposes to mill the existing asphalt and overlay with hot mix asphalt (HMA) surface material. In addition to the HMA overlay activities, a new sidewalk will be installed from 143 feet North of 3rd St to 207 feet South of 4th St. Additionally, three (3) intersections will have ADA curb ramp work completed in order to meet ADA-compliant standards. Five (5) storm sewer inlets will be replaced in kind as part of the curb ramp reconstructions. The intersections where ADA curb ramp work is proposed to occur are provided in the table below:

Intersection	Quadrants	Depth of excavation (feet below ground surface (ft-bgs))
SR 43 and US 24/421	All four (4) corners	5 ft-bgs
SR 43 and 3rd Street	All four (4) corners	5 ft-bgs
SR 43 and 4th Street	All four (4) corners	5 ft-bgs

Des 2100235 is an HMA overlay on SR 43, spanning from SR 18 to 0.2 mile South of US 24/421. The project scope includes milling the existing asphalt and overlaying it with HMA surface material, and approximately eleven (11) small structure (each less than 48") and six (6) storm sewer inlet replacements. Some work within existing waterways will likely be required to replace the small structures.

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

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

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

Culvert Work Included in Project: Yes ☒ No ☐ Structure #(s) ___various, see below__

Culvert No.	Latitude	Longitude
CLV-64399	40.612326	-86.867832
CLV-64400	40.625835	-86.868413
CLV-64401	40.632749	-86.868722
CLV-64402	40.642326	-86.869134
CLV-64403	40.649485	-86.869449
CLV-64404	40.655946	-86.869740
INCB-54961	40.662045	-86.870494
INCB-54960	40.662122	-86.870511
INCB-54954	40.662162	-86.870359
INCB-54951	40.662120	-86.870341
INCB-54952	40.662045	-86.870326
INCB-54953	40.661983	-86.870293
CLV-64405	40.671143	-86.870433
CLV-64406	40.673075	-86.870525
CLV-64407	40.693612	-86.871343
CLV-64408	40.699560	-86.871542
CLV-64409	40.729356	-86.872802
INCB-54959	40.747520	-86.874906
INCB-54958	40.748397	-86.875120
INCB-54957	40.748506	-86.875123
INCB-54956	40.748512	-86.874975
INCB-54956	40.748406	-86.874968

Proposed right of way: Temporary ☒ # Acres _0.06__ Permanent ☒ # Acres _1.5__, Not Applicable ☐

Type and proposed depth of excavation: Excavation to a depth of approximately five (5) feet below the ground surface (ft-bgs) will occur at the locations requiring ADA curb ramp updates and new sidewalk. Please see the above table for specific locations. Excavation for small structures will be to a maximum depth of twelve (12) ft-bgs.

Maintenance of traffic (MOT): Likely maintenance of traffic will include a mix of partial (phased) closures, daytime flaggers, and brief (less than 30 days) full closures.

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	**4**	Recreational Facilities	**7**
Airports[1]	**N/A**	Pipelines	**4**
Cemeteries	**5**	Railroads	**2**
Hospitals	**N/A**	Trails	**1**
Schools	**2**	Managed Lands	**N/A**

[1]In order to complete the required airport review, a review of public-use airports within 3.8 miles (20,000 feet) is required.

Explanation:

CLV-64409

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the eastern edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64408

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the eastern edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64407

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the eastern edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64406

Pipelines: One pipeline segment, Northern Indiana Public Service Co., crosses the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64405

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is located adjacent to the west of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

INCB-54961, INCB-54960, INCB-54954, INCB-54951 INCB-54952, INCB-54953 (SR 43 and Main St):

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the western edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

CLV-64404

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the western edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64403

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the western edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64402

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the western edge of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64401

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is located 0.04 mile west of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64400

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is located 0.05 mile west of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64399

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

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	**51**
Canal Structures – Historic	**N/A**	Lakes	**6**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**1**
NWI-Lines	**5**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**1**	Sinkhole Areas	**N/A**
Rivers and Streams	**17**	Sinking-Stream Basins	**N/A**

Direct coordination with INDOT ESD Ecology and Waterway Permitting will occur on all water resources except for the IDEM 303d Listed Streams and Lakes (Impaired).

Explanation:

No IDEM 303d Listed Streams and Lakes (Impaired) were within or adjacent to the project area(s).

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

Explanation:

No Mining or Mineral Resources were identified within or adjacent to the areas where excavation will occur.

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	**8**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**1**
Construction Demolition Waste	**N/A**	Institutional Controls	**3**
Solid Waste Landfill	**N/A**	NPDES Facilities	**9**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**2**
Leaking Underground Storage (LUST) Sites	**7**	Notice of Contamination Sites	**1**

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

Explanation:

SR 43 and US 24/421:

Leaking Underground Storage Tank (LUST) Sites: Union 76 Reynolds Hoovers Self Serve Mart (also known as Hoovers Self Serve Mart), 102 N Kenton St., Agency ID 54430, is the site of an active gas station and is located on the northwest corner of the intersection. According to the No Further Action (NFA) Approval Pursuant to Remediation Closure Guide letter issued by IDEM on June 24, 2021, contamination remains in the area surrounding the site and exists within the ROW. An Environmental Restrictive Covenant (ERC) was recorded on June 25, 2020, and placed restrictions on land and groundwater uses. An ERC was proposed for the site at the southwest corner of the intersection at 204 South Kenton; however, the owner of that property declined to sign the ERC. A Notice of Contamination within Right-of-Way was submitted to INDOT on March 3, 2020, informing INDOT of petroleum-related impacts in the ROW along US 24 adjacent to the site. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination. Notice of Contamination Sites*: Union 76 Reynolds Hoovers Self Serve Mart (also known as Hoovers Self Serve Mart), 102 N Kenton St., Agency ID 54430. Please see the LUST section above.

Institutional Controls: Union 76 Reynolds Hoovers Self Serve Mart (also known as Hoovers Self Serve Mart), 102 N Kenton St., Agency ID 54430. Please see the LUST section above.

NPDES Facilities: Reynolds BP Amoco (also known as Hoovers Self Serve Mart), 102 N Kenton St, Agency ID 54430, permit number ING080229, is associated with the Hoovers Self Serve Mart and expired on September 30, 2021. No impact is expected.

One unmapped NPDES Facility, INDOT Des 1383600 Road Reconstruction, permit number INRA10600, is located adjacent to the western edge of the project area. The permit is associated with construction stormwater and is effective through September 27, 2027. Coordination will occur with Jason Kruger, LaPorte District Construction Director, Indiana Department of Transportation, and Regina Session, Project Engineer, American Structurepoint.

INCB-54961, INCB-54960, INCB-54954, INCB-54951 INCB-54952, INCB-54953 (SR 43 and Main St):

Underground Storage Tank (UST) Sites: Dennis J Reisert, SR 43 & W Main St, Agency ID 54873, is located within and adjacent to areas where excavation will occur. Based on a Notification for Underground Storage Tanks report dated September 30, 1991, all tanks at this location were removed earlier that month. No maps of soil sample locations were provided, and even though Total Petroleum Hydrocarbons (TPH) levels were non-detect at 10 parts per million (ppm), three (3) soil samples collected at an unknown depth are insufficient to determine the presence or absence of contamination. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination.

ECOLOGICAL INFORMATION SUMMARY

The White County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is provided at https://www.in.gov/dnr/nature-preserves/files/np_white.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did indicate the presence of ETR species within the 0.5 mile search radius. Due to the nature of project activities, this project may fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. However, if a Waters of the US Report (WOTUS) is prepared for the project, coordination will need to occur with IDNR at a minimum. Results of the WOTUS report may indicate the need to coordinate with USFWS.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. No information on the presence or absence is available for the small structures. Additional investigation to confirm the presence or absence of bats in the structures will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation INDOT Projects".

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:

CLV-64409 and CLV-64408:

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is 0.04 mile east of the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64407

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the east of the project area. Coordination with INDOT Utilities and Railroads will occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64406:

Pipelines: One pipeline segment, Northern Indiana Public Service Co., crosses the project area. Coordination with INDOT Utilities and Railroads should occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64405:

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the west of the project area. Coordination with INDOT Utilities and Railroads will occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

INCB-54961, INCB-54960, INCB-54954, INCB-54951, INCB-54952, INCB-54953 (SR 43 and Main Street):

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the west of the project area. Coordination with INDOT Utilities and Railroads will occur.

CLV-64404

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the west of the project area. Coordination with INDOT Utilities and Railroads will occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64403

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the west of the project area. Coordination with INDOT Utilities and Railroads will occur.

Railroads: One railroad segment, CSX RR, is adjacent to the eastern edge of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64402 and CLV-64401

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is adjacent to the west of the project area. Coordination with INDOT Utilities and Railroads will occur.

Railroads: One railroad segment, CSX RR, is adjacent to the east of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

CLV-64400

Pipelines: One pipeline segment, Northern Indiana Public Service Co., is located 0.05 mile west of the western edge of the project area. Coordination with INDOT Utilities and Railroads will occur.

Railroads: One railroad segment, CSX RR, is adjacent to the eastern edge of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant

no later than the Ready for Contracts (RFC) date.

CLV-64399

Railroads: One railroad segment, CSX RR, is adjacent to the eastern edge of the project area. Standard coordination will occur with INDOT Utilities and Railroads by the Project Management Team or their consultant no later than the Ready for Contracts (RFC) date.

WATER RESOURCES: Direct coordination with INDOT ESD Ecology and Waterway Permitting will occur for all water resources.

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS:

SR 43 and US 24/421:

Leaking Underground Storage Tank (LUST)/Institutional Controls/Notice of Contamination Sites: Union 76 Reynolds Hoovers Self Serve Mart (also known as Hoovers Self Serve Mart), 102 N Kenton St., Agency ID 54430, is the site of an active gas station and is located on the northwest corner of the intersection. According to the No Further Action (NFA) Approval Pursuant to Remediation Closure Guide letter issued by IDEM on June 24, 2021, contamination remains in the area surrounding the site and exists within the ROW. An Environmental Restrictive Covenant was recorded on June 25, 2020, and placed restrictions on land and groundwater uses. An ERC was proposed for the site at the southwest corner of the intersection at 204 South Kenton; however, the owner of that property declined to sign the ERC. A Notice of Contamination within Right-of-Way was submitted to INDOT on March 3, 2020, informing INDOT of petroleum-related impacts in the ROW along US 24 adjacent to the site. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with the IDEM Institutional Controls section (institutionalcontrols@idem.IN.gov) before RFC. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination.

NDPES Facilities: INDOT Des 1383600 Road Reconstruction, permit number INRA10600, is located adjacent to the western edge of the project area. The permit is associated with construction stormwater and is effective through September 27, 2027. Coordination will occur with Jason Kruger, LaPorte District Construction Director, Indiana Department of Transportation, and Regina Session, Project Engineer, American Structurepoint.

INCB-54961, INCB-54960, INCB-54954, INCB-54951, INCB-54952, INCB-54953 (SR 43 and Main Street):

UST Sites: Underground Storage Tank (UST) Sites: Dennis J Reisert, SR 43 & W Main St, Agency ID 54873, is located within and adjacent to areas where excavation will occur. Based on a Notification for Underground Storage Tanks report dated September 30, 1991, all tanks at this location were removed earlier that month. No maps of soil sample locations were provided, and even though TPH levels were non-detect at 10 ppm, three (3) soil samples collected at an unknown depth are insufficient to determine the presence or absence of contamination. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater may be necessary. Refer to Appendix G of the SAM Manual for the recommendation procedure to manage and report contamination.

ECOLOGICAL INFORMATION: Due to the nature of project activities, this project may fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. However, if a Waters of the US Report (WOTUS) is prepared for the project, coordination will need to occur with IDNR at a minimum. Results of the WOTUS report may indicate the need to coordinate with USFWS. Additional investigation to confirm the presence or absence of bats in the structures will be necessary. The range-wide programmatic consultation for the

Indiana Bat and Northern Long-eared Bat will be completed according to the most recent “Using the USFWS’s IPaC System for Listed Bat Consultation INDOT Projects”.

INDOT ESD concurrence: Dariane Davis Digitally signed by Dariane Davis Date: 2023.05.18 15:38:33 -04'00' (Signature)

Prepared by:
Lisa Vale
Environmental Scientist
H.W. Lochner

Graphics:

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

SITE LOCATION: YES

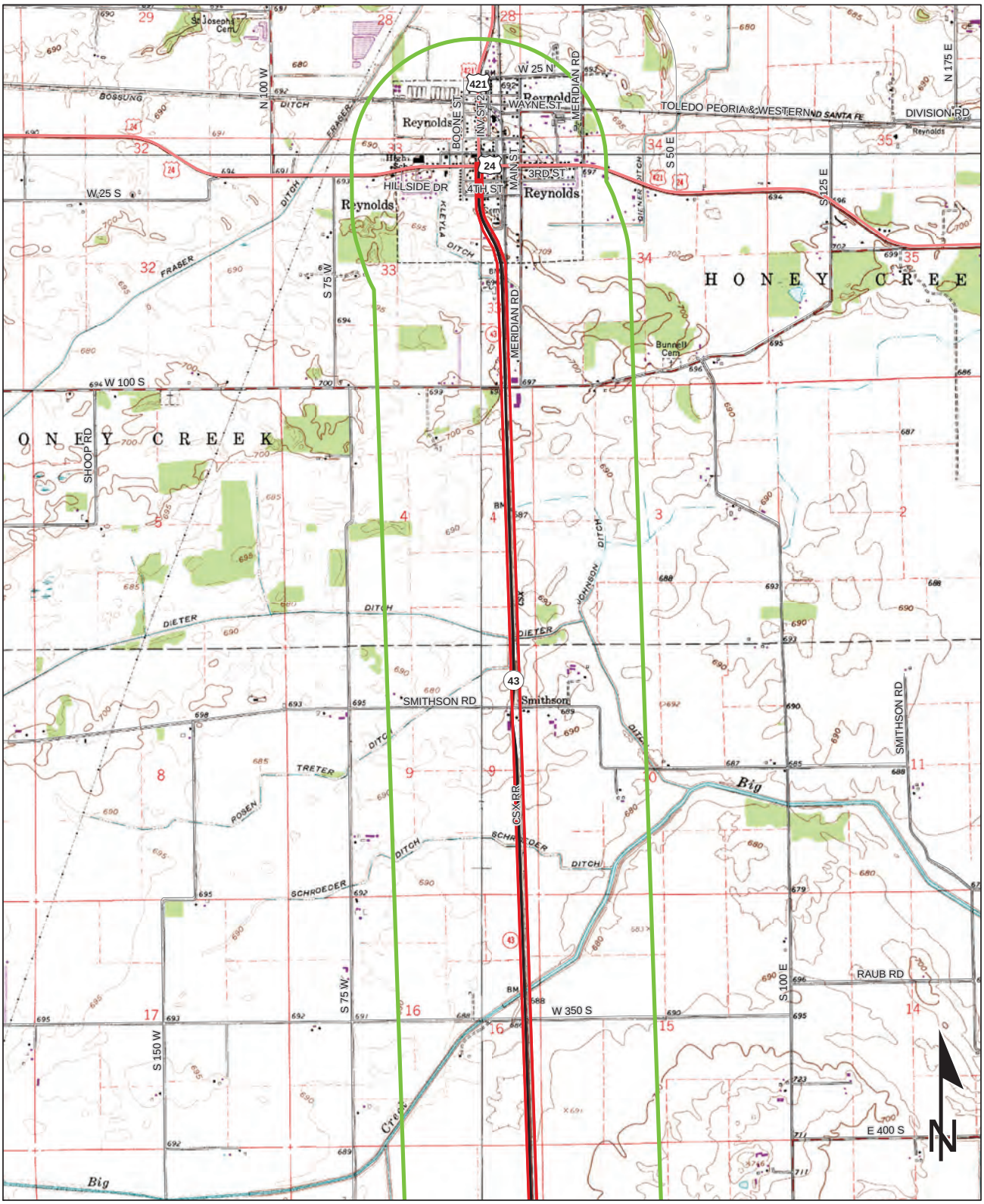
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location (1 of 3)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



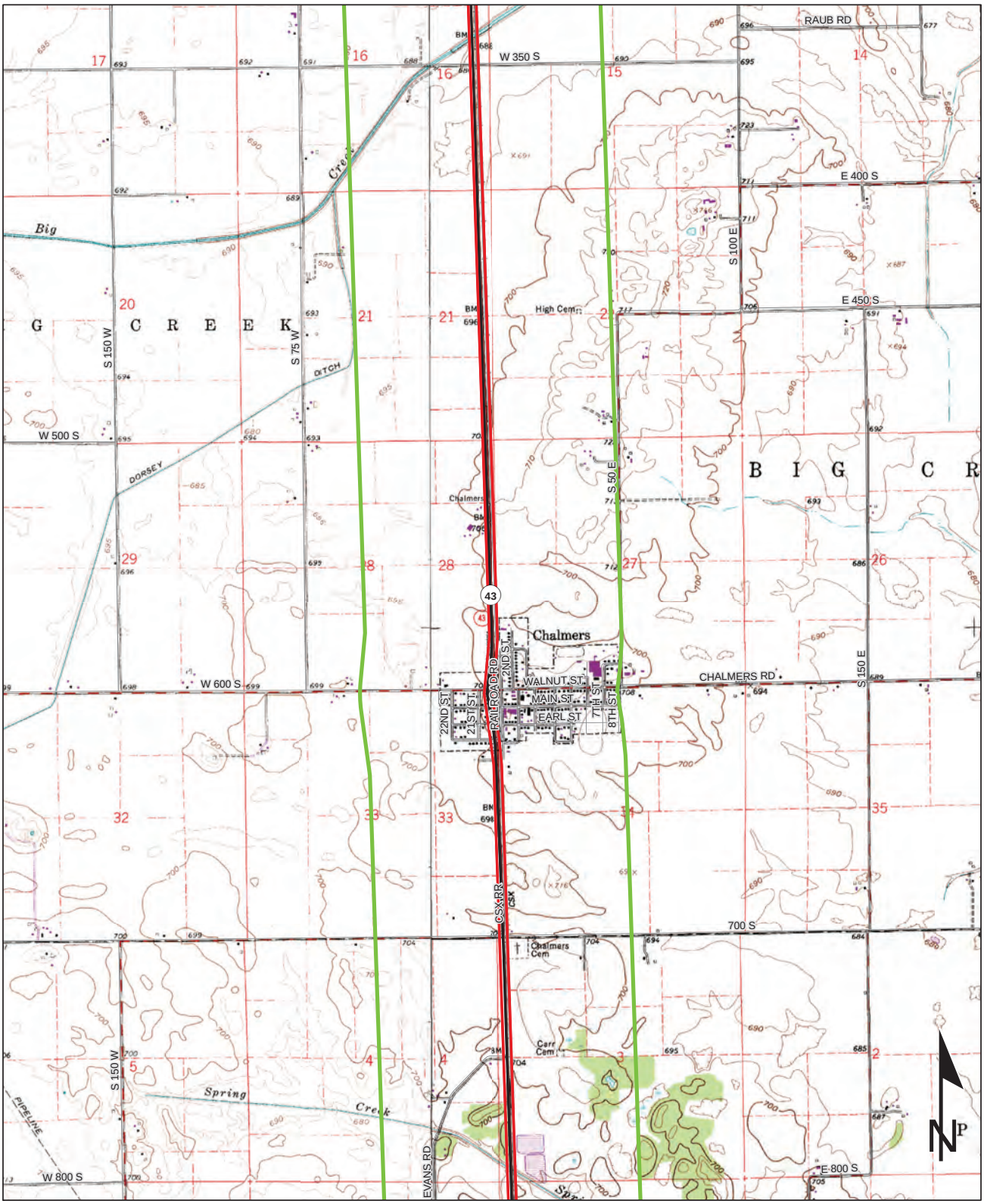
0.45 0.23 0 0.45 Miles

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

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

BROOKSTON NW, BROOKSTON SW, MONTICELLO SOUTH, & BROOKSTON QUADRANGLES, INDIANA
7.5 MINUTE SERIES

Red Flag Investigation - Site Location (2 of 3)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



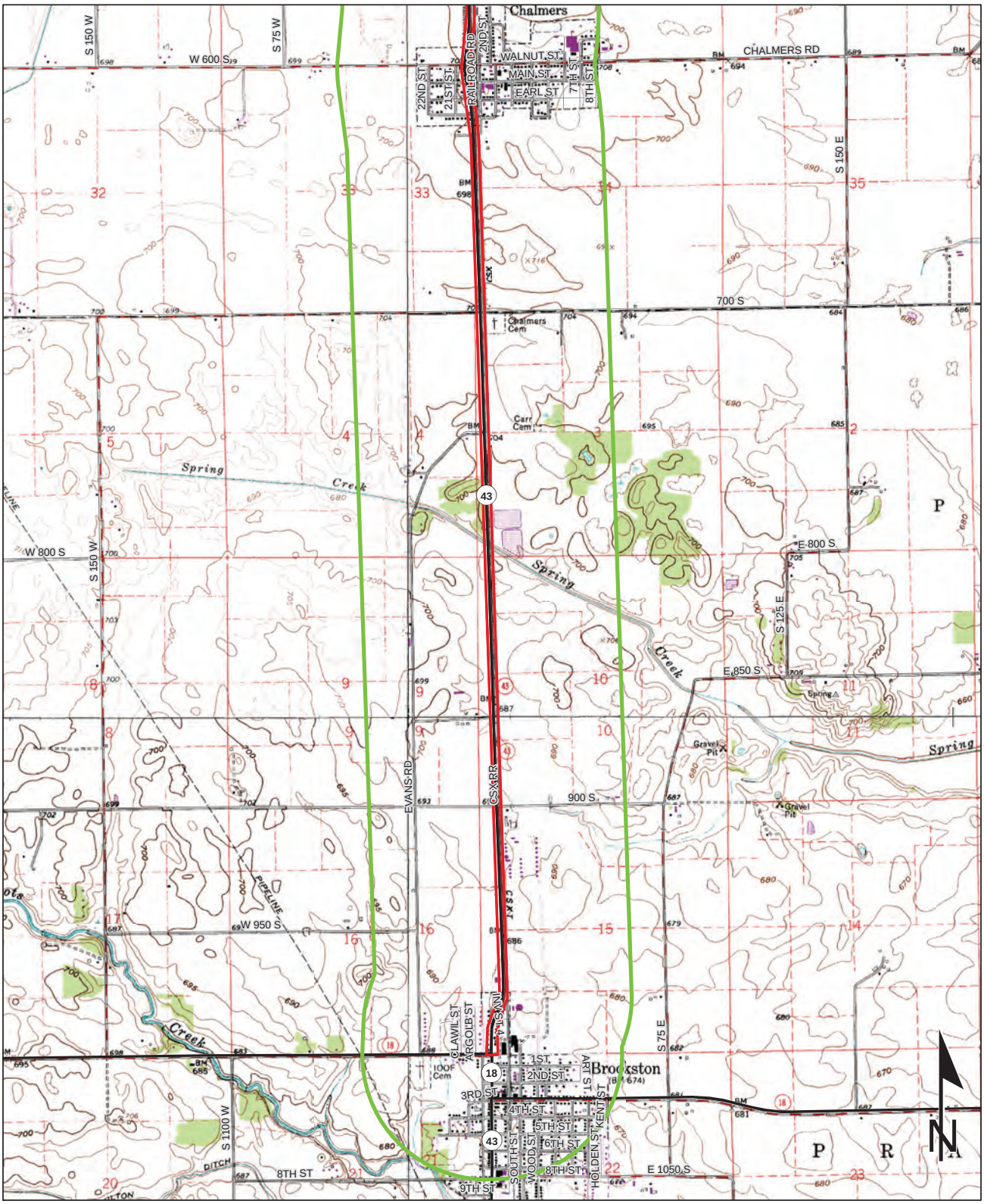
0.45 0.23 0 0.45 Miles

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

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

BROOKSTON NW, BROOKSTON SW, MONTICELLO SOUTH, & BROOKSTON QUADRANGLES, INDIANA
7.5 MINUTE SERIES

Red Flag Investigation - Site Location (3 of 3)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



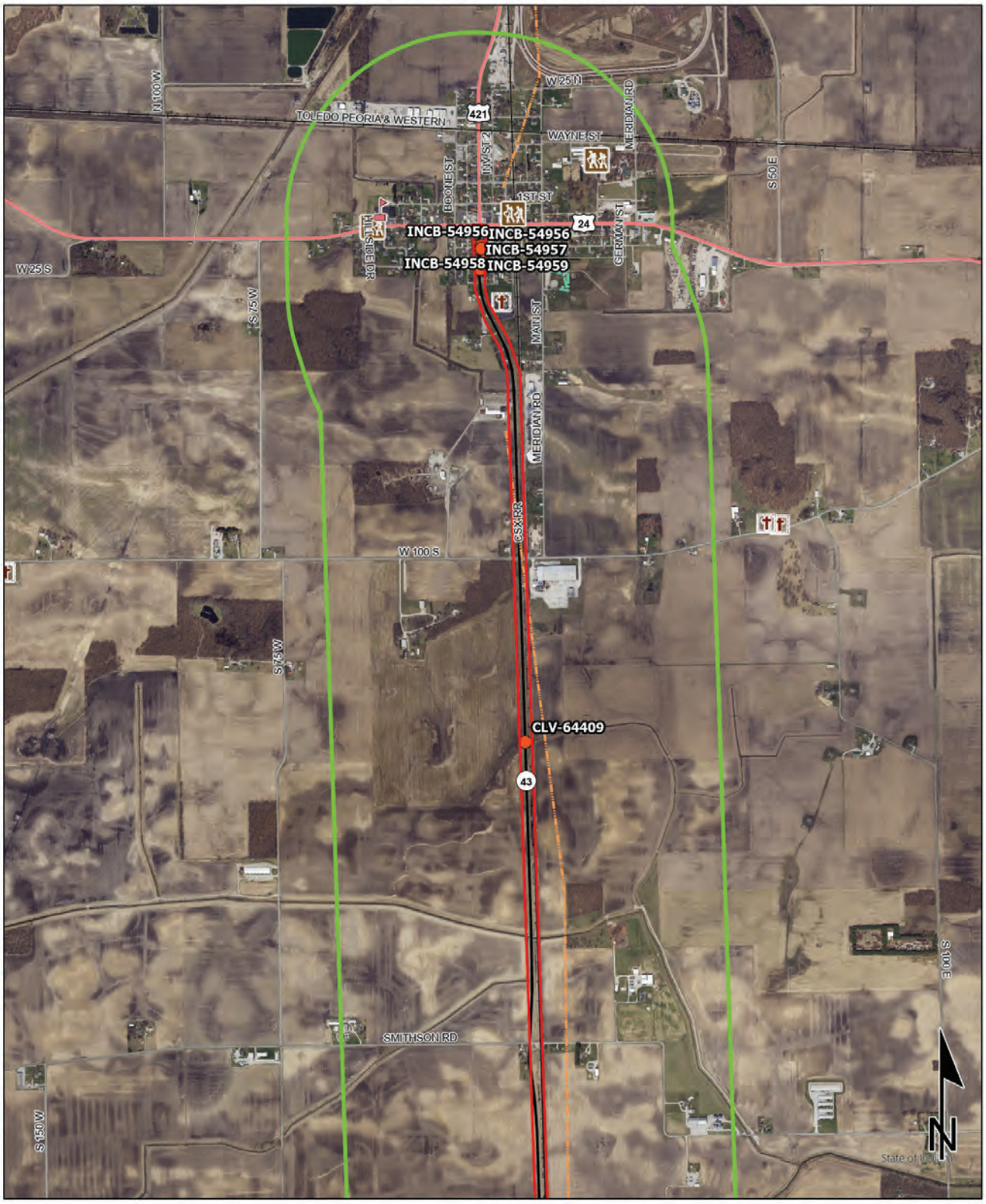
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

0.45 0.23 0 0.45 Miles

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

BROOKSTON NW, BROOKSTON SW, MONTICELLO SOUTH, & BROOKSTON QUADRANGLES, INDIANA
7.5 MINUTE SERIES

Red Flag Investigation - Infrastructure (1 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



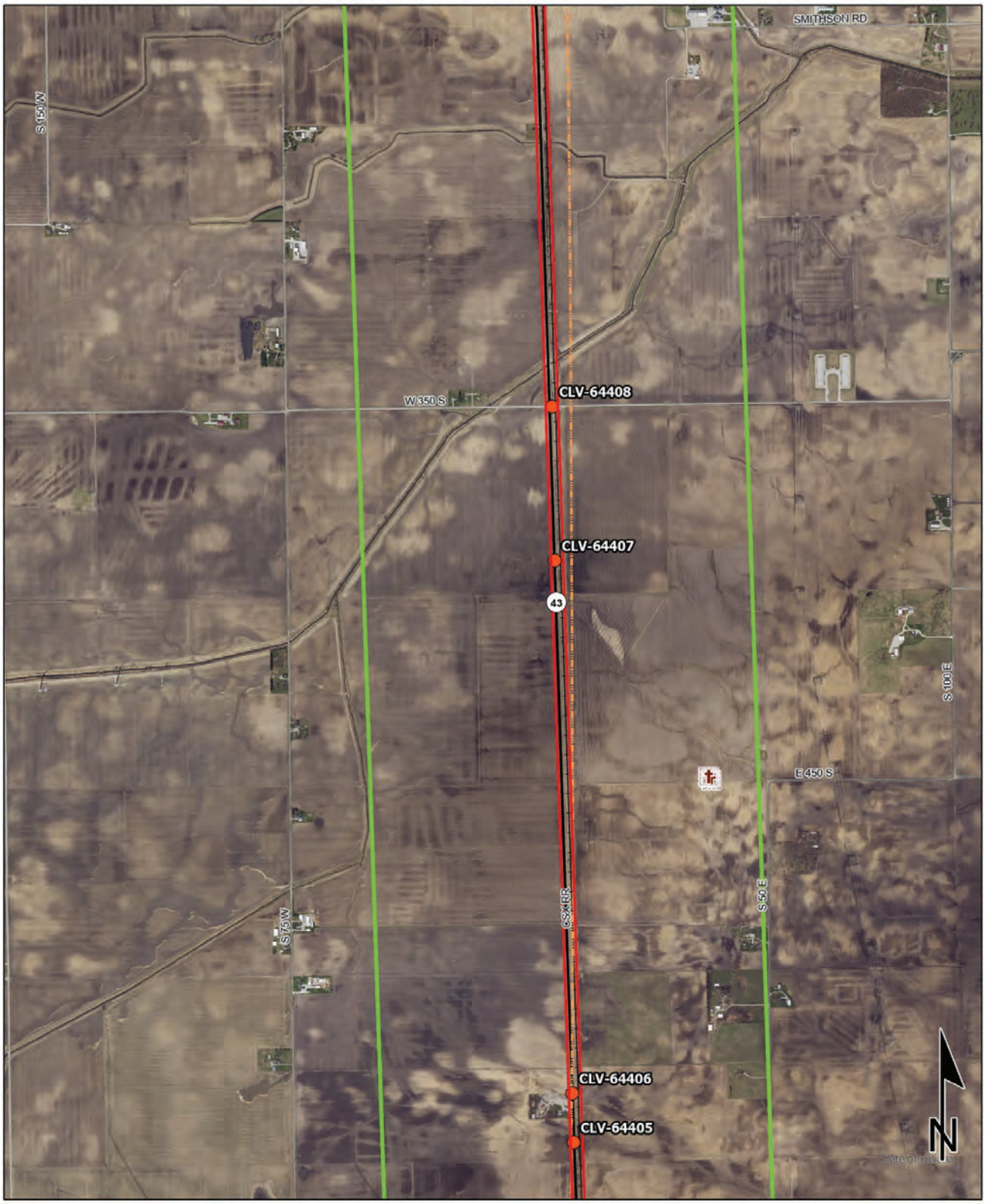
0.3 0.15 0 0.3 Miles

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

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

- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Infrastructure (2 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



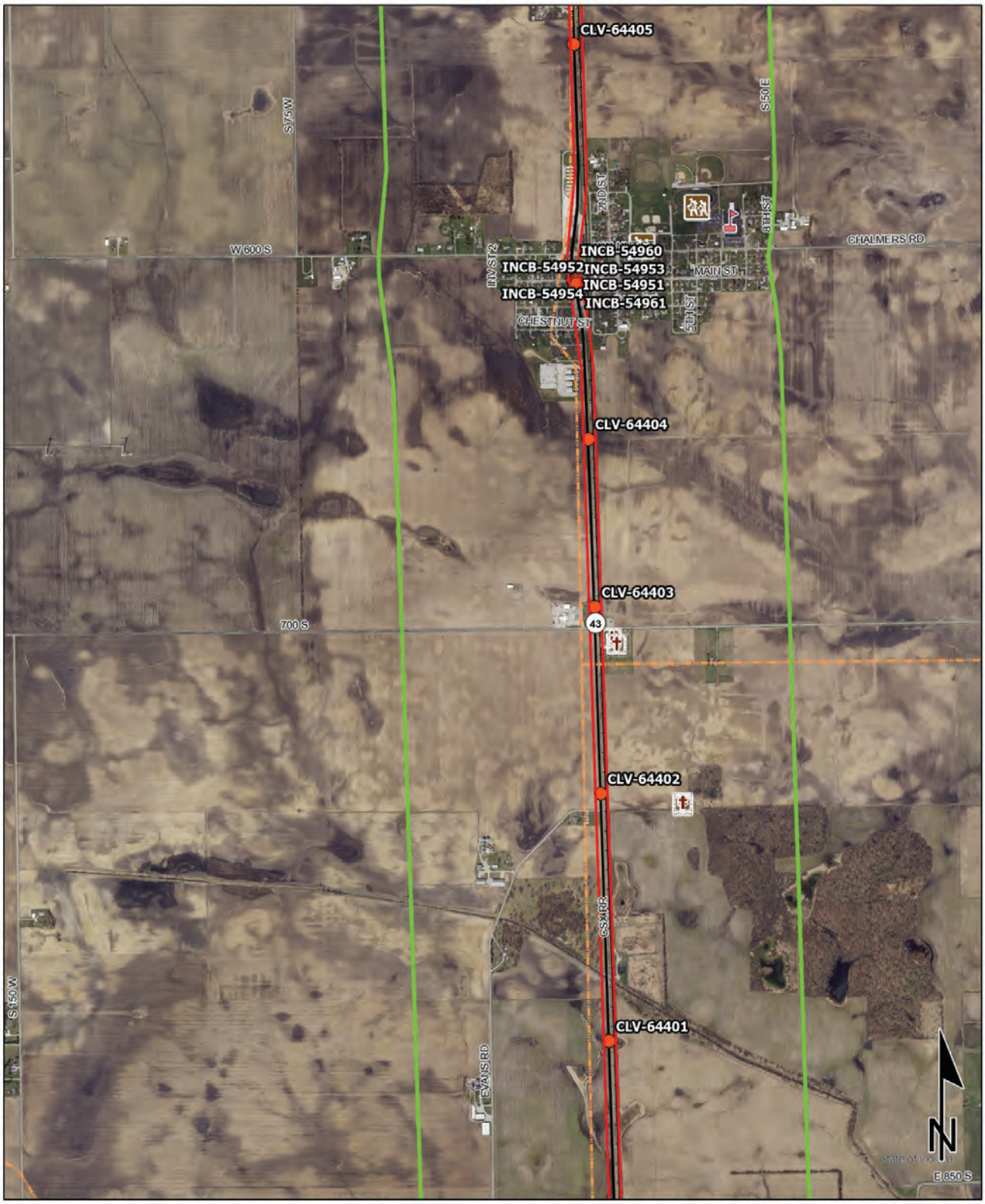
0.3 0.15 0 0.3 Miles

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

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

- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Infrastructure (3 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



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

0.3 0.15 0 0.3 Miles

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

- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Infrastructure (4 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



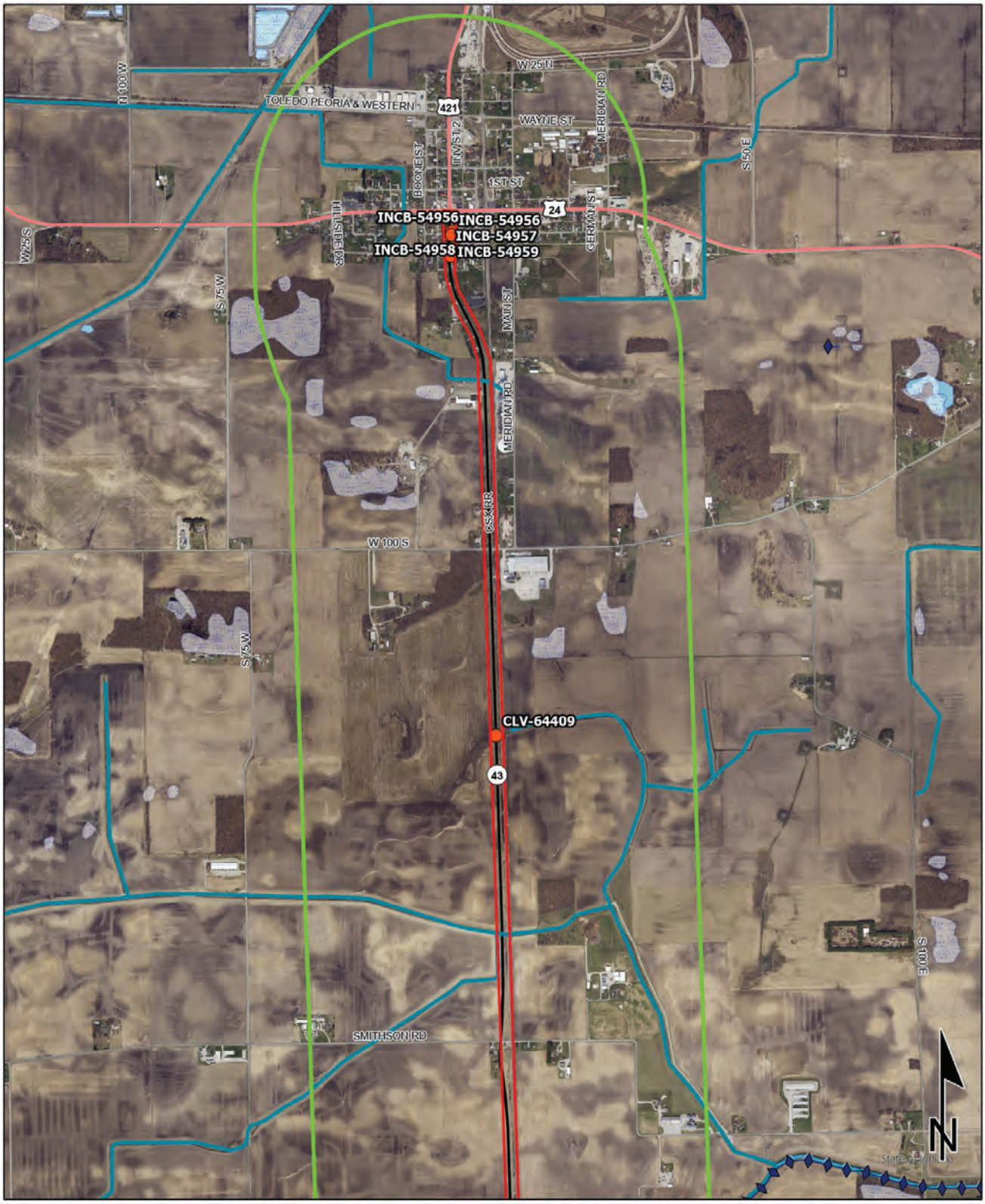
0.3 0.15 0 0.3 Miles

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

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

- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Waters Report (1 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



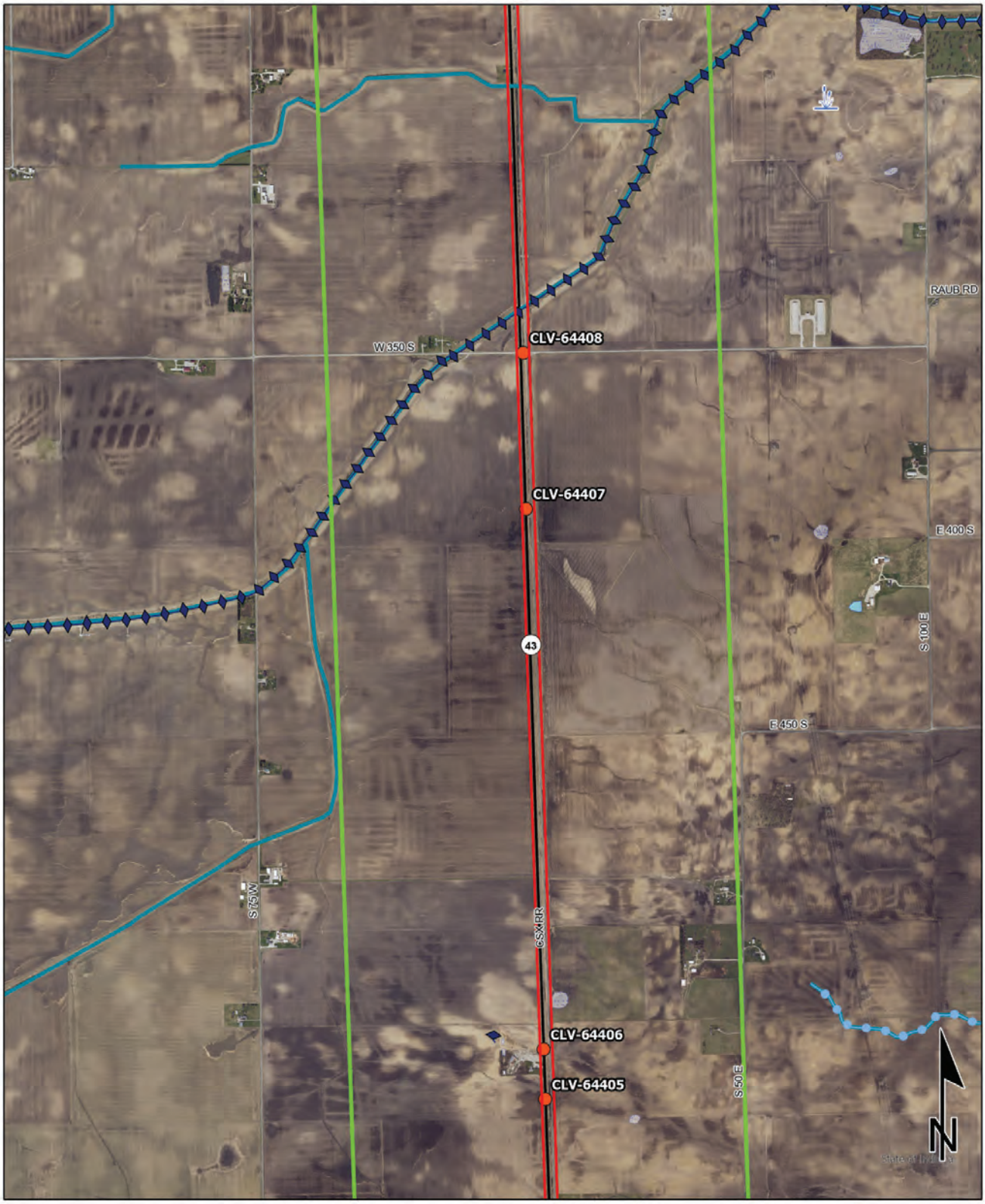
0.3 0.15 0 0.3 Miles

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

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

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

Red Flag Investigation - Waters Report (2 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



0.3 0.15 0 0.3 Miles

Sources:

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

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

Red Flag Investigation - Waters Report (3 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



0.3 0.15 0 0.3 Miles

Sources:

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

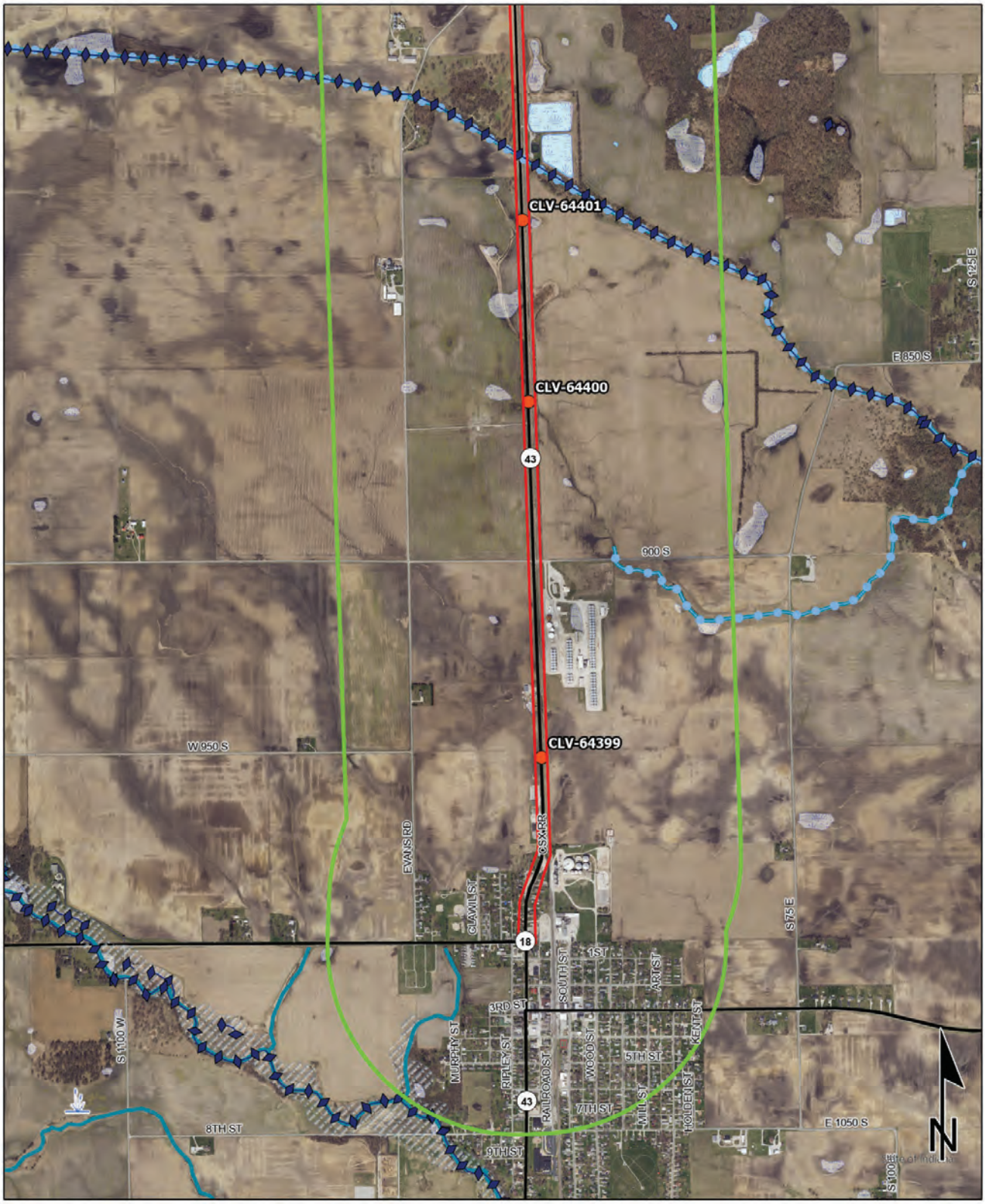
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

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

Red Flag Investigation - Waters Report (4 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



0.3 0.15 0 0.3 Miles

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

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

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

Red Flag Investigation - Mining and Mineral Resources (1 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



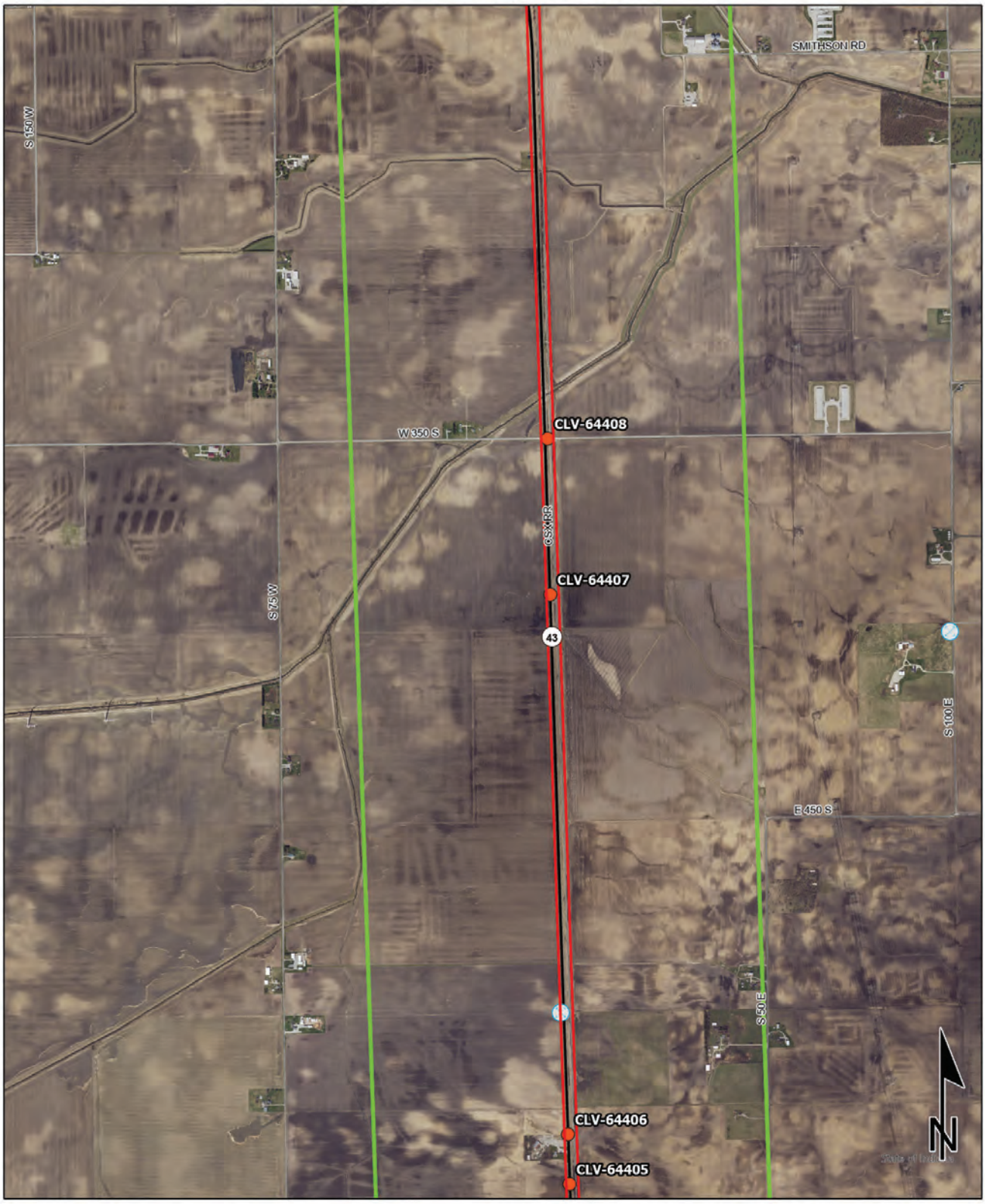
0.3 0.15 0 0.3 Miles

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

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

- Oil and Gas Wells
- Mineral Resources
- Mine - Surface
- Mine - Underground
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Mining and Mineral Resources (2 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



0.3 0.15 0 0.3 Miles

Sources:

Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

- Oil and Gas Wells
- Mineral Resources
- Mine - Surface
- Mine - Underground
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Mining and Mineral Resources (3 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



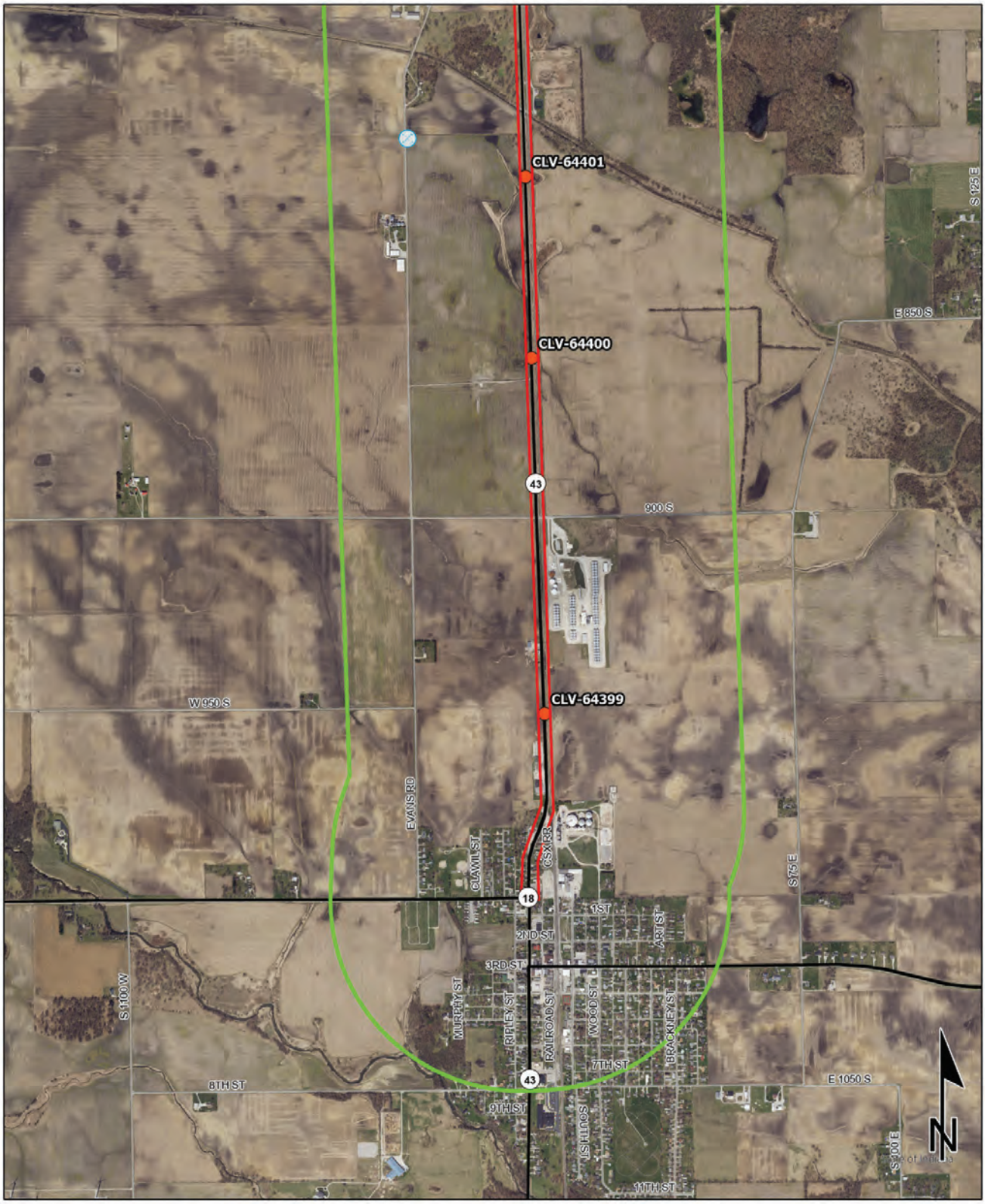
0.3 0.15 0 0.3 Miles

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

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

- Oil and Gas Wells
- Mineral Resources
- Mine - Surface
- Mine - Underground
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Mining and Mineral Resources (4 of 4)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



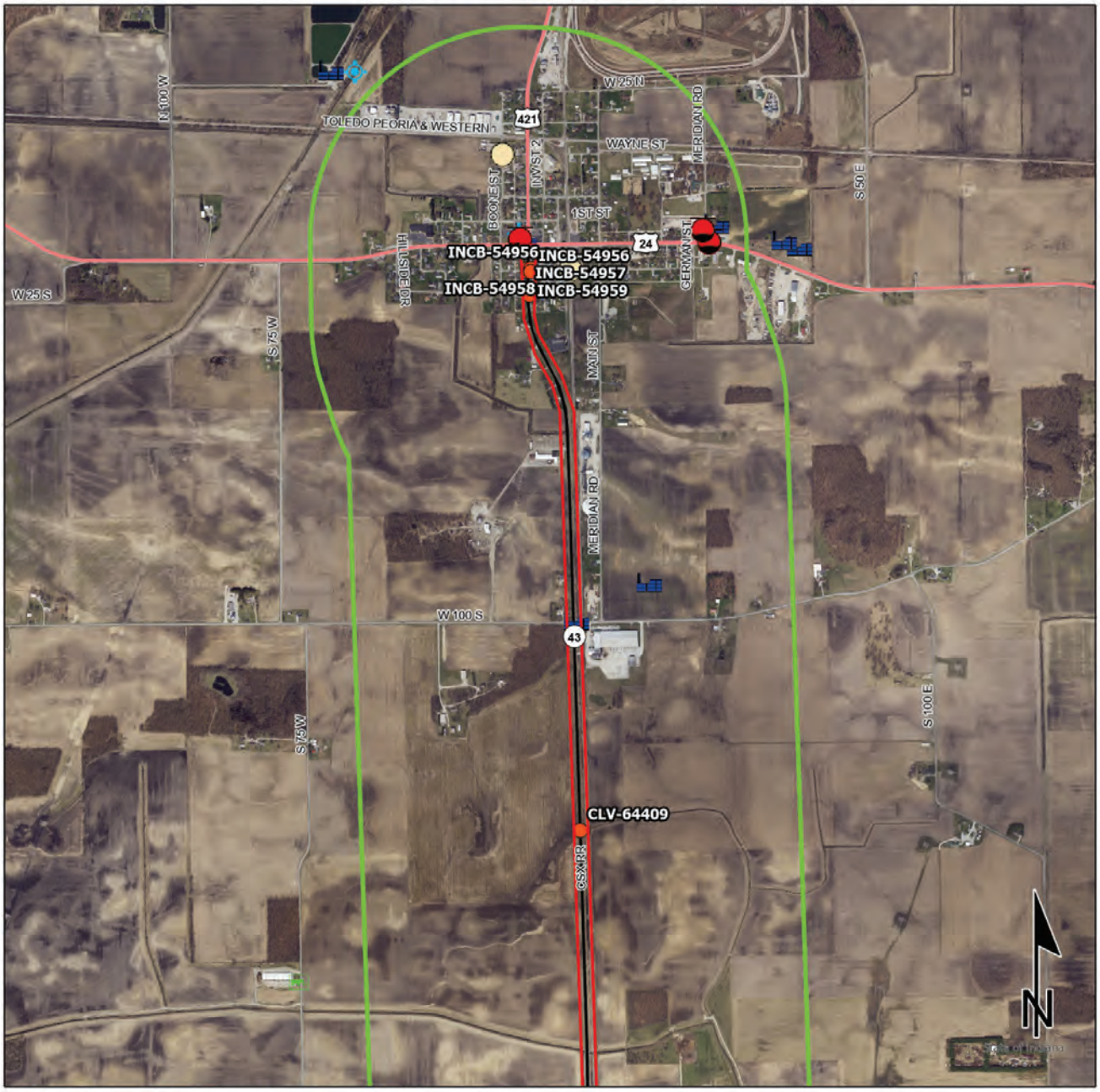
0.3 0.15 0 0.3 Miles

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

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

- Oil and Gas Wells
- Mineral Resources
- Mine - Surface
- Mine - Underground
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Hazardous Material Concerns (1 of 5)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



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

0.3 0.15 0 0.3 Miles

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

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

Red Flag Investigation - Hazardous Material Concerns (2 of 5)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



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

0.3 0.15 0 0.3 Miles

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

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

Red Flag Investigation - Hazardous Material Concerns (3 of 5)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



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

0.3 0.15 0 0.3 Miles

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

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

Red Flag Investigation - Hazardous Material Concerns (4 of 5)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



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

0.3 0.15 0 0.3 Miles

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

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

Red Flag Investigation - Hazardous Material Concerns (5 of 5)
SR 43, from SR 18 to US 24
Des. No. 2100235 (lead) & 2100171, HMA Overlay
White County, Indiana



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

0.3 0.15 0 0.3 Miles

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

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

Appendix F
Water Resources

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.86781760978693**

Lat: **40.6119898266884**

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

County: **White**

Stream Name:
Unnamed Tributary

Approximate Ground Elevation: **688.6 feet (NAVD88)**

Base Flood Elevation: **Not Available**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

US Army Corps of Engineers District: **Louisville** F1

Date Generated: 12/13/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.86845819377892**

Lat: **40.62600204321853**

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

County: **White**

Stream Name: **Spring Creek**

Approximate Ground Elevation: **687.5 feet (NAVD88)**

Base Flood Elevation: **680.8 Feet (NAVD88)**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

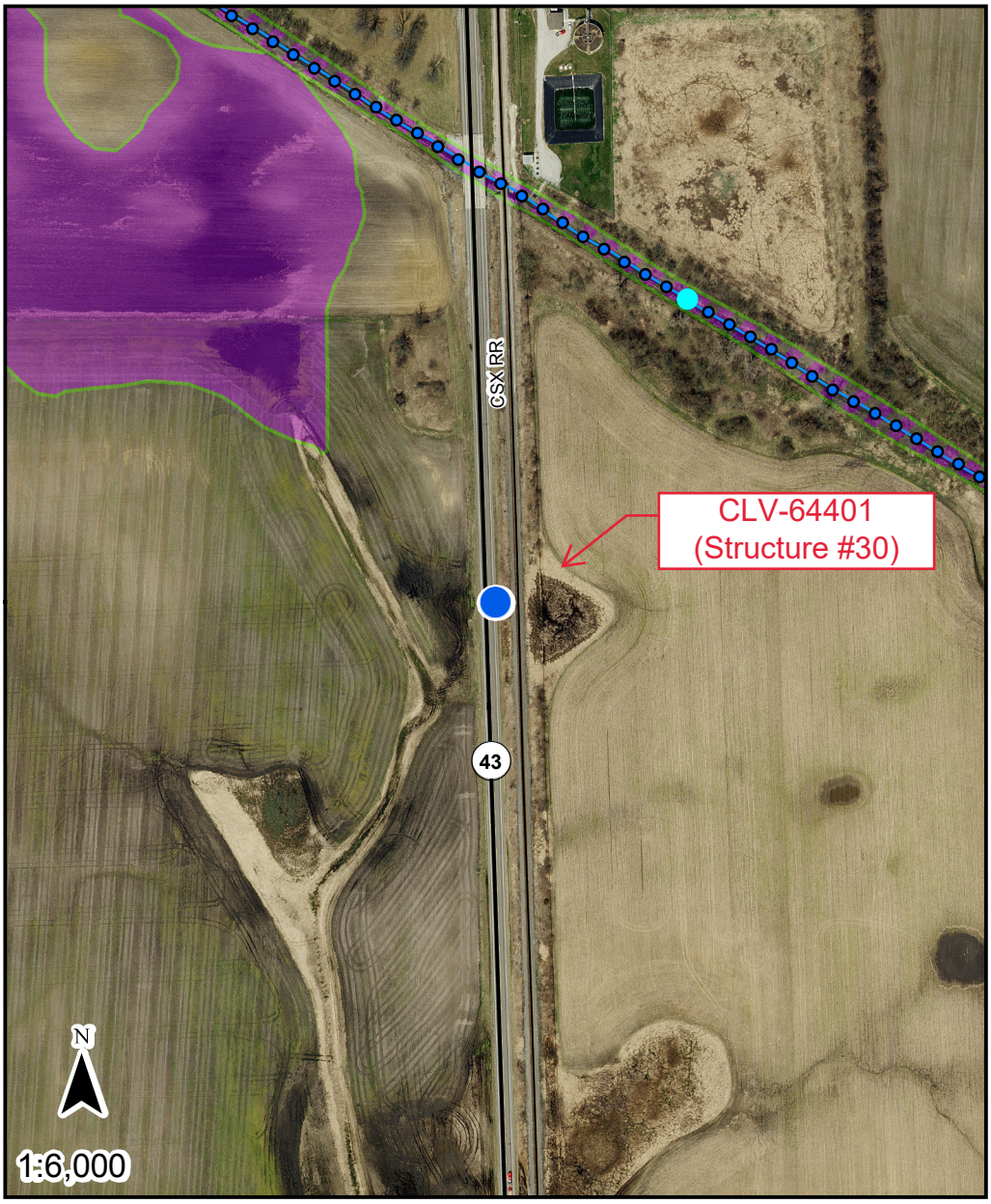
US Army Corps of Engineers District: **Louisville**

F2

Date Generated: 12/13/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

Flood Elevation Points

STUDIED STREAM

Rivers and Streams at least 1 square mile

Drainage Area (sq. miles)

1 - 10

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates (WGS84)

Long: **-86.8686575146**

Lat: **40.6327729172**

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

County: **White**

Stream Name: **Spring Creek**

Approximate Ground Elevation: **691.5 feet (NAVD88)**

Base Flood Elevation: **682.0 feet (NAVD88)**

Drainage Area: **Not available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema, Floodplain Administrator**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-7355**

Email: **acobb@whitecountyindiana.us**

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

Date Generated: 9/12/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.86912338161466**

Lat: **40.6419857607793**

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

County: **White**

Stream Name: **Spring Creek**

Approximate Ground Elevation: **702.1 feet (NAVD88)**

Base Flood Elevation: **683.9 Feet (NAVD88)**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

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

Date Generated: 12/13/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.86942378902435**

Lat: **40.649006985693354**

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

County: **White**

Stream Name: **Spring Creek**

Approximate Ground Elevation: **703.7 feet (NAVD88)**

Base Flood Elevation: **684.1 Feet (NAVD88)**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

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

Date Generated: 12/13/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.86974028968818**

Lat: **40.65601119341695**

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

County: **White**

Stream Name:
Unnamed Tributary

Approximate Ground Elevation: **699.8 feet (NAVD88)**

Base Flood Elevation: **Not Available**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

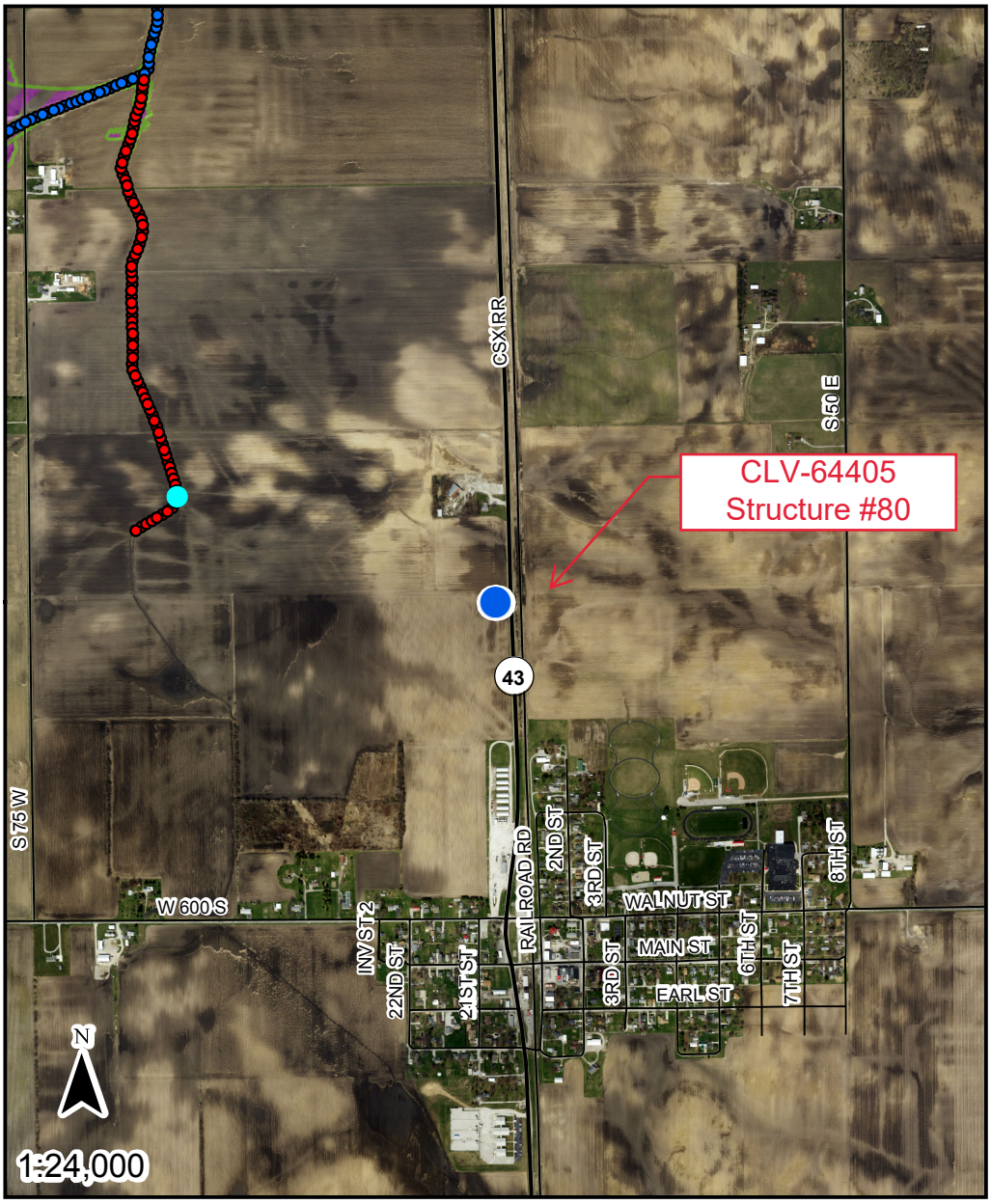
US Army Corps of Engineers District: **Louisville**

F6

Date Generated: 12/13/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

Flood Elevation Points

STUDIED STREAM

JURISDICTIONAL UNSTUDIED STREAM

Rivers and Streams at least 1 square mile

Drainage Area (sq. miles)

1 - 10

10 - 100

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates (WGS84)

Long: **-86.8708575073**

Lat: **40.6702242204**

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

County: **White**

Stream Name: **Unnamed Tributary**

Approximate Ground Elevation: **702.9 feet (NAVD88)**

Base Flood Elevation:**Not Available**

Drainage Area: **Not available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema, Floodplain Administrator**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-7355**

Email: **acobb@whitecountyindiana.us**

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

Date Generated: 9/12/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.87053644180307**

Lat: **40.67298983600439**

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

County: **White**

Stream Name:
Unnamed Tributary

Approximate Ground Elevation: **706.7 feet (NAVD88)**

Base Flood Elevation: **Not Available**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

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

Date Generated: 12/13/2023

DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.87139696693421**

Lat: **40.6940000075045**

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

County: **White**

Stream Name: **Big Creek**

Approximate Ground Elevation: **689.8 feet (NAVD88)**

Base Flood Elevation: **684.7 Feet (NAVD88)**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

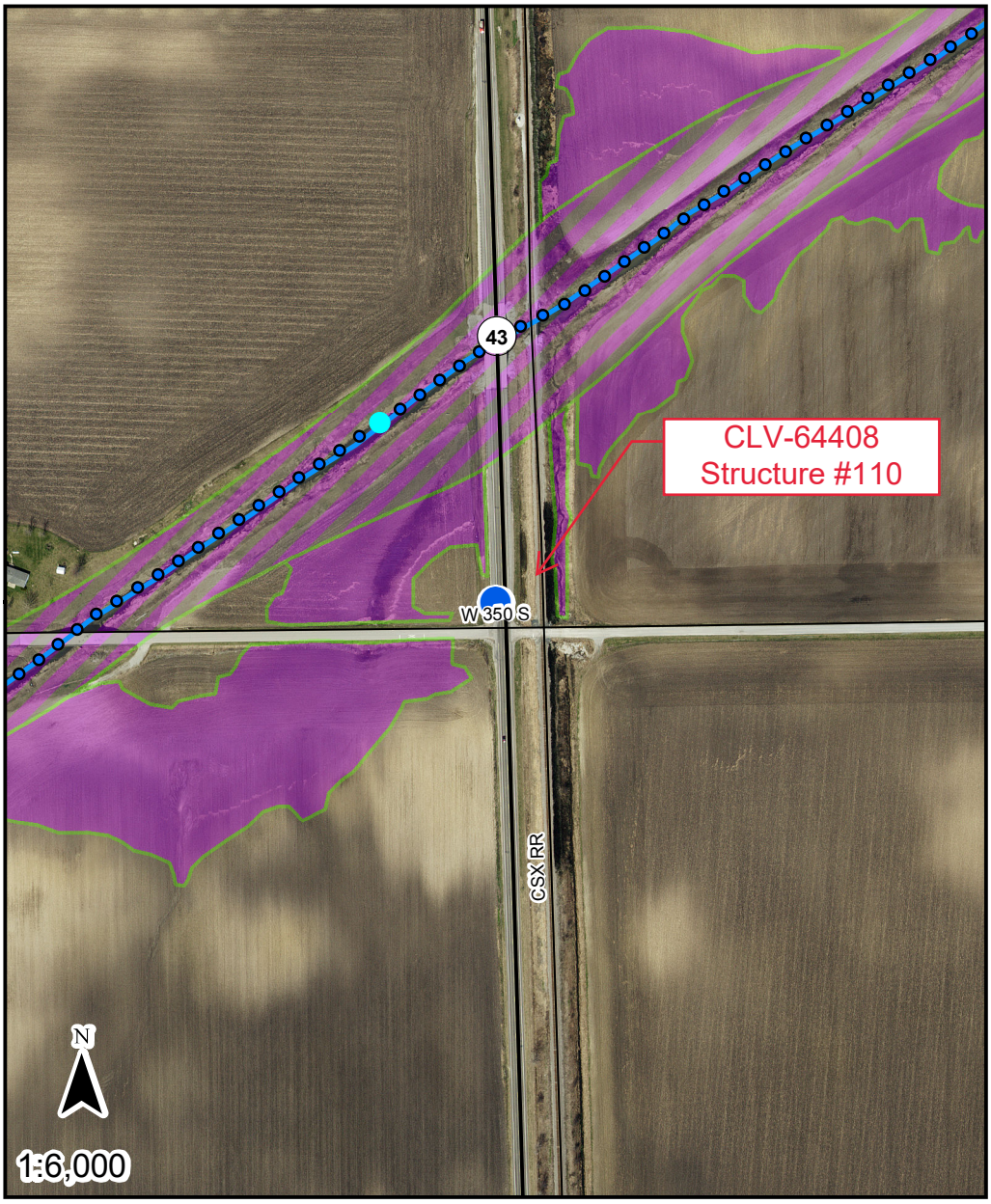
Email: **annette.sipkema@whitecounty.in.gov**

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

Date Generated: 12/13/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

Flood Elevation Points

STUDIED STREAM

Rivers and Streams at least 1 square mile

Drainage Area (sq. miles)

10 - 100

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates (WGS84)

Long: **-86.8716728989**

Lat: **40.6997569249**

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

County: **White**

Stream Name: **Big Creek**

Approximate Ground Elevation: **686.6 feet (NAVD88)**

Base Flood Elevation: **683.1 feet (NAVD88)**

Drainage Area: **Not available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema, Floodplain Administrator**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-7355**

Email: **acobb@whitecountyindiana.us**

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

F10

Date Generated: 9/12/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.8727854232788**

Lat: **40.729008137870196**

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

County: **White**

Stream Name: **Johnson Ditch**

Approximate Ground Elevation: **688.4 feet (NAVD88)**

Base Flood Elevation: **Not Available**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **Annette Sipkema,**

Community Jurisdiction: **White County, County proper**

Phone: **(574) 583-4809**

Email: **annette.sipkema@whitecounty.in.gov**

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

F11

Date Generated: 12/13/2023

DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.87510728836058**

Lat: **40.747691141472274**

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

County: **White**

Stream Name:
Fraser Ditch

Approximate Ground Elevation: **698.6 feet (NAVD88)**

Base Flood Elevation: **683.3 Feet (NAVD88)**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **No Floodplain Administrator Name Available**

Community Jurisdiction: **Town Of Reynolds, City proper**

Phone: **No Phone Number Available**

Email: **No Email Address Available**

US Army Corps of Engineers District: **Louisville** F12

Date Generated: 12/13/2023

DNR Indiana Department of Natural Resources

Floodplain Analysis & Regulatory Assessment (FARA)



Point of Interest

Base Flood Elevation Point

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

Not Mapped

Long: **-86.87503218650814**

Lat: **40.74845517592001**

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

County: **White**

Stream Name: **Fraser Ditch**

Approximate Ground Elevation: **699.5 feet (NAVD88)**

Base Flood Elevation: **683.3 Feet (NAVD88)**

Drainage Area: **Not Available**

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

National Flood Hazard Zone: **Not Mapped**

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

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

Floodplain Administrator: **No Floodplain Administrator Name Available**

Community Jurisdiction: **Town Of Reynolds, City proper**

Phone: **No Phone Number Available**

Email: **No Email Address Available**

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

Date Generated: 12/13/2023

5/1/2023

Waters Report

SR 43 in White County, Indiana

HMA Overlay with Minor Structural Improvements

From Reynolds Junction of US 24 and US 421 to Brookston North Junction of SR 18 and SR 43

Des. No.: 2100235 (Lead) & 2100171

Prepared for:
Indiana Department of Transportation (INDOT)
LaPorte District
315 E. Boyd Blvd.
LaPorte, IN 46350

Prepared by:
Compliance Field Services (CFS), Inc.
Indianapolis Office
8383 Craig Street, Suite 110
Indianapolis, IN 46250

Author:

Paul Killian

Project Manager

pkillian@cfsenv.com

(317) 595-4400

Report Completed:

April 27, 2023

Contents

Introduction 1
Methods 2
Structure 10 – CLV-64399 1
Desktop Survey 1
Field Reconnaissance 1
Structure 20 – CLV-64400 3
Desktop Survey 3
Field Reconnaissance 4
Structure 30 – CLV-64401 7
Desktop Survey 7
Field Reconnaissance 8
Structure 40 – CLV-64402 9
Desktop Survey 9
Field Reconnaissance 9
Structure 50 – CLV-64403 11
Desktop Survey 11
Field Reconnaissance 12
Structure 60 – CLV-64404 13
Desktop Survey 13
Field Reconnaissance 14
Structure 70 to 75 – INCB 54951-54 & 60-61 16
Desktop Survey 16
Field Reconnaissance 17
Structure 80 – CLV-64405 18
Desktop Survey 18
Field Reconnaissance 18
Structure 90 – CLV-64406 22
Desktop Survey 22
Field Reconnaissance 23

Structure 100 – CLV-64407 24
Desktop Survey 24
Field Reconnaissance 24
Structure 110 – CLV-64408 26
Desktop Survey 26
Field Reconnaissance 26
Structure 120 – CLV-64409 28
Desktop Survey 28
Field Reconnaissance 29
Structure 130 – INCB-54959 30
Desktop Survey 30
Field Reconnaissance 30
Structure 140 to 143 – INCB-54956-59 32
Desktop Survey 32
Field Reconnaissance 33
Wildlife Habitat 34
Conclusions 34
Acknowledgement 34
References 35

Tables

Table 1 Project Location Table
Table 2.X NRCS Soil Survey Area of Interest Results
Table 3. Data Point Summary Table
Table 4. Wetlands Delineated Within Project Study Area

Attachments

Culvert Specific Project Study Area Attachments

Project Figures*

Figure 1	State Location Map
Figure 2	USGS Topo Map Large Extent
Figure 3	USGS Topo Map Small Extent
Figure 4	Aerial Location Map
Figure 5	NWI Wetlands Map
Figure 6	NHD Map
Figure 7	NRCS Soils Map
Figure 8	Waters of the US Investigation Map**
Figure 9	Photo Location Map

Photographs

Wetland Data Point**

Upland Data Point**

*FEMA Floodzone Maps were omitted from this report as none of the identified projects included mapped floodzones within or adjacent to project study areas.

**Items included per section where appropriate. Some Waters of the US Investigation Maps were also excluded due to the absence of features.

© 2023 CFS

Introduction

The Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) intend to proceed with an HMA overlay project along State Road (SR) 43 from the town of Reynolds to Brookston, which includes several small structure replacements and rehabilitations, located in White County, Indiana. (Figure 1). The project is located along SR 43 from the Reynolds Junction of US 24 and US 421 to Brookston North Junction of SR 18 and SR 43. This report is focused on the areas of the project where construction activities will leave the current extent of existing pavement. Structure specific information is included in each respective section.

Compliance Field Services, Inc. (CFS), on behalf of INDOT, conducted wetland delineations and waterbody investigations of the project study area on September 20, 2022 and October 18, 2022. The study areas were determined during desktop review of the project and in the field by CFS based upon likely work areas that are not confined to the existing pavement and impacts to potentially regulated Waters of the U.S. as a result of construction activities. This report describes the methods and results of the environmental field survey.

Table 1. Project Location Table

Structure	Asset#	Lat	Long	HUC12	USGS Map	Civil Twps	Sec	Twp	Range
10	CLV-64399	40.612324	-86.867708	51201061308 51201061306	BROOKSTON	Prairie	15	T-25-N	R-4-W
20	CLV-64400	40.625777	-86.868545	51201061306	MONTICELLO SOUTH	Prairie	10	T-25-N	R-4-W
30	CLV-64401	40.632747	-86.868588	51201061306	MONTICELLO SOUTH	Prairie	10	T-25-N	R-4-W
40	CLV-64402	40.642322	-86.869232	51201061306	MONTICELLO SOUTH	Prairie	3	T-25-N	R-4-W
50	CLV-64403	40.649485	-86.869489	51201061306	MONTICELLO SOUTH	Big Creek	33/ 34	T-26-N	R-4-W
60	CLV-64404	40.655964	-86.869618	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
70	INCB-54961	40.662094	-86.870418	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
71	INCB-54960	40.662094	-86.870418	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
72	INCB-54954	40.662094	-86.870418	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
73	INCB-54951	40.662094	-86.870418	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
74	INCB-54952	40.662094	-86.870418	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
75	INCB-54953	40.662094	-86.870418	51201061303	MONTICELLO SOUTH	Big Creek	33	T-26-N	R-4-W
80	CLV-64405	40.671167	-86.870347	51201061303	MONTICELLO SOUTH	Big Creek	28	T-26-N	R-4-W
90	CLV-64406	40.673055	-86.870433	51201061303	MONTICELLO SOUTH	Big Creek	28	T-26-N	R-4-W
100	CLV-64407	40.693622	-86.871420	51201061303	MONTICELLO SOUTH	Big Creek	16	T-26-N	R-4-W
110	CLV-64408	40.699544	-86.871506	51201061303	MONTICELLO SOUTH	Big Creek	16	T-26-N	R-4-W
120	CLV-64409	40.729344	-86.872879	51201061303	MONTICELLO SOUTH	Honey Creek	4	T-26-N	R-4-W
130	INCB-54959	40.74761	-86.875036	51201061207	BROOKSTON NW	Honey Creek	33	T-27-N	R-4-W
140	INCB-54958	40.7485	-86.875052	51201061207	BROOKSTON NW	Honey Creek	33	T-27-N	R-4-W
141	INCB-54957	40.7485	-86.875052	51201061207	BROOKSTON NW	Honey Creek	33	T-27-N	R-4-W
142	INCB-54956	40.7485	-86.875052	51201061207	BROOKSTON NW	Honey Creek	33	T-27-N	R-4-W
143	INCB-54956	40.7485	-86.875052	51201061207	BROOKSTON NW	Honey Creek	33	T-27-N	R-4-W

Methods

Prior to the fieldwork, background information and existing mapping was reviewed to establish the probability and potential location of wetlands on the site. Available information from government agency documents and private sources were collected and reviewed in order to characterize the project areas, as well as identify potential wetlands and other regulated features located within the project study areas.

The growing season in White County, Indiana is generally between April and October [United States Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS)] (USDA-NRCS, 2016). Field observations were supplemented with an intensive review of United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, USDA

soils mapping, historical aerial photography (ArcGIS and Google Earth), and local landscape topography/morphology.

Wetland delineations were conducted in accordance with the 1987 United States Army Corps of Engineers (USACE) *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE, 2012). Wetlands were classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). Classification of the indicator status of vegetation is based on *The National Wetland Plant List, Ver 3.5:* 2020 wetland ratings (U.S. Army Corps of Engineers, 2020).

The USACE will assert jurisdiction over traditionally navigable waters (TNW), adjacent wetlands, and non-navigable tributaries of TNW that have "relatively permanent" flow, and wetlands that border these waters, regardless of whether or not they are separated by roads, berms, and similar barriers. The USACE will use a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" can be found where waters, including adjacent wetlands, alter the physical, biological, or chemical integrity of the TNW based on consideration of several factors.

Each wetland and waterbody feature was given a unique map designation and each boundary flag location was recorded using a Trimble R1 GNSS model global positioning system mapping grade unit with the capability of sub-meter accuracy. Judgmental upland and wetland soil test pits were taken within the study corridor at the discretion of the delineator to confirm the presence or absence of wetlands in areas with exhibiting wetland indicators. Wetland boundaries and other waterbody centerlines and/or perimeters were mapped including ordinary high water mark (OHWM) and top-of-bank (TOB). Waterbody data collected included general morphological characteristics, flow regime, substrate, jurisdictional connection, and significant nexus determination.

All likely jurisdictional streams, waterbodies, and wetlands were evaluated for quality using the 2018 *INDOT Waters of the United States Documentation* (Revised 2019) three tier classification system (i.e., poor, average, or excellent). Determinations of quality for streams were based on the substrate, riffle and pools, overhead cover, presence of aquatic organisms or potential habitat value, opacity, sinuosity, and riparian width. Wetland quality was derived from metrics in the Indiana Wetland Rapid Assessment Protocol (In-WRAP 2005) and the wetland quality descriptions on the basis of disturbance, native plant diversity and cover, and content of exotic or invasive species.

Structure 10 – CLV-64399

Structure 10 is located approximately 0.51 mile south of the intersection of SR 43 and W 900 S (40.612339°, -86.867822°) in Section 15, Township 25 North, Range 4 West, Prairie Township, White County, Indiana as shown in the Brookston USGS 7.5 Minute Topographic Map. The existing 1.5 ft. diameter by 65 ft. long metal pipe is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 686 to 688 ft. Topography appears to drain east to west across the project area. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 4) did not identify any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Spring Creek watershed to the east of SR 43, 12-digit hydrologic unit code (HUC12): 51201061306, and Moots Creek watershed to the west, HUC12: 51201061308.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.1). One series was identified as being hydric (1-32%).

Table 1.1 Structure 10 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Darroch silt loam (Dc)	Somewhat Poorly Drained	No Ponding, No Flooding	Hydric (1-32%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

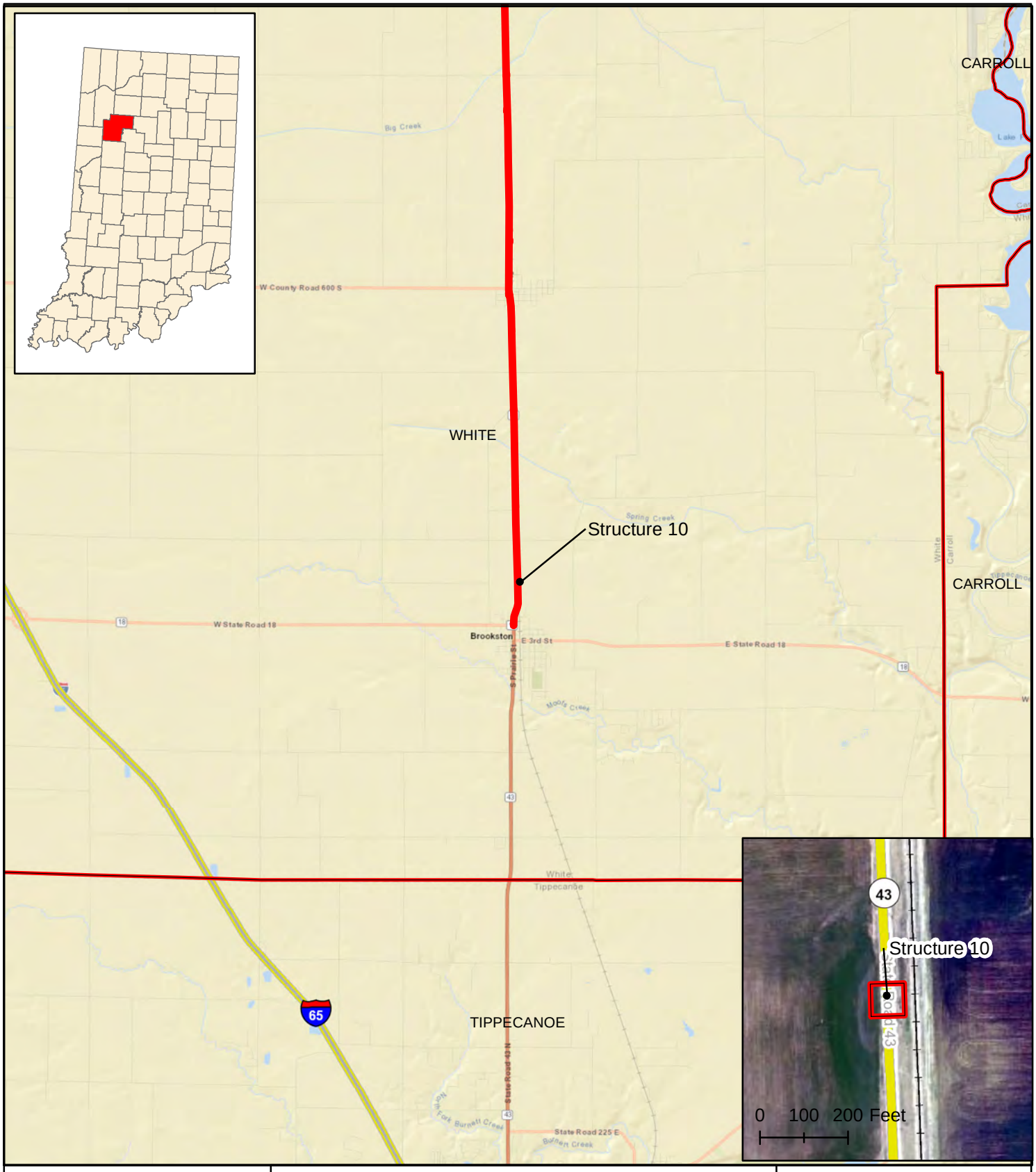
No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM. The USGS National Hydrography Dataset (NHD, Figure 6) layer shows a stream feature flowing through the culvert, however, the absence of scour and any USACE defined stream features indicates the structure serves as a conduit for local drainage. Furthermore, the flow regime of roadside ditches were not sufficient to be classified as tributaries and were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. Though wetland signatures can be found on aerial imagery, there were no indications of wetland development within or directly adjacent to the project study area. Vegetation was comprised primarily of green bristlegrass (*Setaria viridis*, UPL), soybeans (*Glycine max*, UPL), annual ragweed (*Ambrosia artemisiifolia*, FACU) and red fescue (*Festuca rubra*, FACU). No indicators of stressed plants, silt deposits, or other indicators of hydrology were present. Additionally, no depressions or areas likely to hold water for more than two weeks to develop anaerobic conditions were present within the project study area. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

Drainage swales were observed in the eastern quadrants of the study area. These features were excavated in upland soils to convey upland drainage and had no defined channelization, bed and bank or flow regime to establish a Waters of the U.S. designation. The western quadrants were mowed right-of-way, with an embankment to the adjacent agricultural field. Structure 10 appeared to be an equalizer pipe with no scour or other defining drainage features.

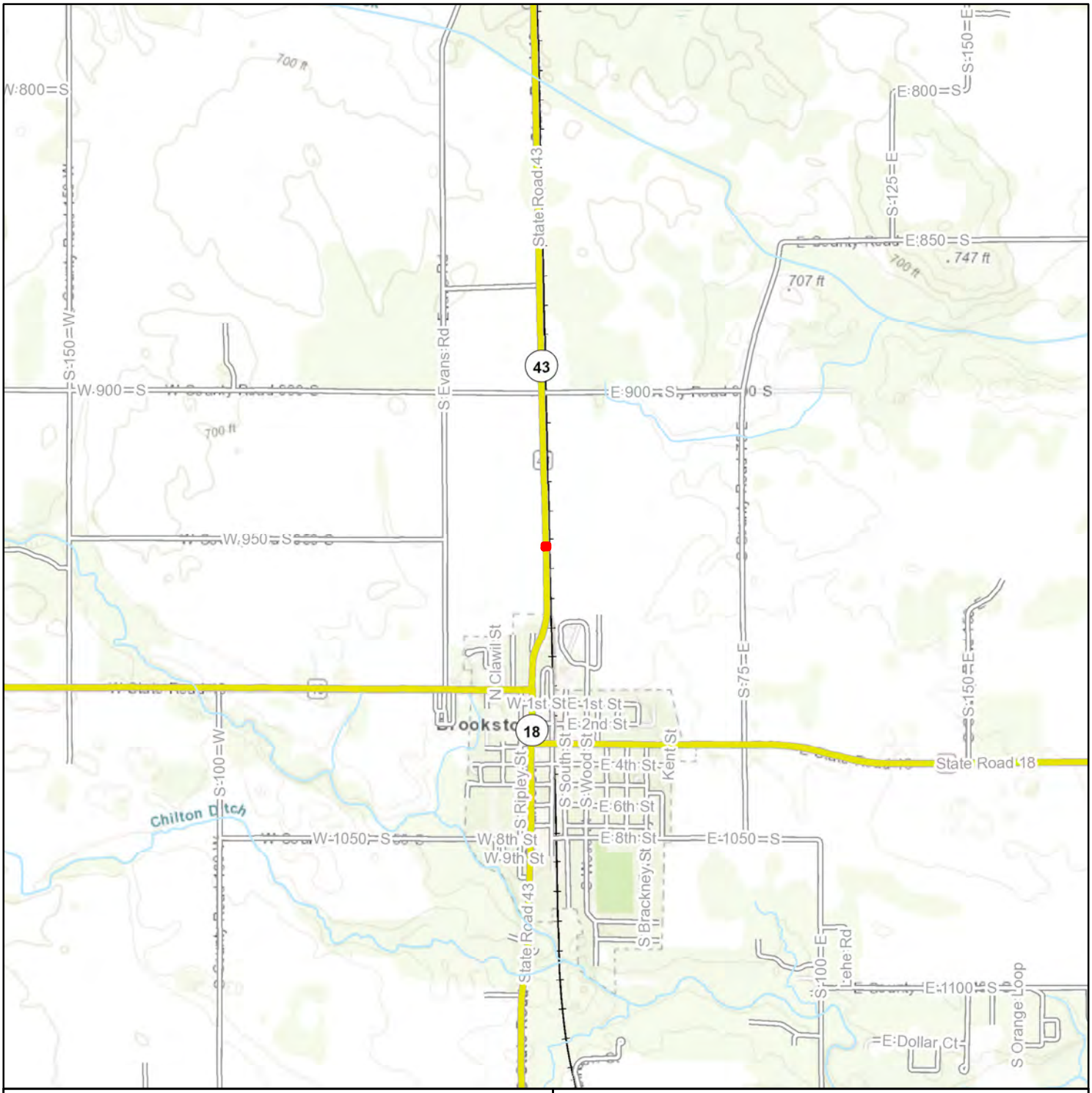


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 10
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

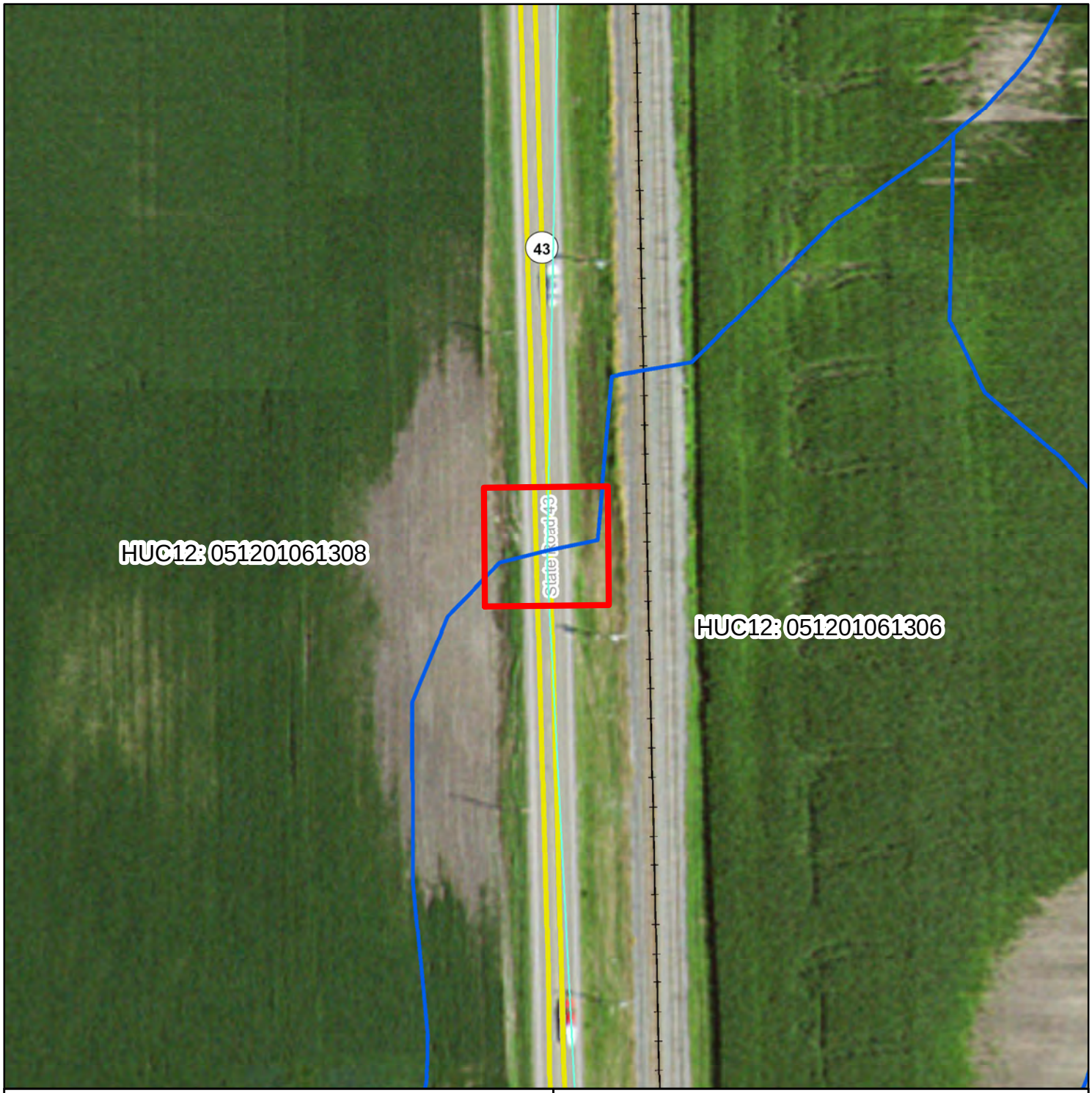
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch

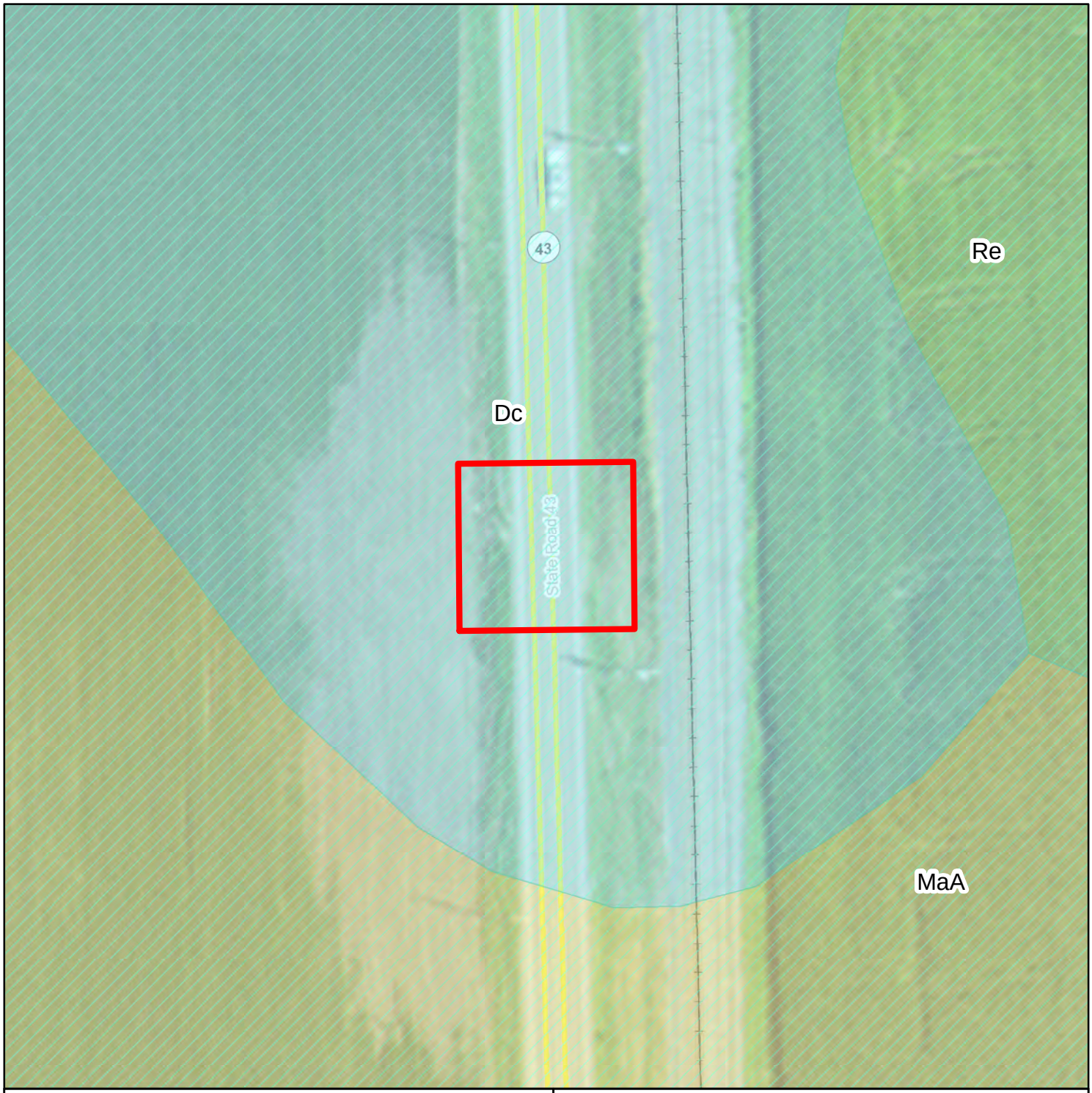
Waterbody
- LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM

N



NRCS Soils Map
Figure 7
SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

Dc
MaA
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

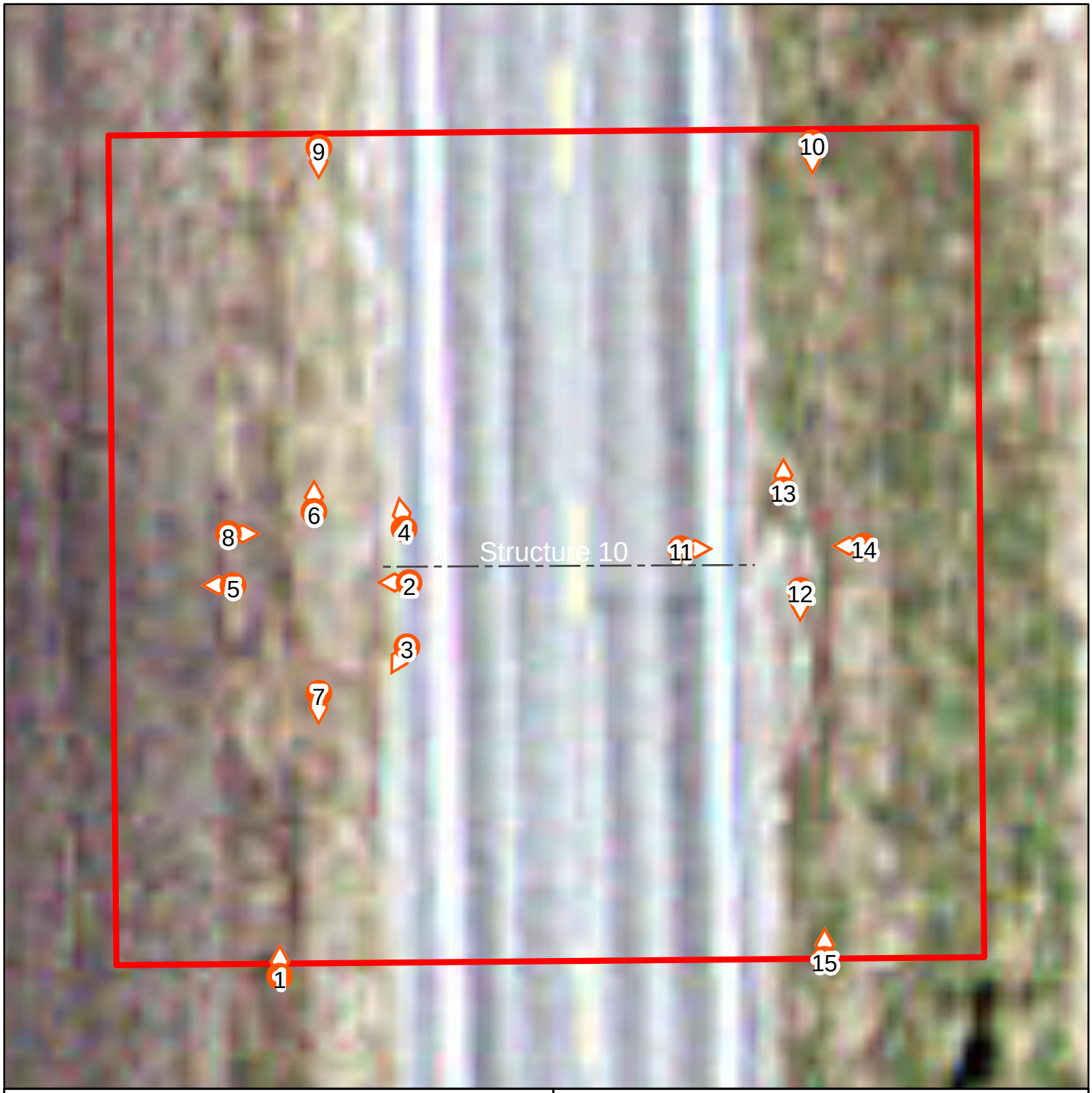


Photo Location Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 10
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 5 10 20 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking west from SB lane of SR 43 at roadside swale inlet for Structure 10.





Photo 4. Looking north along SB lane of SR 43 from Structure 10.





Photo 6. Looking north along SB lane of SR 43 from Structure 10.





Photo 8. Looking east at inlet to Structure 10.





Photo 10. Looking south along NB SR 43 and roadside swale towards Structure 10 outfall.





Photo 12. Looking south along NB SR 43 from Structure 10.



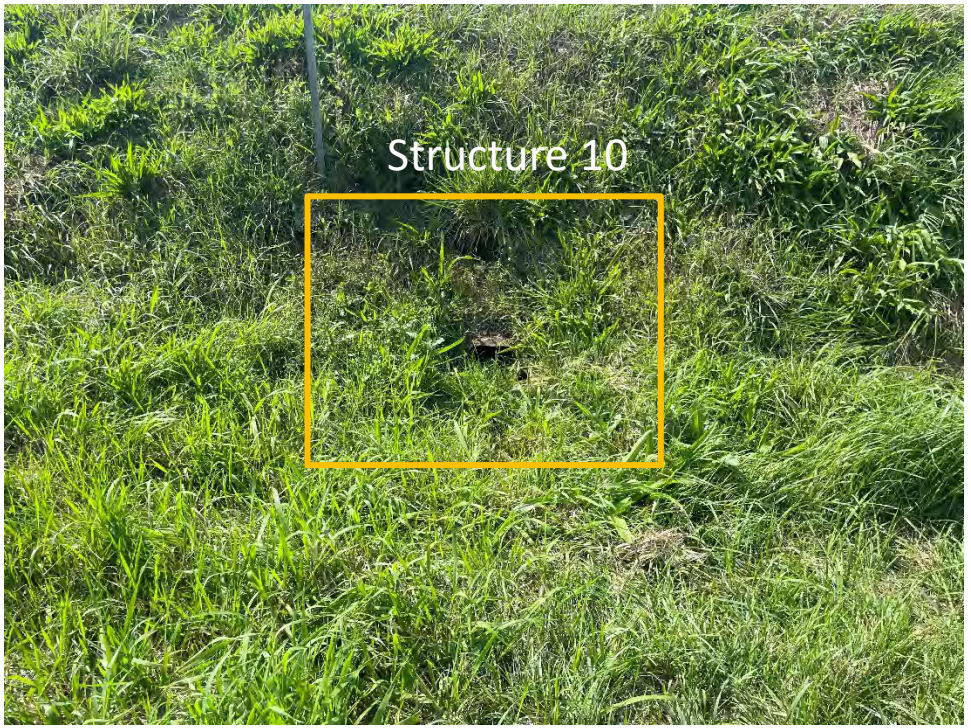


Photo 14. Looking west at Structure 10.


Structure 10

Structure 20 – CLV-64400

Structure 20 is located approximately 0.42 mile north of the intersection of SR 43 and W 900 S (40.625861°, -86.868448°) in Section 10, Township 25 North, Range 4 West, Prairie Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 3 ft. span by 2 ft. rise by 55 ft. long box culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 685 to 681 ft. Drainage patterns were identified via topographic elevation contours to drain west to east. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) identified one NWI wetland 200 ft. to the west that ties into aerial apparent wetlands within the project study area. The nearby wetland was identified as a freshwater emergent wetland (PEM1A).

Watersheds

The project study area is in the Spring Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061306.

NRCS Soil Survey

The NRCS Soil Survey of White County identified two soil series within the project study area (Figure 7, Table 2.2). Two series were identified as hydric, with one or more components identified as hydric.

Table 2.2 Structure 20 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Darroch silt loam (Dc)	Somewhat Poorly Drained	No Ponding, No Flooding	Hydric (1-32%)
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

Two isolated and exempt wetlands were delineated within the study area (Figure 8).

Stream Features

No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM. The NHD map (Figure 6) exhibited a stream feature at the outfall and ditches through the structure. Field reconnaissance did not reveal any USACE features to indicate the presence of a tributary onsite, including an OHWM, bed and bank, or flow regime. Furthermore, the flow regime of roadside ditches were not sufficient to be classified as tributaries, did not exhibit an OHWM, bed and bank, and were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

Two wetland features met all three of the USACE wetland criteria within the project area. A detailed description of the delineated features are discussed below. Completed wetland and upland determination forms from the site investigation are located in the attachments for this section and represent data points taken to characterize the boundary interfaces of the wetland feature, which are summarized in Table 3. The wetland acreage includes the entire boundary as delineated in the project study area (Figure 8). Wetlands identified within the project study area are represented in Table 4.

Wetland A

Wetland A is located on the west side of SR 43 at Structure 20, beginning approximately 10 ft. from the edge of pavement. Wetland A is likely an isolated, palustrine emergent wetland that has formed within a depression that has been left fallow at the edge of an active agricultural field. Wetland A would be classified as a Class I wetland and as a Class I wetland it is considered exempt. Wetland A had a moderate prevalence of native species, despite the dominance of lady's thumb and reed canary grass. Native species included bristly sedge (*Carex comosa*) and soft rush (*Juncus effusus*). Wetland A would be considered average quality due to moderate diversity of native wetland species with interspersed alien and invasive species, and moderate habitat presence.

Upland Data Point 1 (DP-1)

Dominant vegetation included red fescue (*Festuca rubra*, FACU) and reed canary grass (*Phalaris arundinacea*, FACW). The percentage of dominant species with a wetland status was 50%, and the prevalence index was above 3.0, therefore, DP-1 failed to meet any of the hydrophytic

vegetation indicators. The soil profile was a silty clay loam with a color of 10YR 2/1 from the surface to 16 inches, with no apparent redoximorphic features. DP-1 did not have any hydric soil indicators, thus failing to meet the hydric soils criterion. Furthermore, there were no indicators of hydrology present at DP-1. In failing to meet all three wetland criteria, DP-1 was determined to be an upland point.

Wetland Data Point 2 (DP-2)

Dominant vegetation at DP-2 consisted of lady's thumb (*Persicaria maculosa*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW). DP-2 met the hydrophytic vegetation indicators for the rapid test, dominance test, and prevalence index, thus passing the hydrophytic vegetation criterion. The soil profile for DP-2 was a loamy clay with a color of 10YR 2/1 (100%) for the first inch, 10YR 5/1 (90%) for 1-6 inches, with 10YR 5/6 (10%) prominent redox concentrations in the matrix, and 10YR 3/1 (98%) for 6 to 16 inches, with 10YR 5/6 (2%) prominent redox concentrations in the pore linings and matrix. DP-2 met the hydric soils indicators of depleted matrix (F3) and redox dark surface (F6), thus passing the hydric soils criterion. The hydrology criterion was met with the primary indicator saturation (A3, saturated from surface) and secondary indicators of drainage patterns (B10), saturation visible on aerial imagery (C9), geomorphic position (D2), and the FAC-neutral test (D5). Meeting all three criteria, DP-2 was determined to be a wetland point.

Wetland B

Wetland B is located on the east side of SR 43 at Structure 20, approximately 9 ft. from the edge of pavement. Wetland B is a palustrine emergent wetland that has formed within a depression along the roadside ditch, between the CSX railroad and SR 43. As Wetland B is dominated by reed canary grass, an invasive species, and the functionality of Wetland B for filtering runoff and habitat value are minimal, Wetland B would be considered poor quality. Wetland B would be classified as a Class I wetland and as a Class I wetland it is considered exempt.

Upland Data Point 3 (DP-3)

Dominant vegetation at DP-3 included red fescue (*Festuca rubra,* FACU) and perennial ryegrass (*Lolium perenne*, FACU). DP-3 failed to meet any of the hydrophytic vegetation indicators, thus failing the criterion. The soil profile for DP-3 was a clay loam with a color of 10YR 3/2 with no redoximorphic features present from 0 to 16 inches. No hydric soils indicators were met, thus DP-3 failed to meet the hydric soils criterion. Furthermore, no wetland hydrology indicators were observed. In failing all three criteria, DP-3 was considered an upland point.

Wetland Data Point 4 (DP-4)

The dominant vegetation at DP-4 consisted of reed canary grass (*Phalaris arundinacea*, FACW), meeting the hydrophytic vegetation indicators of the rapid test, dominance test, and prevalence indicators, meeting the requirements of the hydrophytic vegetation criterion. The soil profile was a loamy clay, with a matrix color of 10YR 4/1 (95%) from the surface to 6 inches, including 10YR 5/4 (5%) distinct redox concentrations within the pore linings. From 6 to 16 inches, the matrix color was 10YR 4/2 (93%) with 10YR 5/6 (7%) prominent redox concentrations in the pore linings and matrix. DP-4 passed the hydric soils criterion with the depleted matrix (F3) indicator. Hydrology was met with the primary indicator of saturation (A3, saturated from 3 inches) and oxidized rhizosphere (C3). Secondary hydrology indicators included drainage patterns (B10), geomorphic position (D2) and the FAC-neutral test (D5). In meeting all three criteria, DP-4 was determined to be a wetland point.

Table 3. Data Point Summary Table

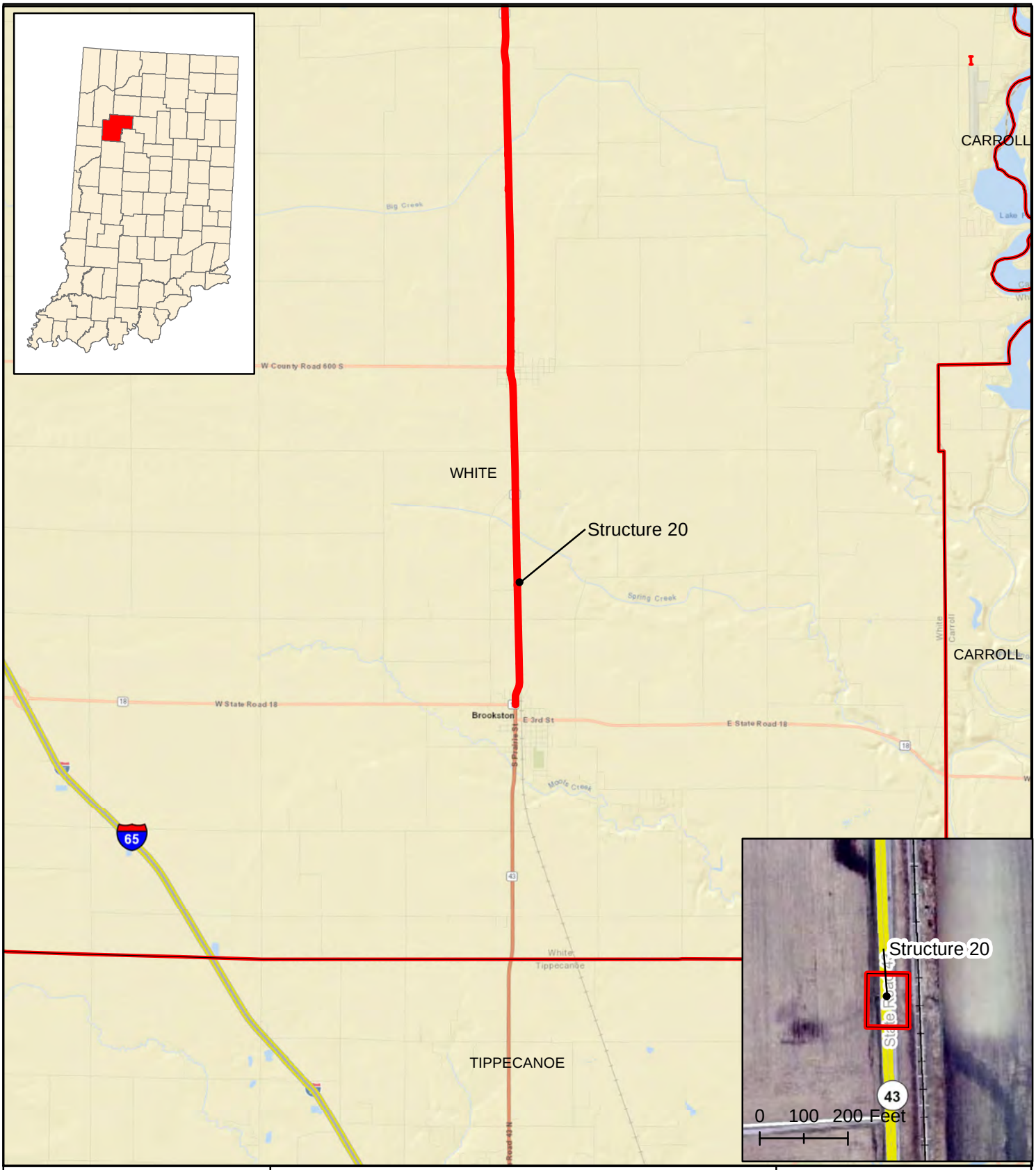
Data Point	Structure	Latitude	Longitude	Vegetation	Soils	Hydrology	Wetland
DP-1	20	40.625787	-86.86853	No	No	No	No
DP-2	20	40.625801	-86.86859	Yes	Yes	Yes	Yes
DP-3	20	40.625798	-86.86834	No	No	No	No
DP-4	20	40.62584	-86.86831	Yes	Yes	Yes	Yes

Table 4. Wetlands Delineated Within Project Study Area

Wetland Name	Structure	Photo No.	Latitude, Longitude	Type	Total Area (acres)	Quality	Waters of the U.S.	Isolated/ Exempt
Wetland A	20	2-6, 9, 10, 12, 13	40.625785, -86.86857	Emergent	0.05823	Poor	No	Isolated/ Exempt
Wetland B	20	14-18, 20, 22, 23, 24	40.625841, -86.8683	Emergent	0.03549	Poor	No	Isolated/ Exempt

Roadside Ditches and Other Drainages

Roadside ditches were present in all four quadrants of the project study area (RSD-20 on the west side of SR 43 and RSD-21 on the east side). A non-jurisdictional stormwater conveyance was also present at Structure 20. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime, or connection to a TNW to establish a Waters of the U.S. designation.

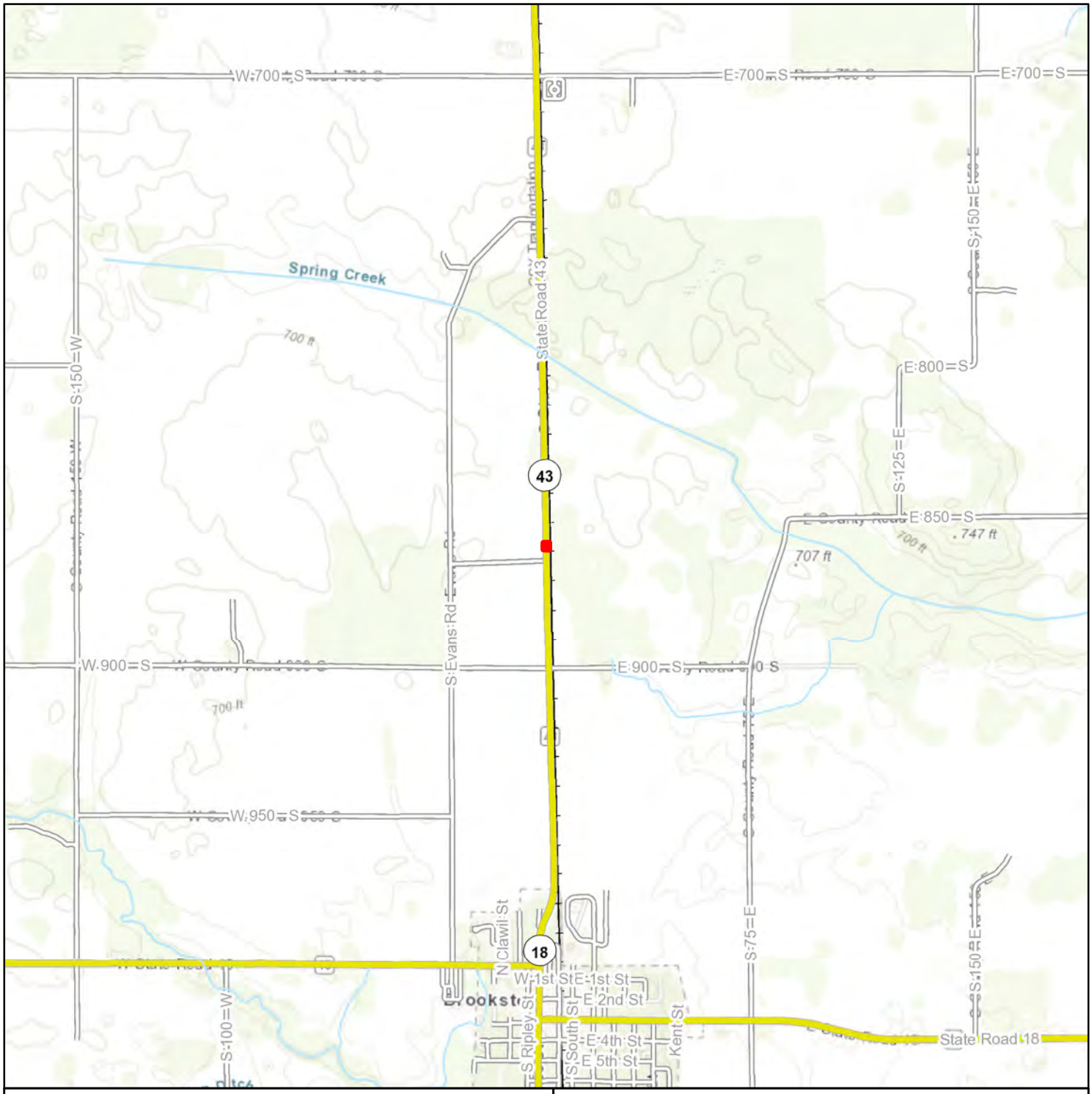


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 20
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3
SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch

Waterbody
- LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology, Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7
SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

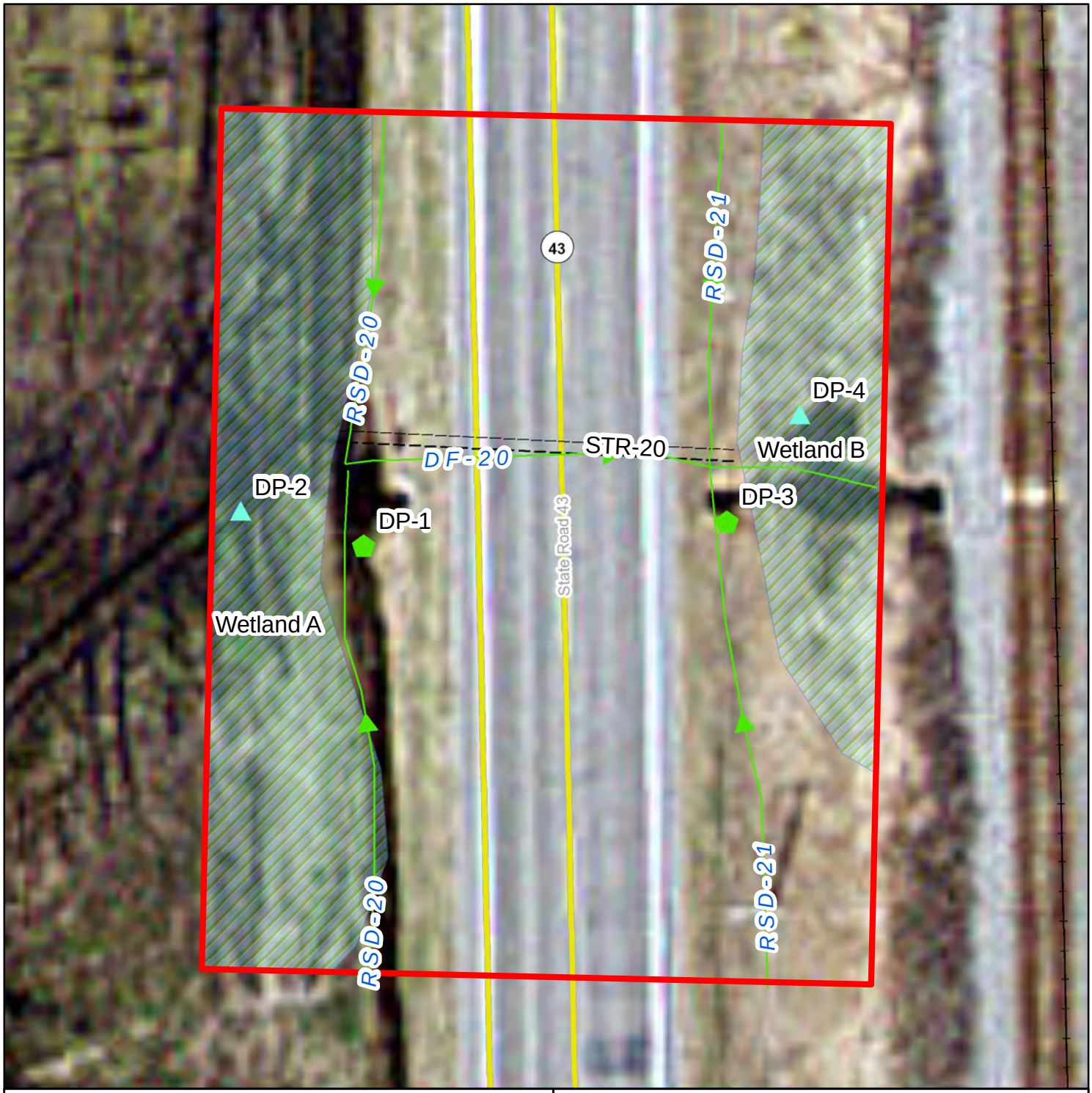
Dc
MaB2
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure 8
SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 10 20 40 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

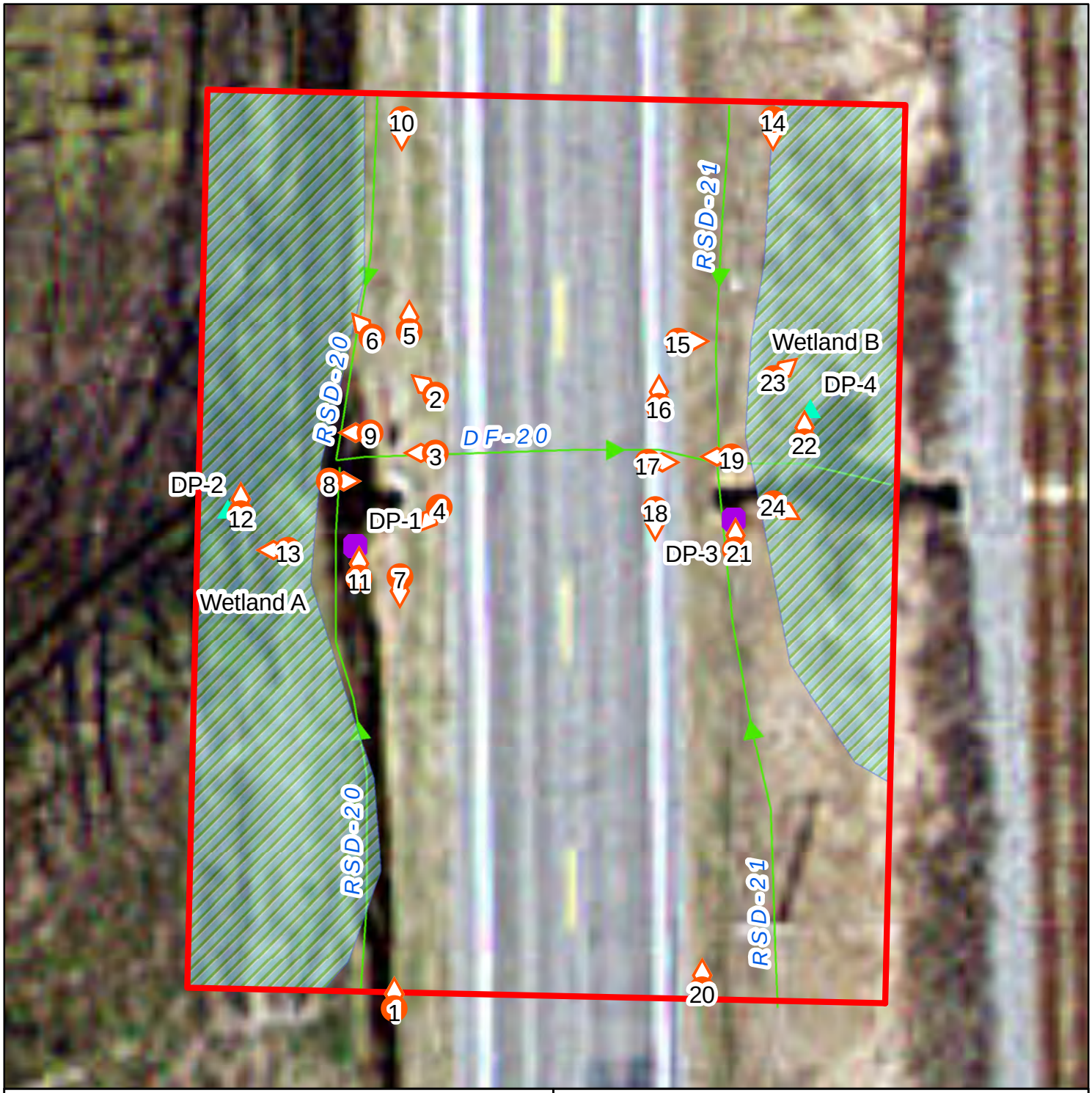


Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 20
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 5 10 20 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking northwest from inlet of Structure 20 along roadside ditch and Wetland A.





Photo 4. Looking southwest from inlet of Structure 20 at Wetland A and roadside ditch.





Photo 6. Looking northwest at Wetland A and roadside ditch along SB lane of SR 43.





Photo 8. Looking east towards inlet of Structure 20 from Wetland A.





Photo 10. Looking south along SB SR 43, roadside ditch, and Wetland A towards Structure 20 inlet.





Photo 12. Data Point 2 (DP-2) soil profile.





Photo 14. Looking south along NB SR 43, roadside ditch, and Wetland B towards outfall of Structure 20.





Photo 16. Looking north along NB SR 43, roadside ditch, and Wetland B.





Photo 18. Looking south along NB SR 43, roadside ditch, DP-3 location, and Wetland B from Structure 20 outfall.





Photo 20. Looking north along NB SR 43, roadside ditch, and Wetland B towards outfall of Structure 20.





Photo 22. Data Point 4 (DP-4) soil profile.





Photo 24. Looking southeast at Wetland B from drainage feature at Structure 20.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 20 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-1

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 10, T-25-N, R-4-W

Landform (hillside, terrace, etc.): None Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.625787 Long: -86.86853 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Festuca rubra*	40	Yes	FACU
2. *Phalaris arundinacea*	40	Yes	FACW
3. *Bromus inermis*	4	No	FACU
4. *Poa pratensis*	3	No	FAC
5. *Echinochloa crus-galli*	3	No	FACW
6.			
7.			
8.			
9.			
10.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	43	x 2 =	86
FAC species	3	x 3 =	9
FACU species	44	x 4 =	176
UPL species	0	x 5 =	0
Column Totals:	90 (A)		271 (B)

Prevalence Index = B/A = 3.01

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 20 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-2

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 10, T-25-N, R-4-W

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40.625801* Long: -86.86859* Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Persicaria maculosa*	40	Yes	FACW
2. *Phalaris arundinacea*	33	Yes	FACW
3. *Carex comosa*	15	No	OBL
4. *Juncus effusus*	7	No	OBL
5. *Echinochloa crus-galli*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	22	x 1 =	22
FACW species	78	x 2 =	156
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		178 (B)

Prevalence Index = B/A = 1.78

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators 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: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					Loamy/Clayey	
1-6	10YR 5/1	90	10YR 5/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
6-16	10YR 3/1	98	10YR 5/6	2	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes X No ___ Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 20 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-3

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 10, T-25-N, R-4-W

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.625798* Long: -86.86834* Datum: NAD83

Soil Map Unit Name: Darroch silt loam (Dc) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Festuca rubra*	60	Yes	FACU
2. *Lolium perenne*	20	Yes	FACU
3. *Poa pratensis*	15	No	FAC
4. *Persicaria maculosa*	3	No	FACW
5. *Phalaris arundinacea*	2	No	FACW
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	15	x 3 =	45
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	100 (A)		375 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 20 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-4

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 10, T-25-N, R-4-W

Landform (hillside, terrace, etc.): None Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.625840 Long: -86.86831 Datum: NAD83

Soil Map Unit Name: Darroch silt loam (Dc) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	80	Yes	FACW
2. *Persicaria maculosa*	15	No	FACW
3. *Typha latifolia*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		195 (B)

Prevalence Index = B/A = 1.95

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators 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: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	95	10YR 5/4	5	C	PL	Loamy/Clayey	Distinct redox concentrations
6-16	10YR 4/2	93	10YR 5/6	7	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
X Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
X Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
X Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 3

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Structure 30 – CLV-64401

Structure 30 is located approximately 0.9 mile north of the intersection of SR 43 and W 900 S (40.632763°, -86.868739°) in Section 10, Township 25 North, Range 4 West, Prairie Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 15-inch diameter by 60 ft. long box culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 690 to 691 ft. Topography indicates drainage patterns from east to west. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) identified one NWI wetland adjacent to the project study area, and two more within 500 ft. of the project study area. A palustrine emergent, persistent wetland temporarily flooded (PEM1A) begins approximately 76 ft. to the east of the existing structure inlet, adjacent to the CSX railroad. The other two wetlands are also PEM1A connected hydrologically via drainage patterns apparent on aerial imagery.

Watersheds

The project study area is in the Spring Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061306.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.3). The identified series is hydric (100%).

Table 2.3 Structure 30 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No jurisdictional features were delineated within the study area (Figure 8).

Stream Features

No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM.

Wetland Features

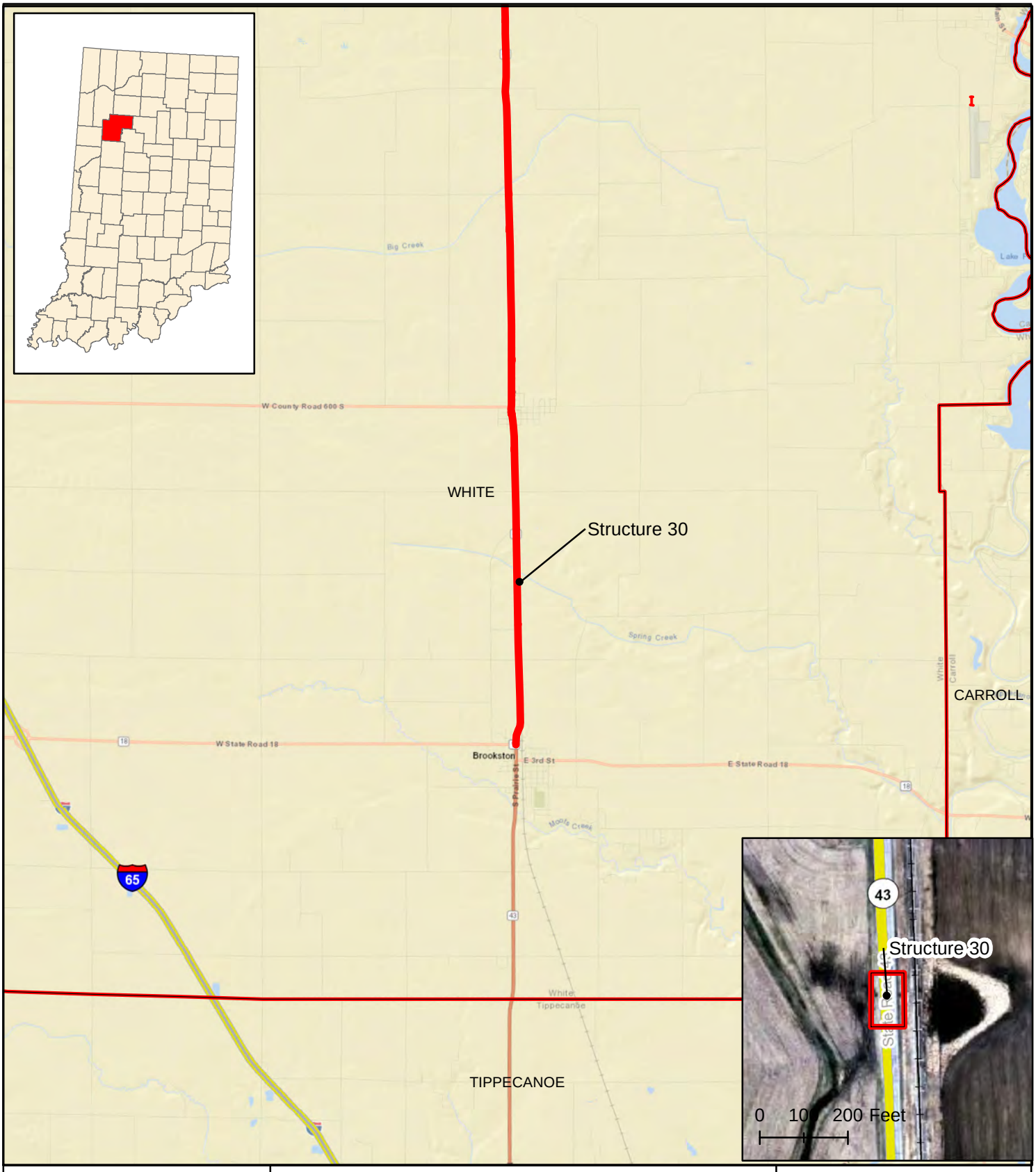
No wetland features that met all three of the USACE wetland criteria were observed within the project area. Though aerial imagery shows wetland signatures within the project boundary and hydrophytic vegetation was pronounced at the edge of the existing right-of-way, soil test pits showed no hydric soil development within the project study area. DP-5 is representative of test points taken around the boundary of the project study area. With a lack of all three criteria indicators, no wetlands were delineated at this site.

Upland Data Point 5 (DP-5)

Vegetation was dominated by Johnsongrass (*Sorghum halepense*, FACU) and reed canary grass (*Phalaris arundinacea*, FACW). DP-5 did not meet any of the indicators for hydrophytic vegetation, thus failing the hydrophytic vegetation criterion. The soil profile was a silty clay with a matrix color of 10YR 3/1 (100%) from 0 to 16 inches with no redoximorphic features, thus failing to meet any hydric soils indicators and failing the hydric soils criterion. Hydrology met one secondary indicator of saturation visible on aerial imagery (C9), however, without a second secondary indicator, DP-5 failed to meet hydrology. In failing to meet all three wetland criteria, DP-5 was determined to be an upland point.

Roadside Ditches and Other Drainages

Drainage ditches were present on the east side of SR 43 between the roadway and the CSX railroad (RSD-30). Scour and channelization was present along the Structure 30 alignment (DF-30), however, this feature does not connect to a TNW or meet the criteria for a tributary. These features would not be considered jurisdictional within the study area. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.

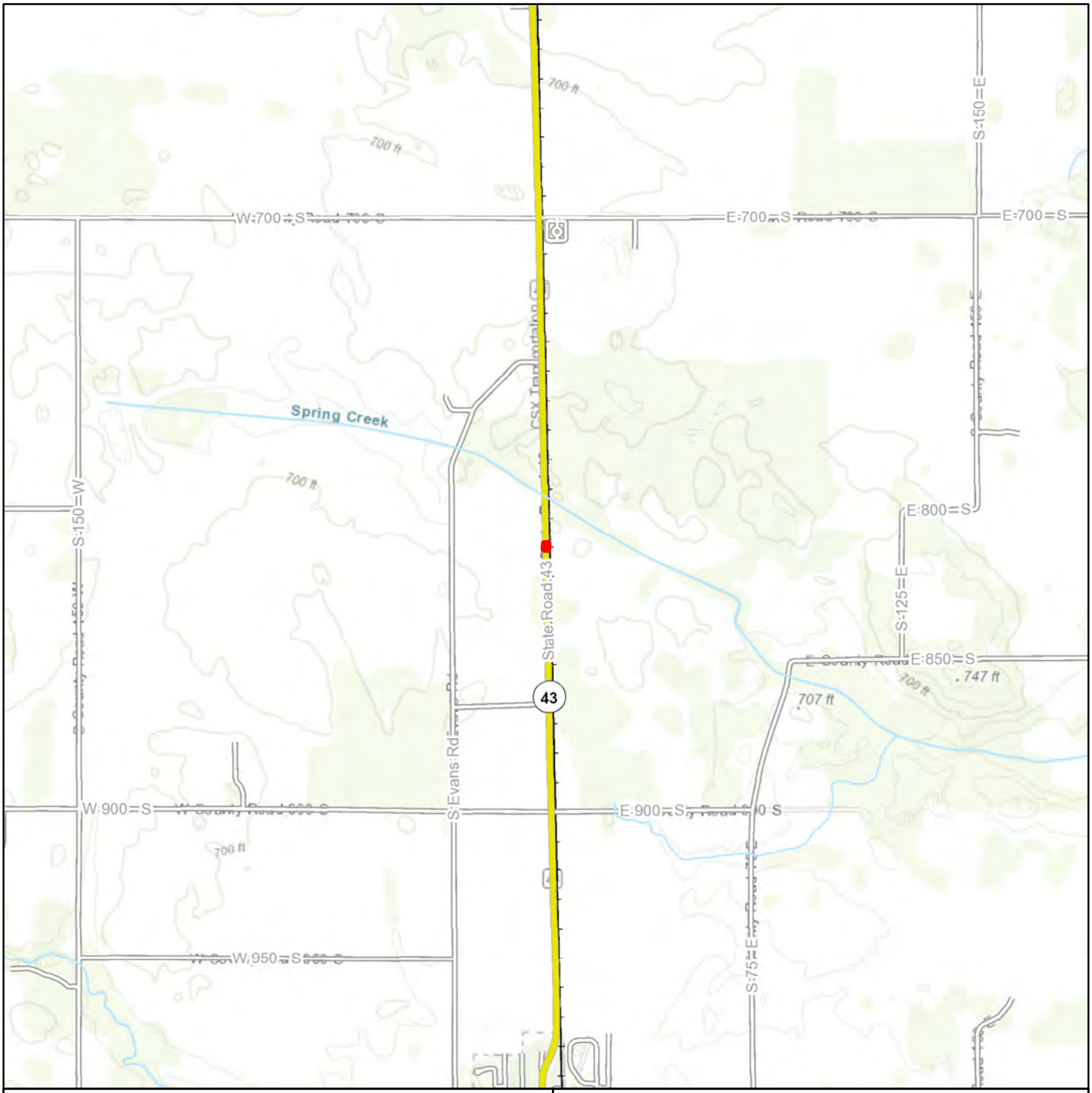


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 30
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

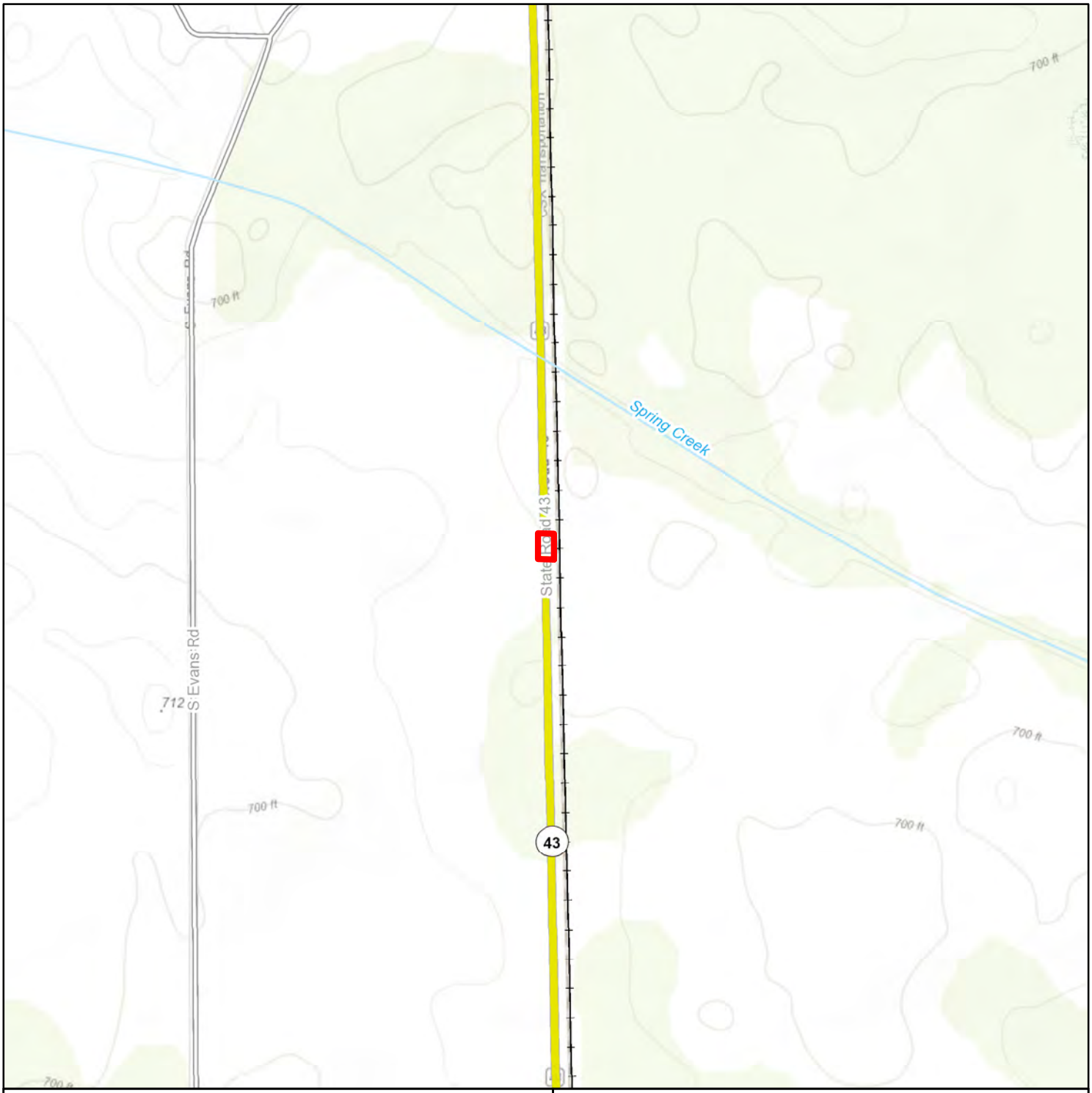
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3
SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

HUC12 Boundary

Flowline
StreamRiver
ArtificialPath
CanalDitch

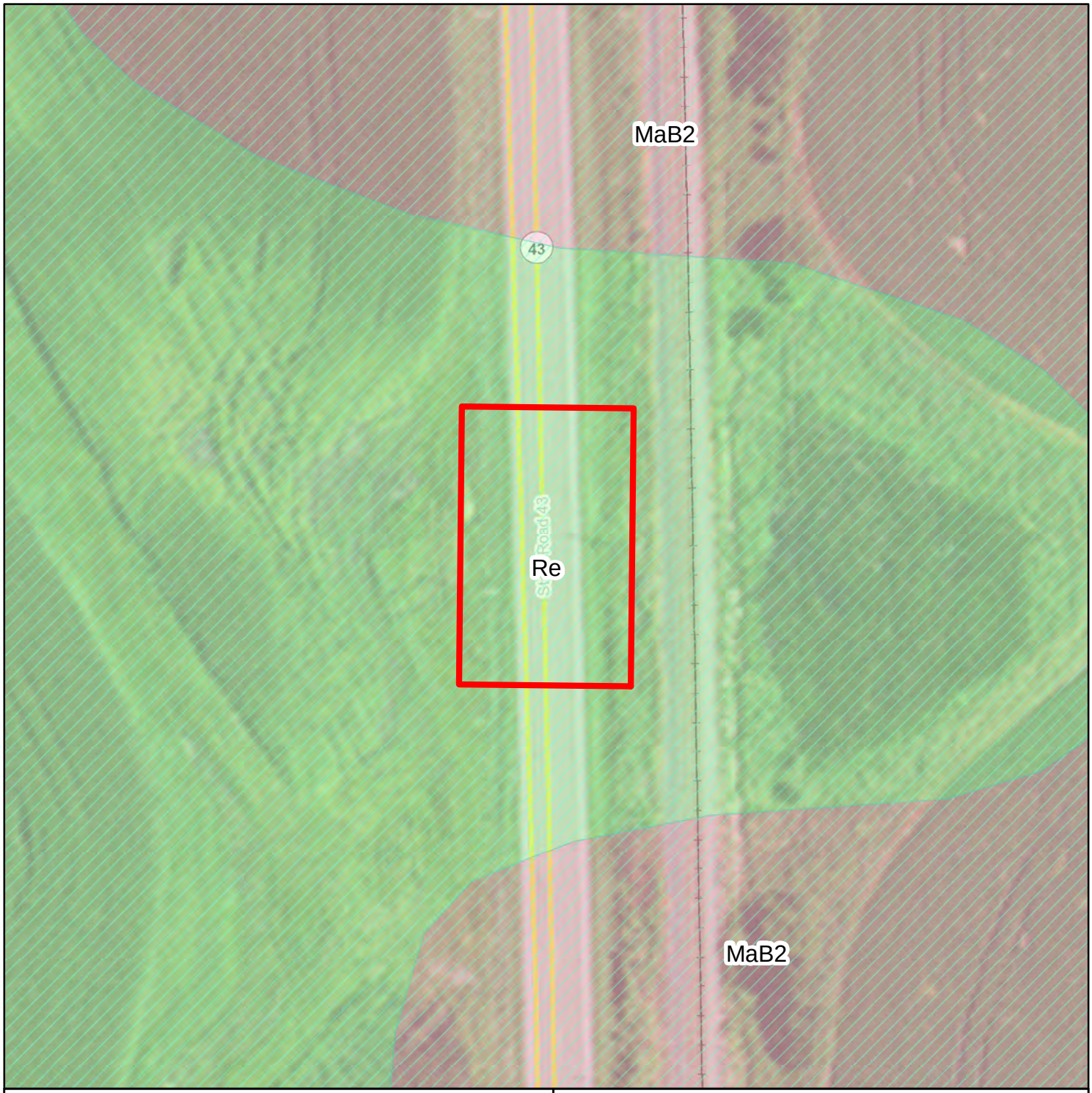
Waterbody
LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7

SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

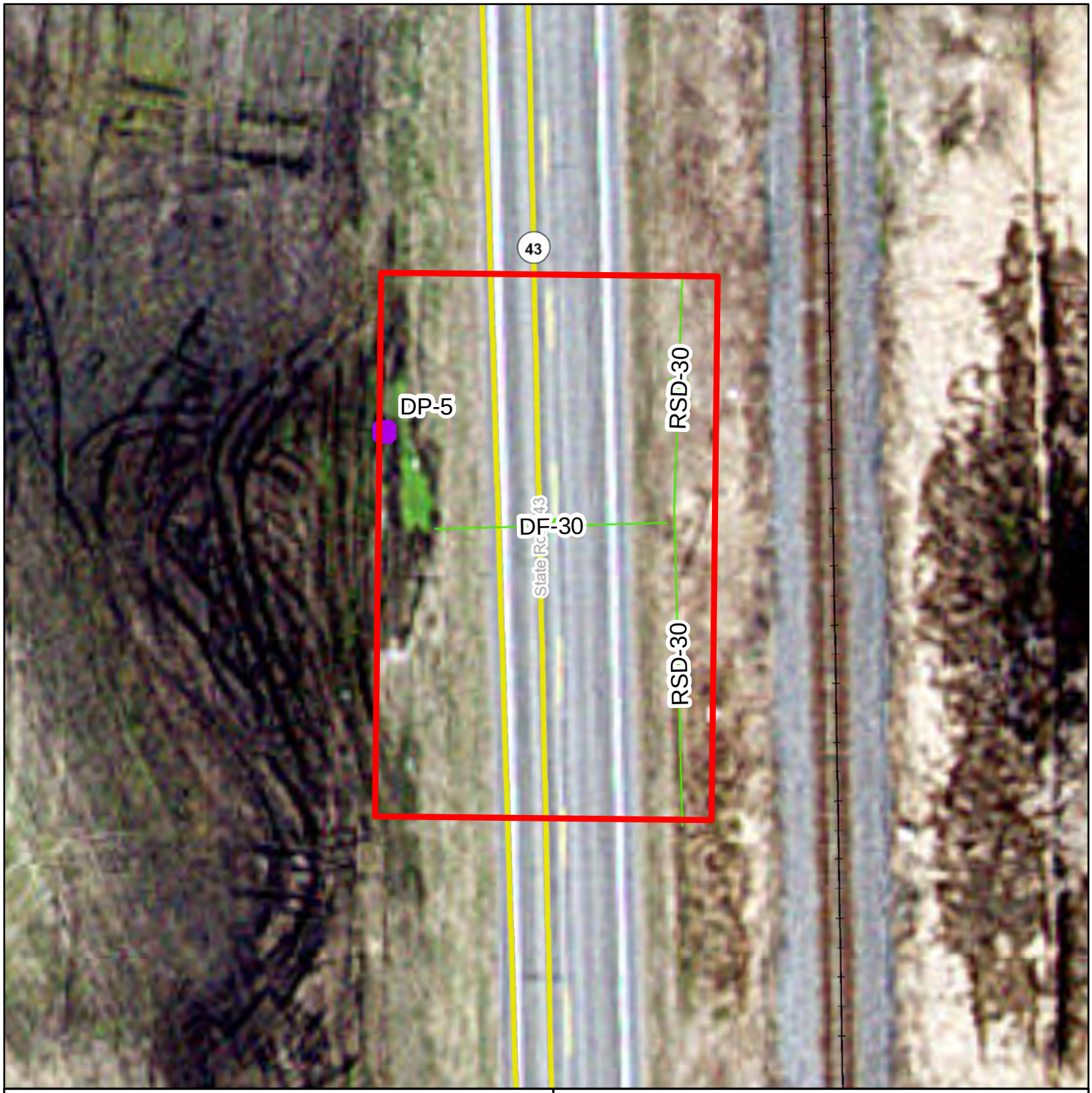
MaB2
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 15 30 60 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

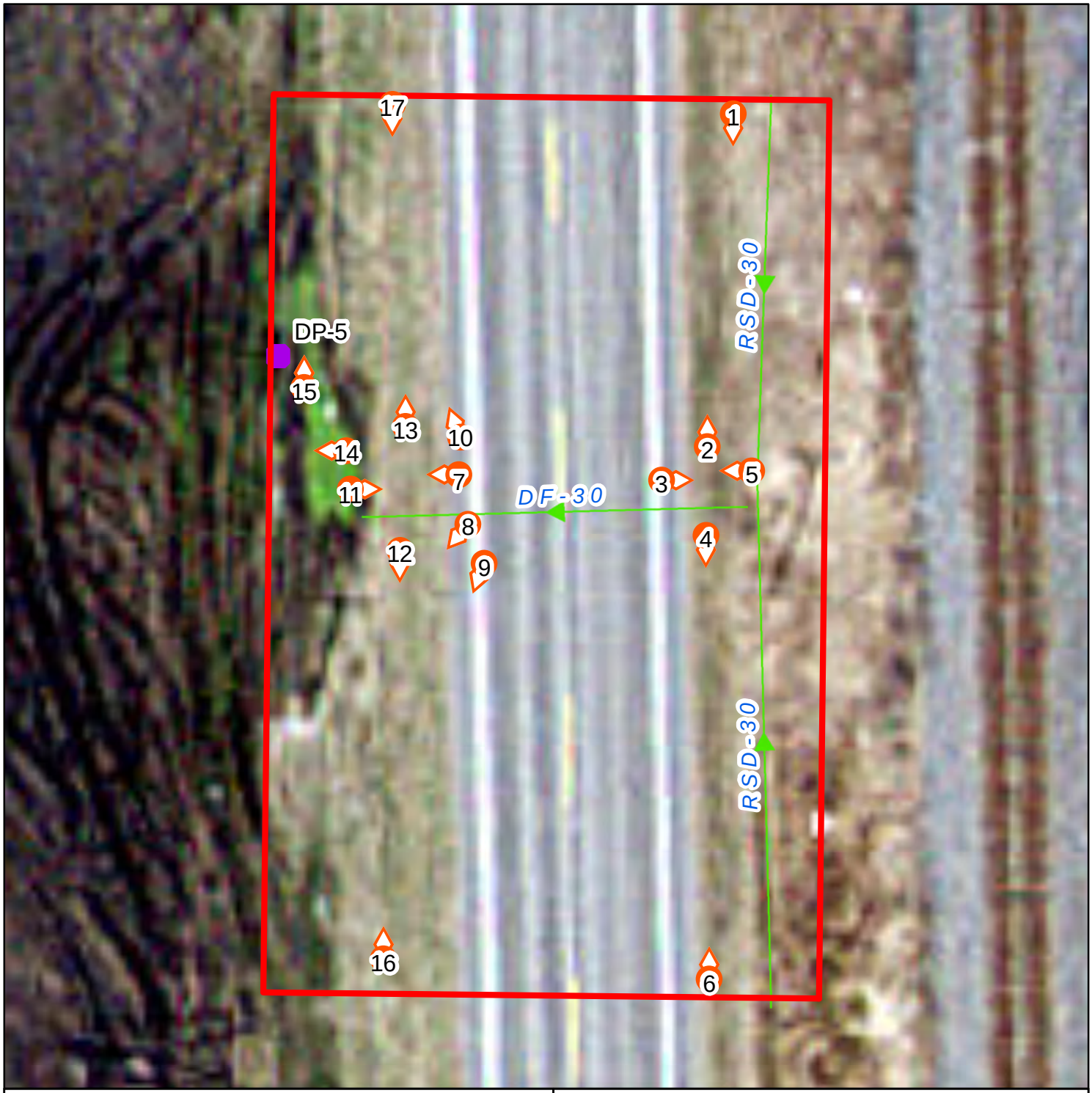


Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 30
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 5 10 20 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking north along NB SR 43 and roadside ditch from the inlet of Structure 30.





Photo 4. Looking south along NB SR 43 from the inlet of Structure 30.





Photo 6. Looking north along NB SR 43..





Photo 8. Looking southwest from outfall at Structure 30.





Photo 10. Looking north along SB SR 43 and roadside ditch from Structure 30 outfall.





Photo 12. Looking south along SB SR 43 and roadside ditch from the Structure 30 outfall.





Photo 14. Looking west at wetlands outside of Study Area.





Photo 16. Looking north along SB SR 43 and roadside ditch towards Structure 30 outfall.

Photos Taken: 10/18/2022



F91

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 30 City/County: White Sampling Date: 10/18/22

Applicant/Owner: INDOT State: IN Sampling Point: DP-5

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 10, T-25-N, R-4-W

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.632798 Long: -86.86884 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Sorghum halepense*	56	Yes	FACU
2. *Phalaris arundinacea*	37	Yes	FACW
3. *Lolium perenne*	6	No	FACU
4. *Arctium minus*	1	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	37	x 2 =	74
FAC species	0	x 3 =	0
FACU species	63	x 4 =	252
UPL species	0	x 5 =	0
Column Totals:	100 (A)		326 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Structure 40 – CLV-64402

Structure 40 is located approximately 0.44 mile south of the intersection of SR 43 and W 700 S (40.642310°, -86.869143°) in Section 3, Township 25 North, Range 4 West, Prairie Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 15-inch diameter by 50 ft. long metal pipe culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 698 to 702 ft. Drainage patterns were identified via topographic elevation contours to drain east to west at Structure 40. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) identified one emergent NWI wetland (PEM1A) to the southeast of the project study area, across the CSX railroad in an adjacent agricultural field.

Watersheds

The project study area is in the Spring Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061306.

NRCS Soil Survey

The NRCS Soil Survey of White County identified three soil series within the project study area (Figure 7, Table 2.2). Two map units were identified as being hydric (1-32%), with at least one component of each unit being identified as hydric.

Table 2.2. Structure 40 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Martinsville silt loam, 0-2% slopes (MaA)	Well Drained	No Ponding, No Flooding	Hydric (1-32%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

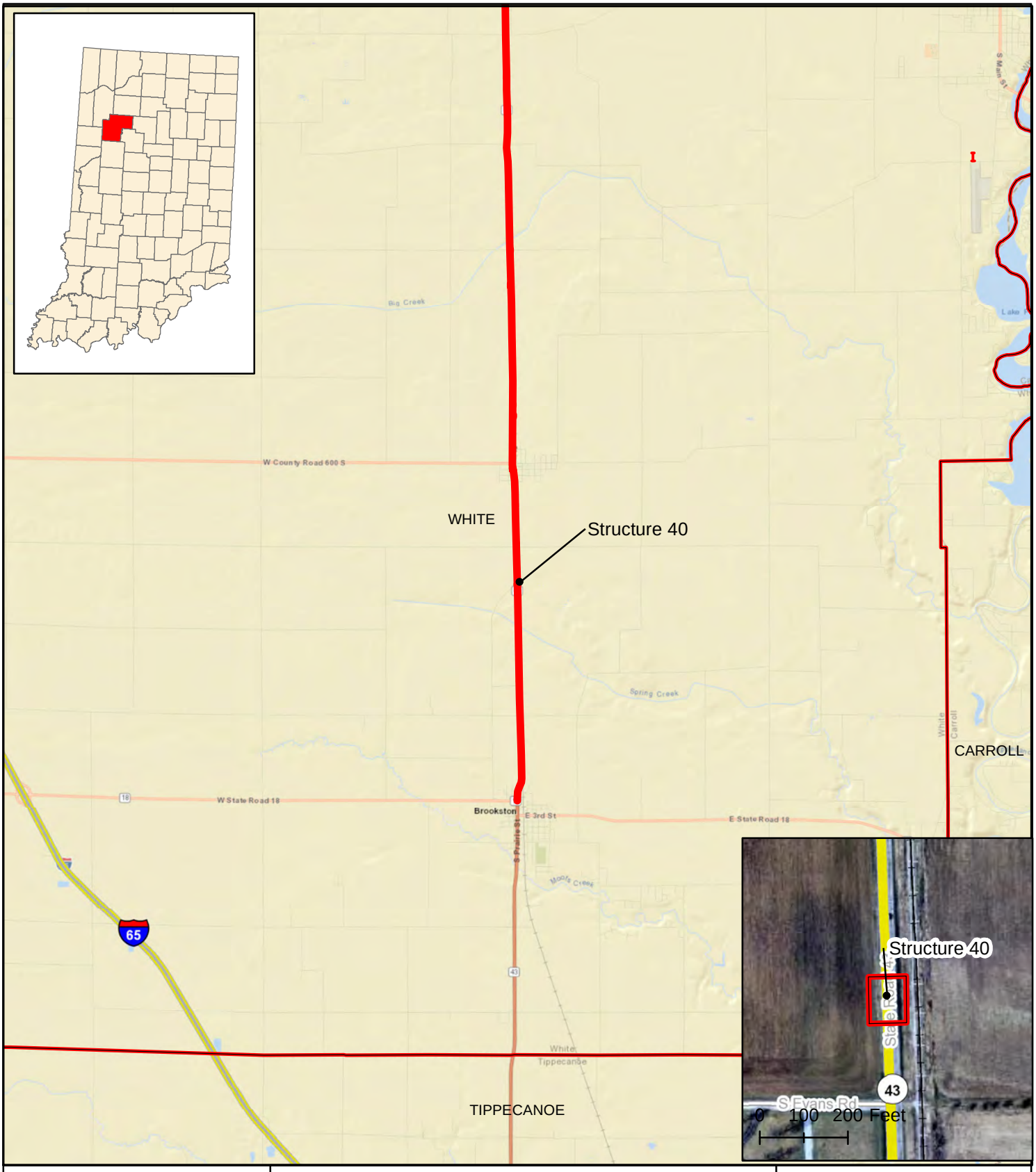
No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM. The NHD map (Figure 6) exhibited a stream feature crossing the project area, however, the field reconnaissance did not indicate the presence of any features meeting the USACE definition for a tributary, including an OHWM, bed and bank, or flow regime. All drainage features were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. Vegetation was predominantly fescue blend (*Festuca rubra* & *Festuca arundinacea* FACU) and perennial rye (*Lolium perenne*, FACU). No indicators of hydrology were observed either. As no indicators of hydrophytic vegetation or hydrology were observable within the project study area no data points were collected.

Roadside Ditches and Other Drainages

Roadside ditches were observed in the eastern quadrants of the study area (RSD-40) with mowed right-of-way through the western quadrants. These roadside ditches drain towards Structure 40, which acts as an equalizer pipe between the east and west sides of SR 43 to manage stormwater. These roadside ditches would not likely be considered jurisdictional within the study area. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.

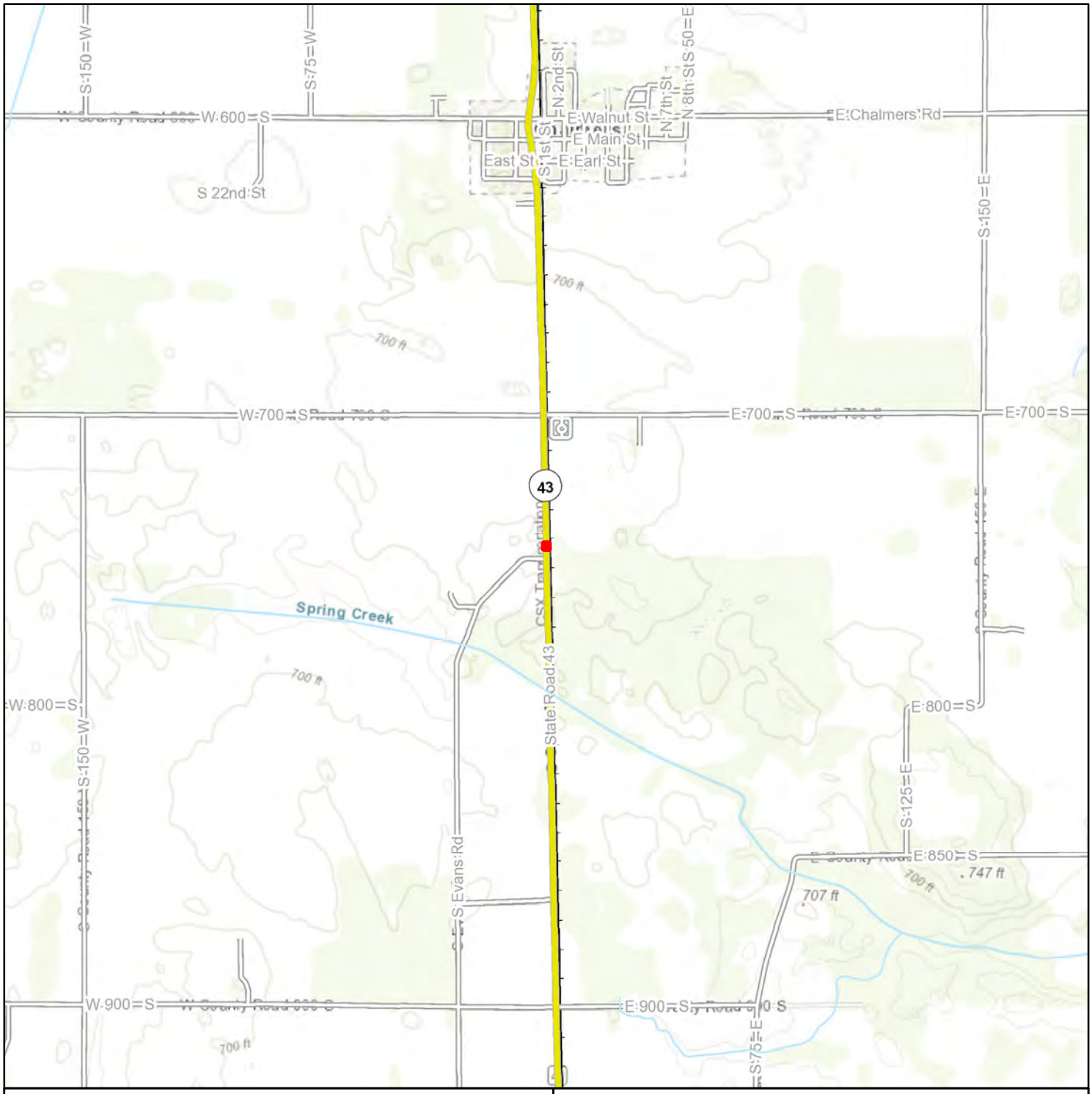


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 40
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

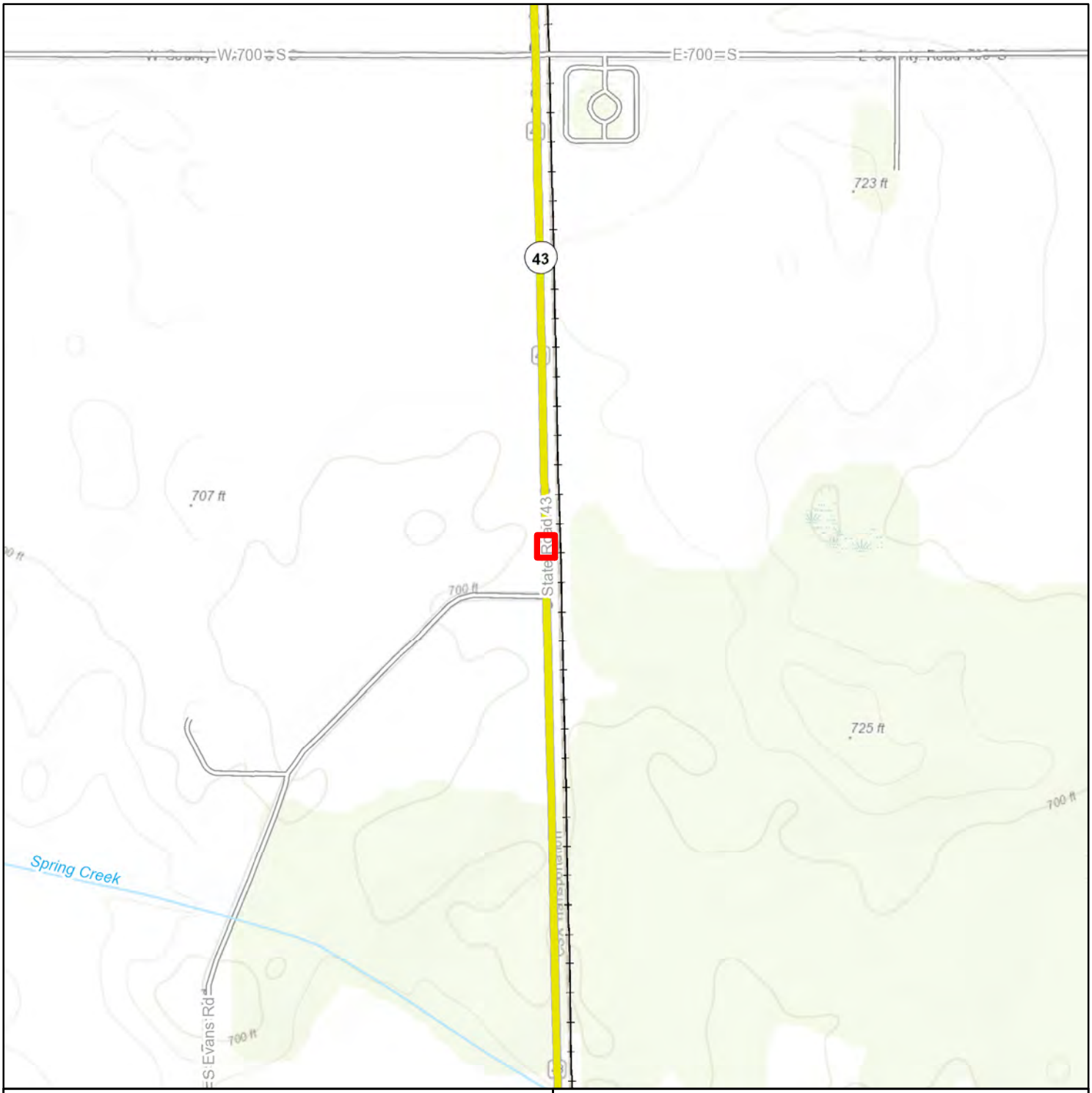
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

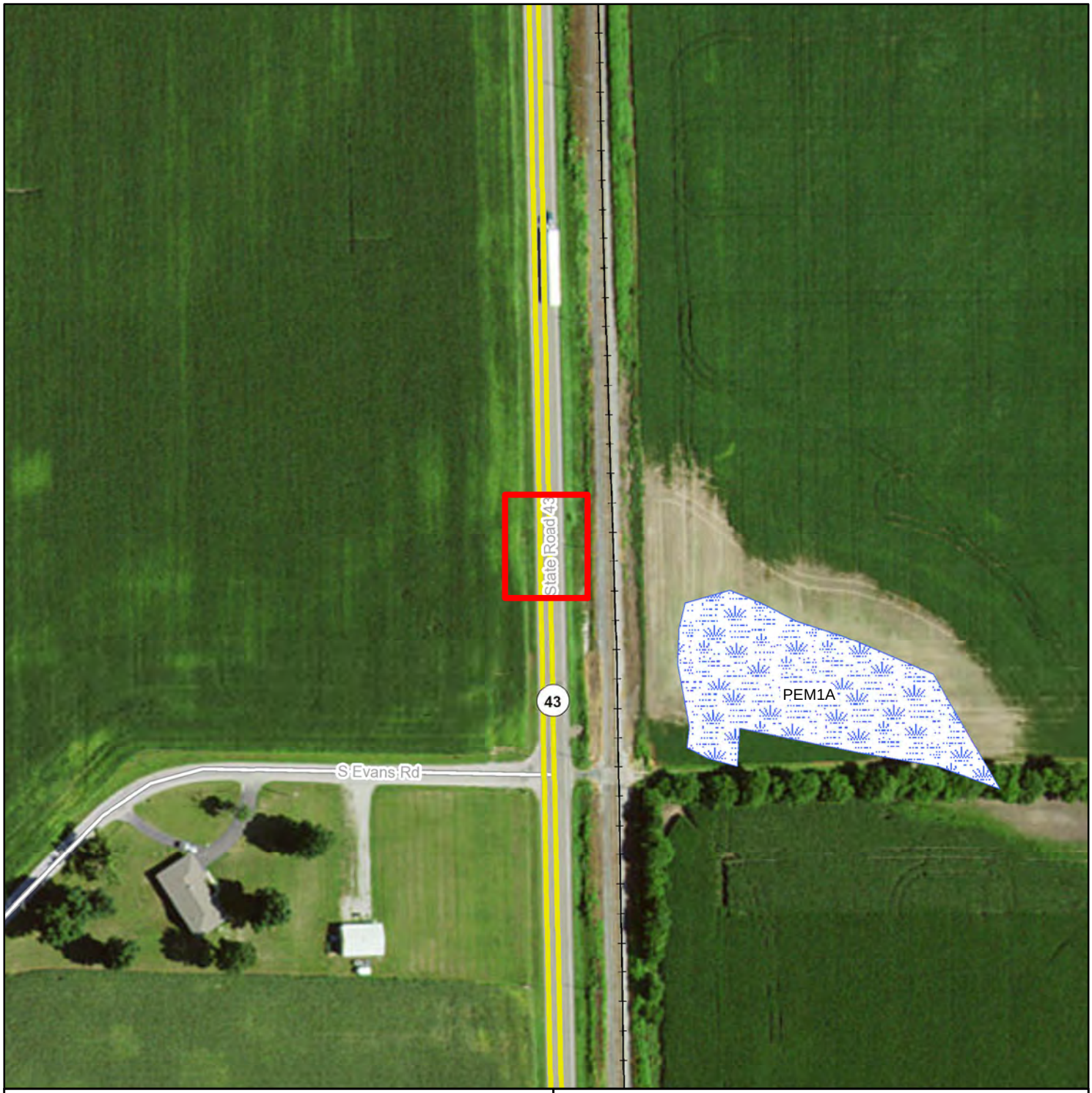
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

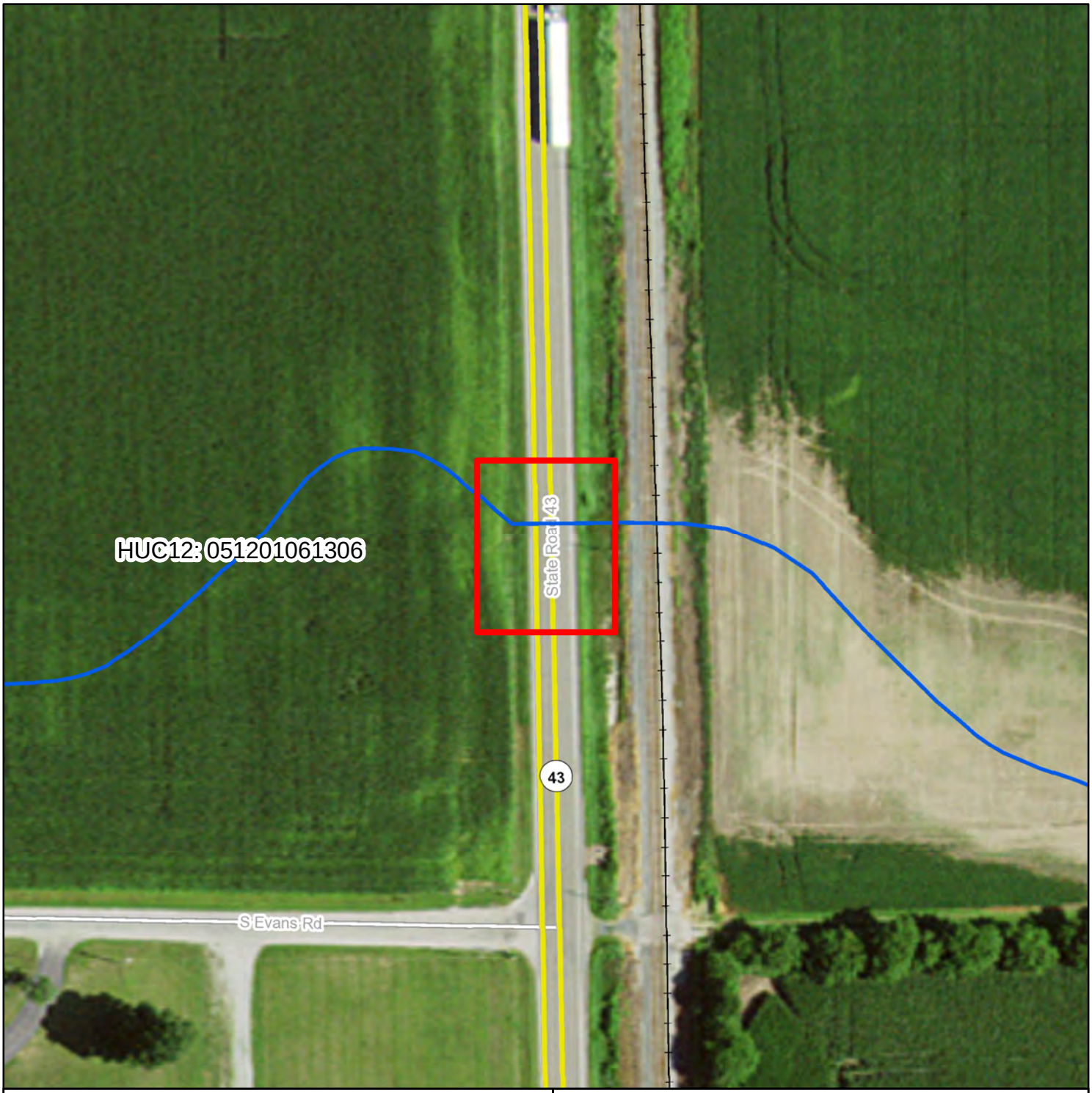
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch

Waterbody
- LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology, Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

MaA
Wh

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N

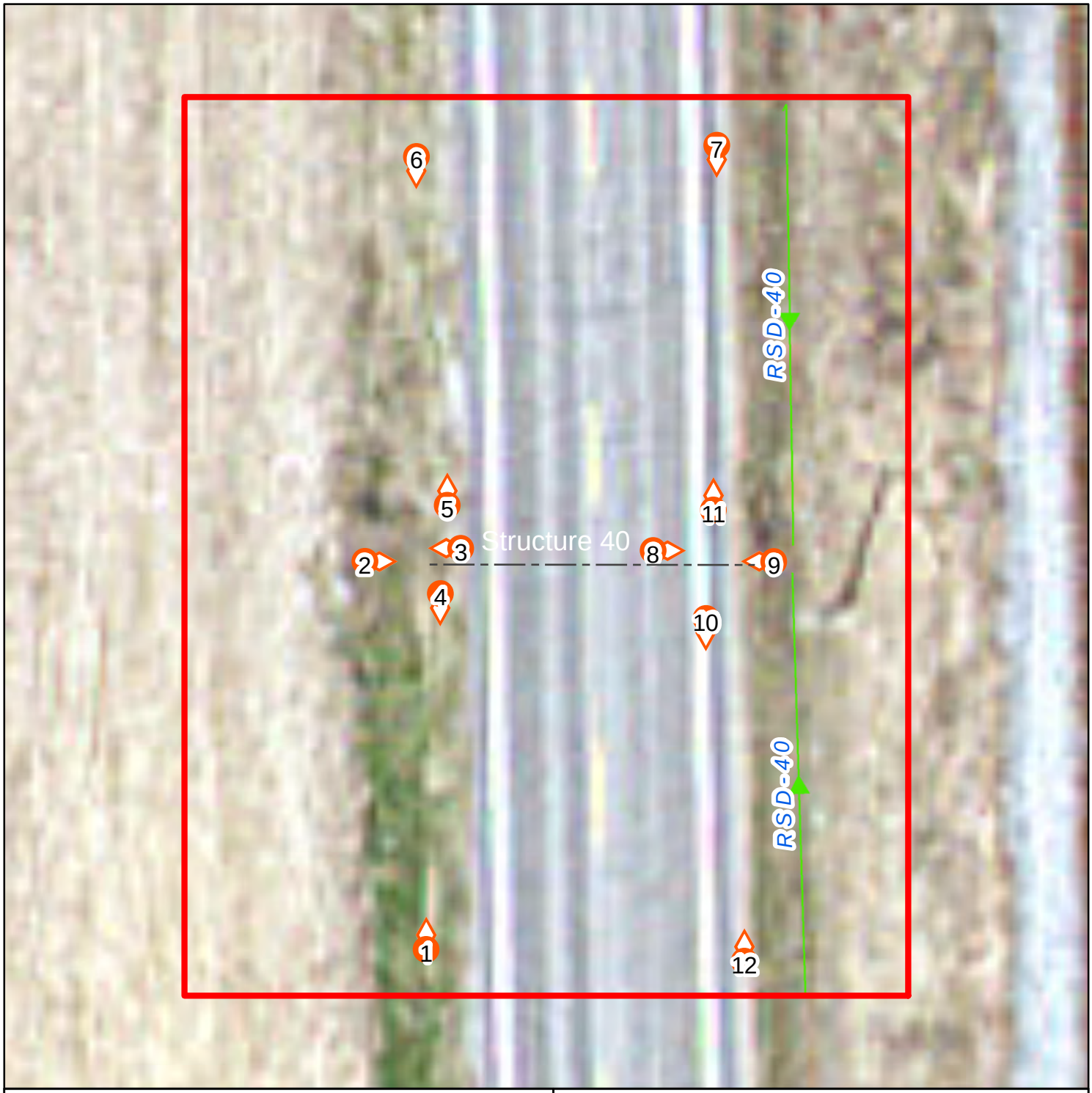


Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 5 10 20 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N

Photos Taken: 09/20/2022





Photo 2. Looking east towards outfall of Structure 40.

F105

COMPLIANCE FIELD SERVICES, INC.





Photo 4. Looking south along SB SR 43 from Structure 40 outfall.





Photo 6. Looking south along SB SR 43 towards Structure 40 outfall.





Photo 8. Looking east from inlet of Structure 40.





Photo 10. Looking south along NB SR 43 and roadside ditch from Structure 40 inlet.





Photo 12. Looking north along NB SR 43 and roadside ditch towards Structure 40 inlet.

Structure 50 – CLV-64403

Structure 50 is located approximately 0.06 mile north of the intersection of SR 43 and W 700 S (40.649505°, -86.869438°) in Section 33 and 34, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 15-inch diameter by 50 ft. long concrete pipe culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 698 to 699 ft. Drainage patterns were identified via topographic elevation contours to drain east to west at Structure 50. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural agricultural and is adjacent to a commercial facility.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) identified one palustrine emergent, temporarily flooded (PEM1A) NWI wetland 130 ft. to the east of the project study area.

Watersheds

The project study area is in the Spring Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061306.

NRCS Soil Survey

The NRCS Soil Survey of White County identified three soil series within the project study area (Figure 7, Table 2.5). Two map units were identified as being hydric (100%).

Table 2.3. Structure 50 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

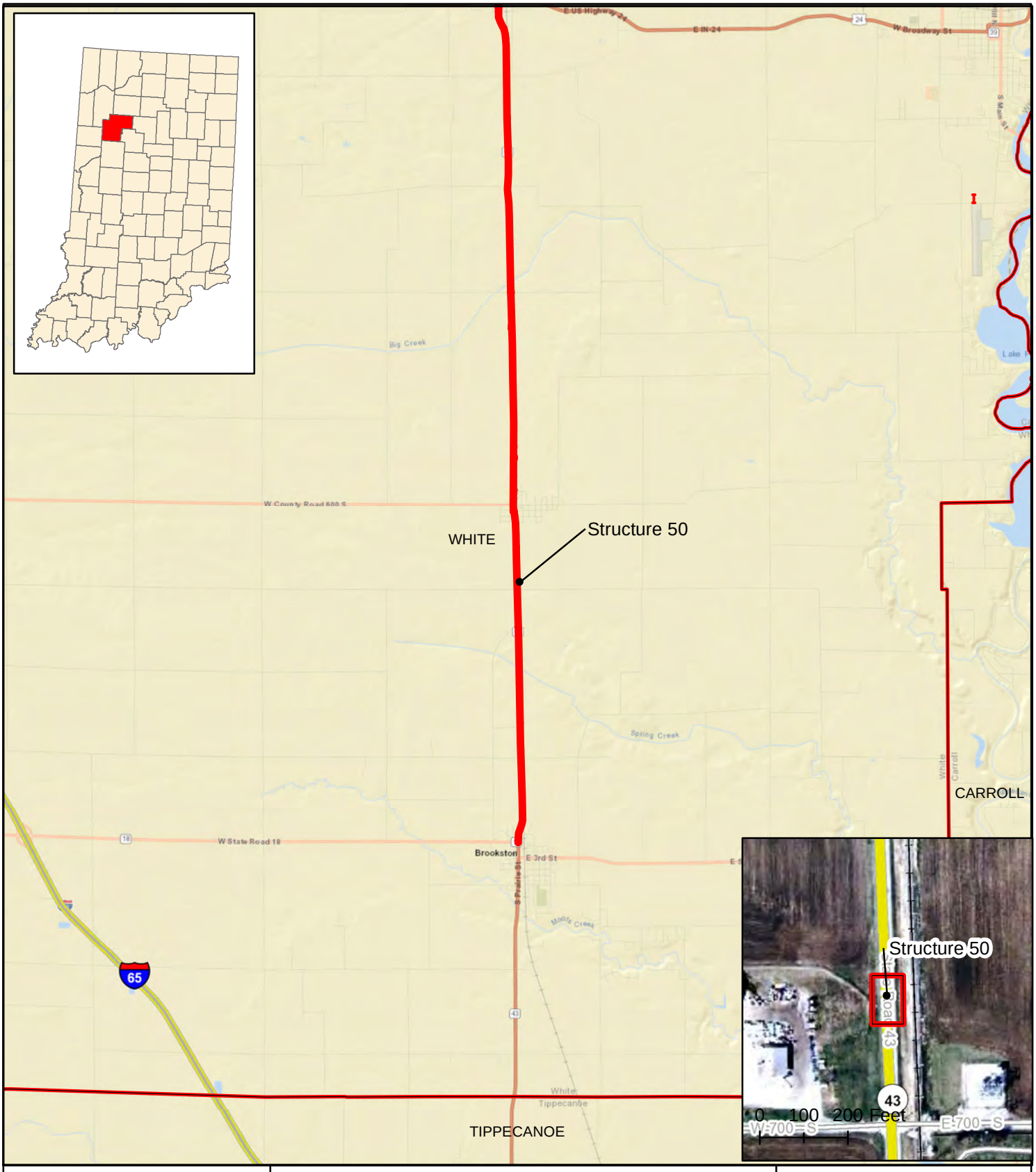
No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM. Furthermore, the flow regime of roadside ditches were not sufficient to be classified as tributaries and were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. No hydrophytic vegetation indicators were present, as dominant vegetation included red fescue (*Festuca rubra*, FACU), perennial ryegrass (*Lolium perenne*, FACU) and Kentucky bluegrass (*Poa pratensis*, FAC). No hydrology indicators and no depressions or areas likely to hold water for more than two weeks in order to develop anaerobic conditions were present within the project study area. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

Roadside ditches were observed in the eastern quadrants of the study area (RSD-50). These roadside ditches drain towards Structure 50. These roadside ditches would not likely be considered jurisdictional within the study area. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.

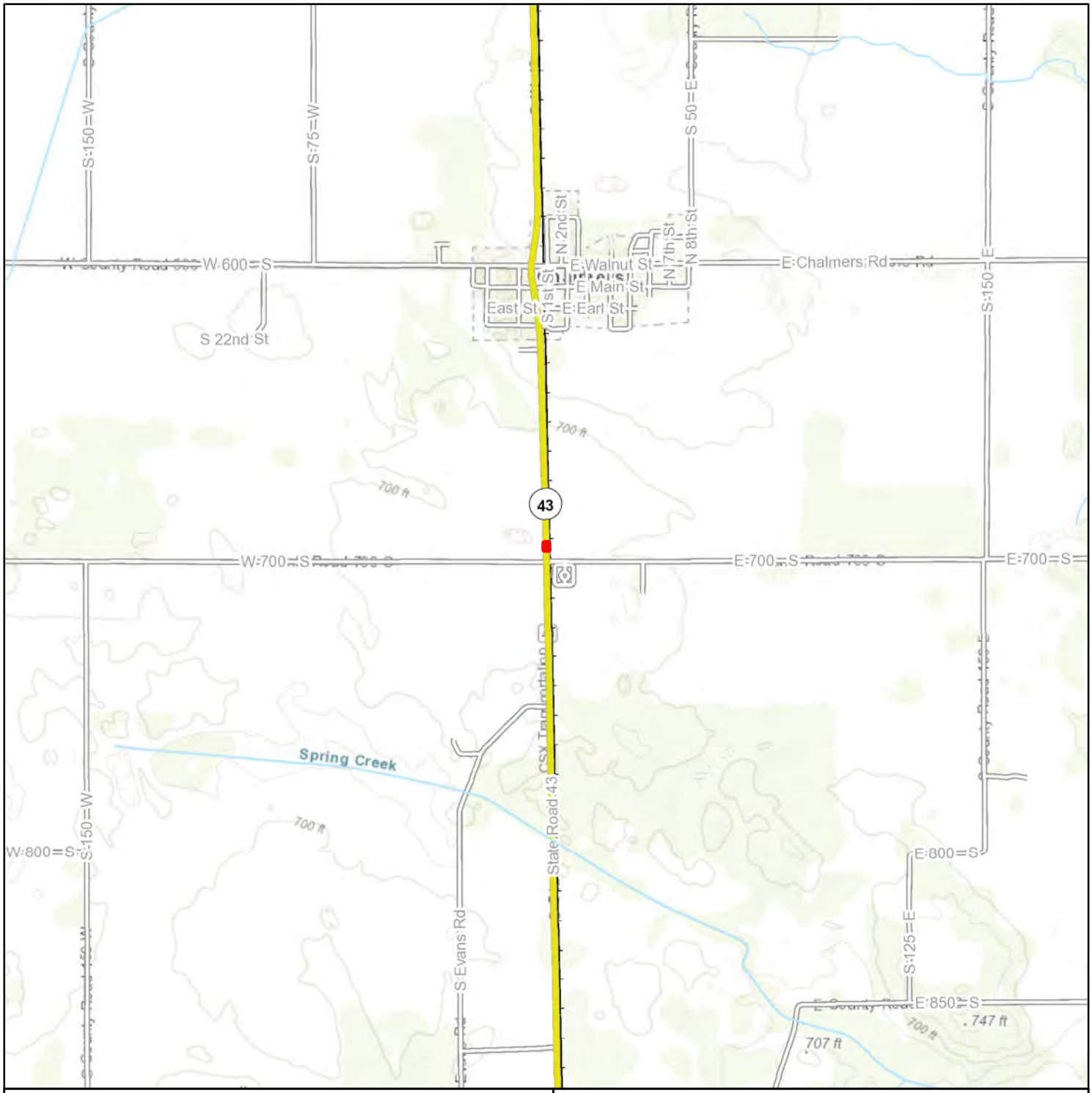


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 50
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3
SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

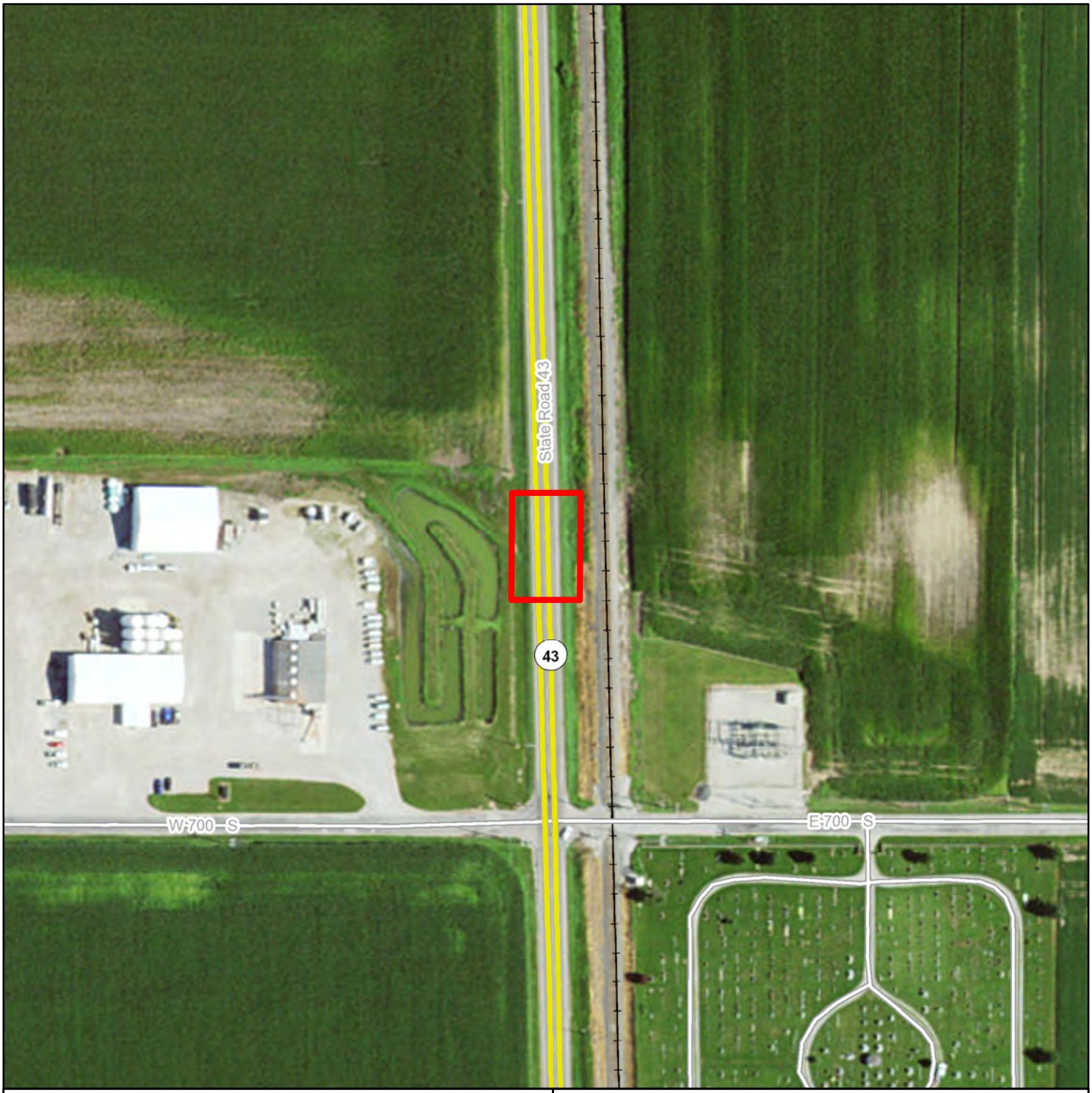
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

N



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

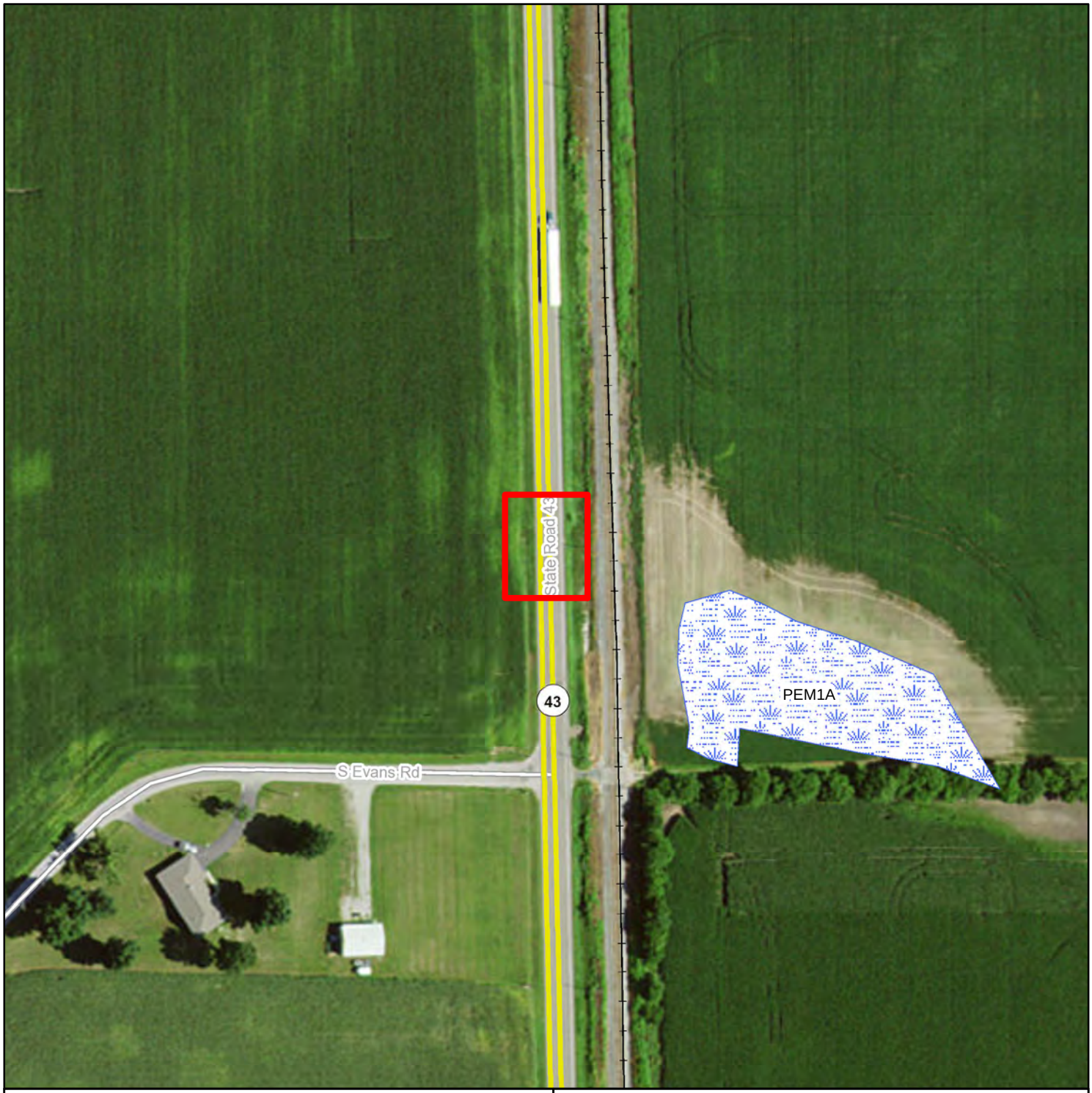
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 40
Des # 2100235
White County, Indiana

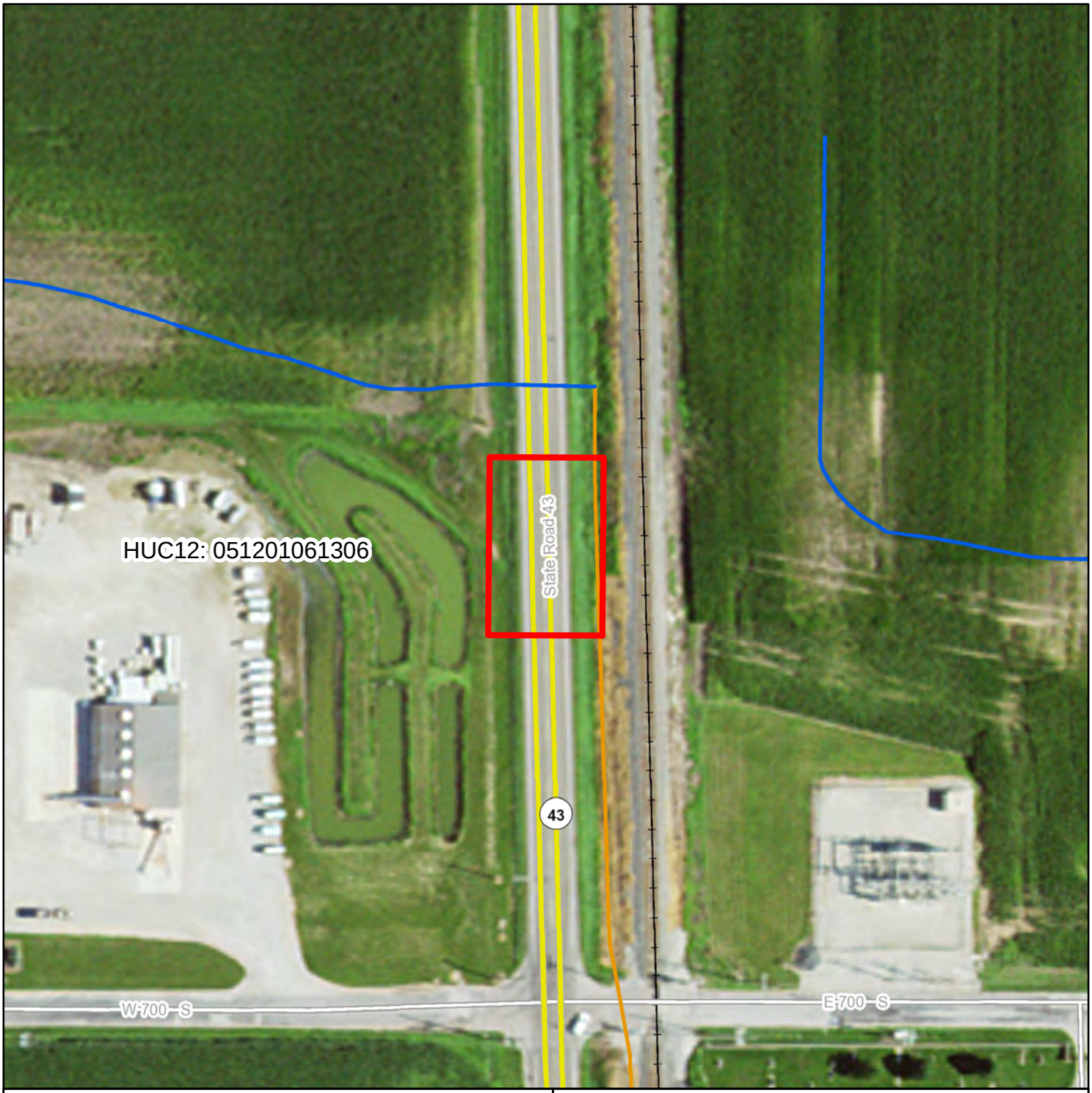
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch

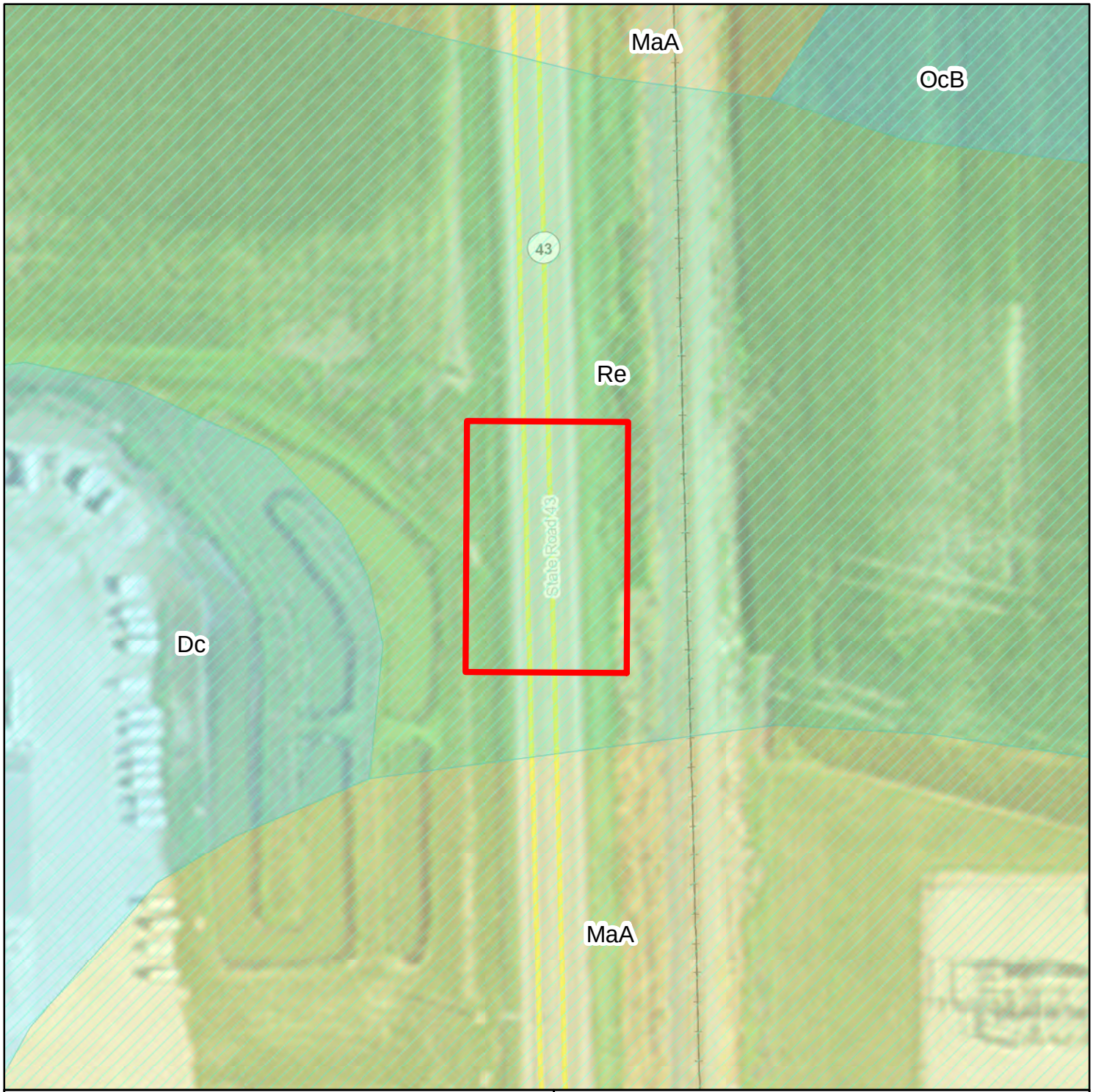
Waterbody
- LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM

N



NRCS Soils Map
Figure 7
SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Hydric

NRCS Soil MU

Dc
MaA
OcB
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N



Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 50
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 5 10 20 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking east towards Structure 50.





Photo 4. Looking west from Structure 50.





Photo 6. Looking south along SB SR 43 from Structure 50.

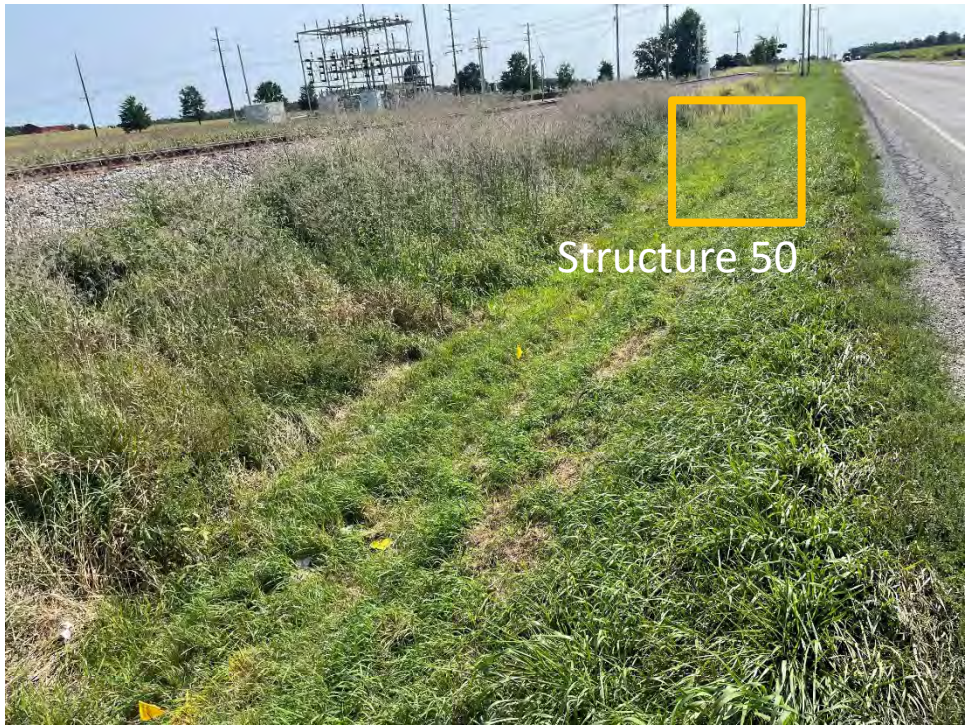




Photo 8. Looking north along NB SR 43 and roadside ditch from Structure 50.





Photo 10. Looking south along NB SR 43 from Structure 50.





Photo 12. Looking west towards Structure 50.

Structure 60 – CLV-64404

Structure 60 is located approximately 0.51 mile north of the intersection of SR 43 and W 700 S (40.655977°, -86.869749°) in Section 33, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 15-inch diameter concrete pipe culvert is recommended for leave in place in initial scoping, but were investigated for potential rehabilitation or replacement in this report.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 695 to 699 ft. Drainage patterns were identified via topographic elevation contours to drain east to west at Structure 60. The project study area is within the Kankakee Drainage ways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) identified one emergent NWI wetland (PEM1A) to the northwest, approximately 230 feet from the project study area.

Watersheds

The project study area is in the Dieter Ditch-Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified three soil series within the project study area (Figure 7, Table 2.6). Two map units were identified as being hydric (100%).

Table 2.4. Structure 60 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM. Channel formation exists between the CSX Railroad and Structure 60, however, there is no indication that this feature is jurisdictional as it terminates to the west of the pipe outfall and does not appear to drain a wetland feature or exhibit any of the markers of a tributary or captured steam. Furthermore, the ground truthing of the channel that appears to the west in aerial imagery has been apparently tiled, terminating direct hydrological connection to Dorsey Ditch to the north. The NHD map (Figure 6) indicates the presence of a stream channel along the western boundary of the project study area as well. As noted above, this channel appears to function as a means of stormwater diversion and management and does not meet the USACE criteria for a tributary, including the presence of an OHWM, bed and bank, or flow regime, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

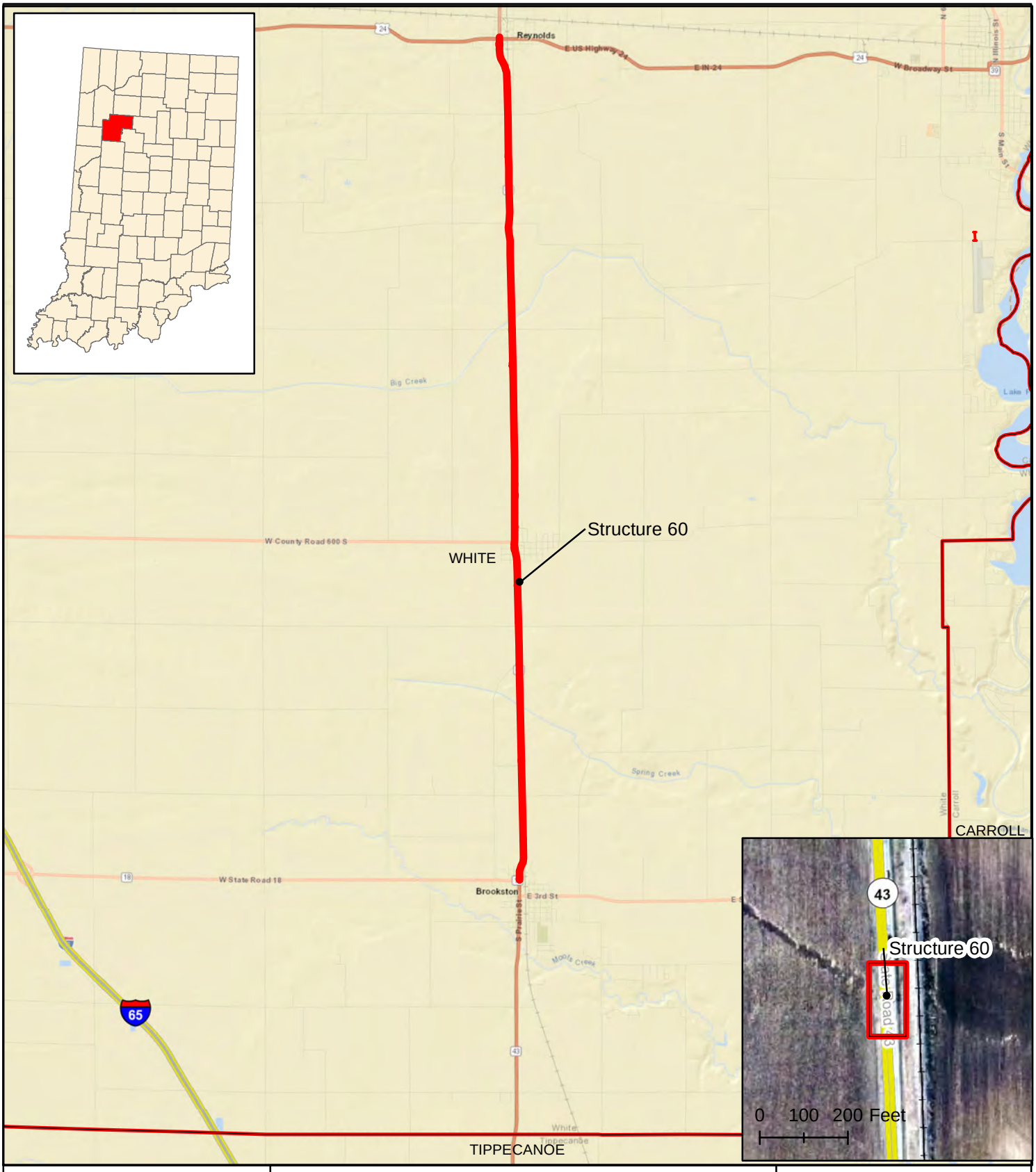
No wetland features that met all three of the USACE wetland criteria were observed within the project area. As hydrophytic vegetation was present between the CSX Railroad and SR 43, including poison hemlock (*Conium maculatum*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW), a data point was taken to confirm the absence of wetland development. Additional soil profiles taken on the backslope of SR 43 and throughout the right-of-way between SR 43 and CSX railroad yielded similar soil profiles with no redoximorphic features. As all three criteria could not be met, no wetlands were delineated within the project study area.

Upland Data Point 10 (DP-10)

DP-10 is located approximately 16 ft. from the edge of pavement in the northeast quadrant of the project study area. DP-10 herbaceous stratum was dominated by reed canary grass (*Phalaris arundinacea*, FACW), poison hemlock (*Conium maculatum*, FACW), and Queen Anne's lace (*Daucus carota*, UPL). DP-10 passed the dominance test and prevalence index indicators for hydrophytic vegetation. The soil profile from 0-16 inches had a matrix color of 10YR 4/2 (100%) with no redoximorphic features, thus failing to meet any of the hydric soils indicators. Hydrology was met with the secondary indicators of drainage patterns (B10) and FAC-neutral test (D5). As DP-10 did not meet all three criteria, failing to meet the hydric soils criterion, DP-10 was determined to be an upland data point.

Roadside Ditches and Other Drainages

Roadside ditches were observed in the eastern quadrants of the study area, with mowed right-of-way in the western quadrants. These roadside ditches (RSD-60) drain towards Structure 60. These roadside ditches would not likely be considered jurisdictional within the study area. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.



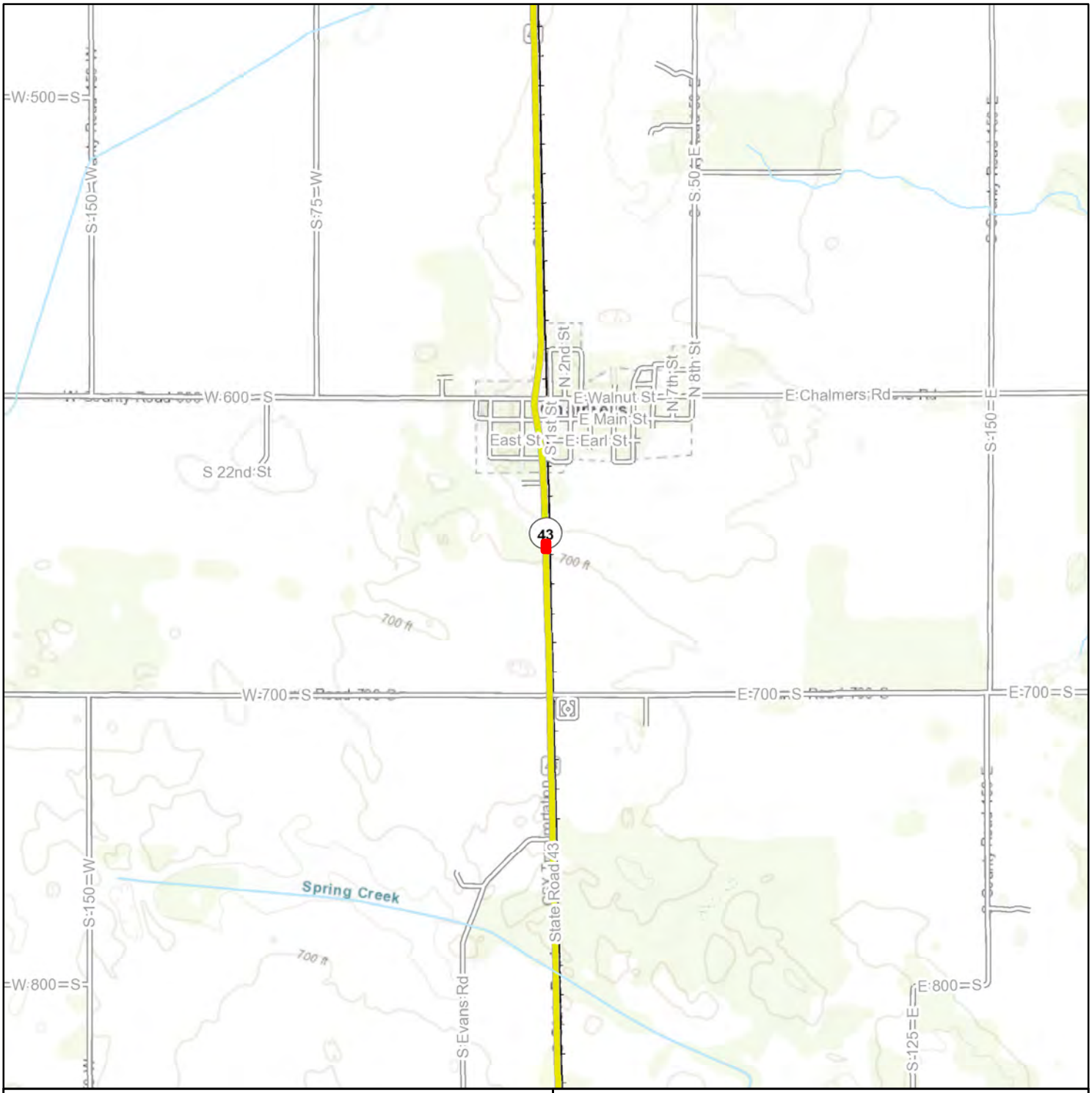
State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 60
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

COMPLIANCE FIELD SERVICES, INC

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

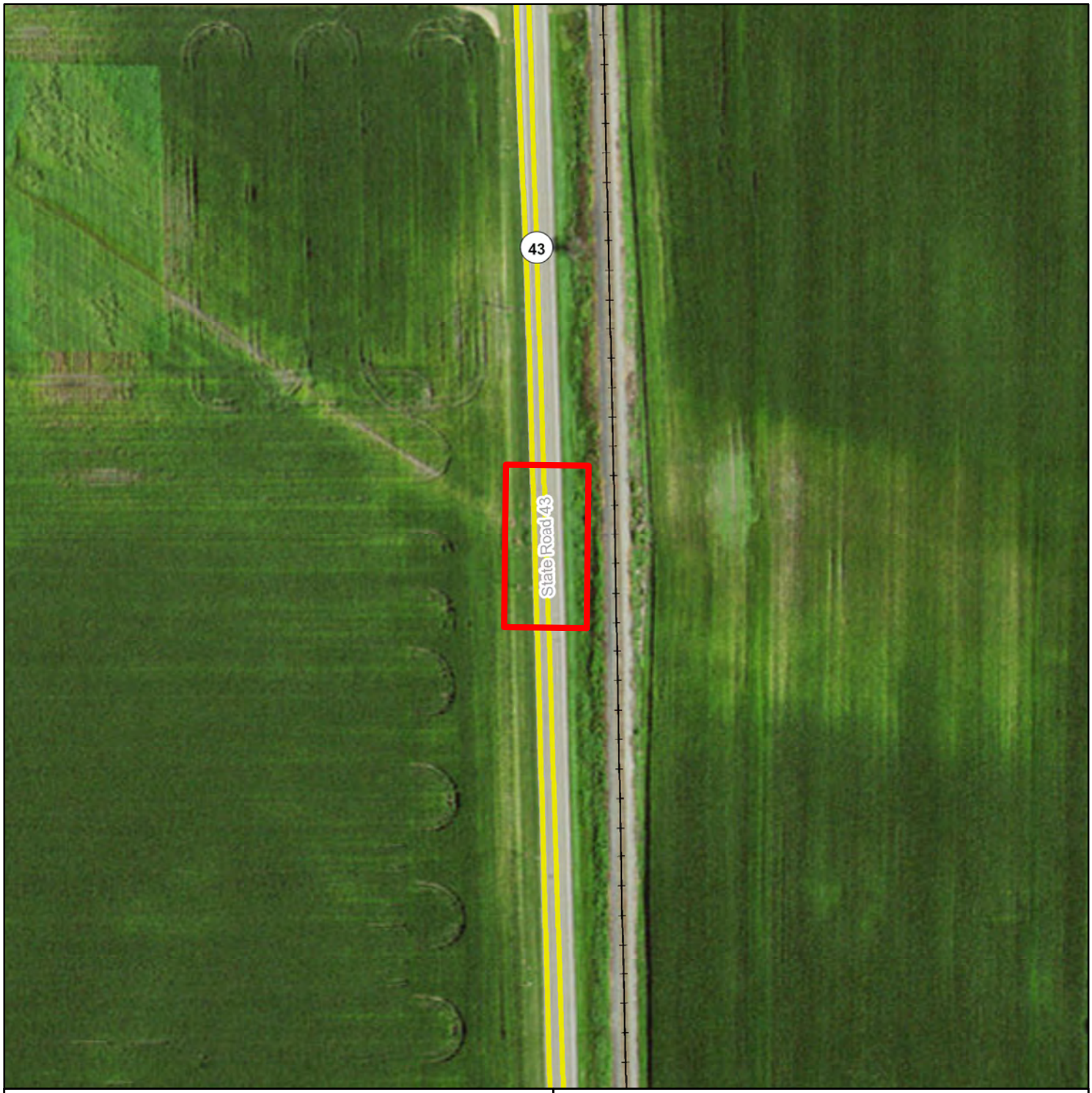
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

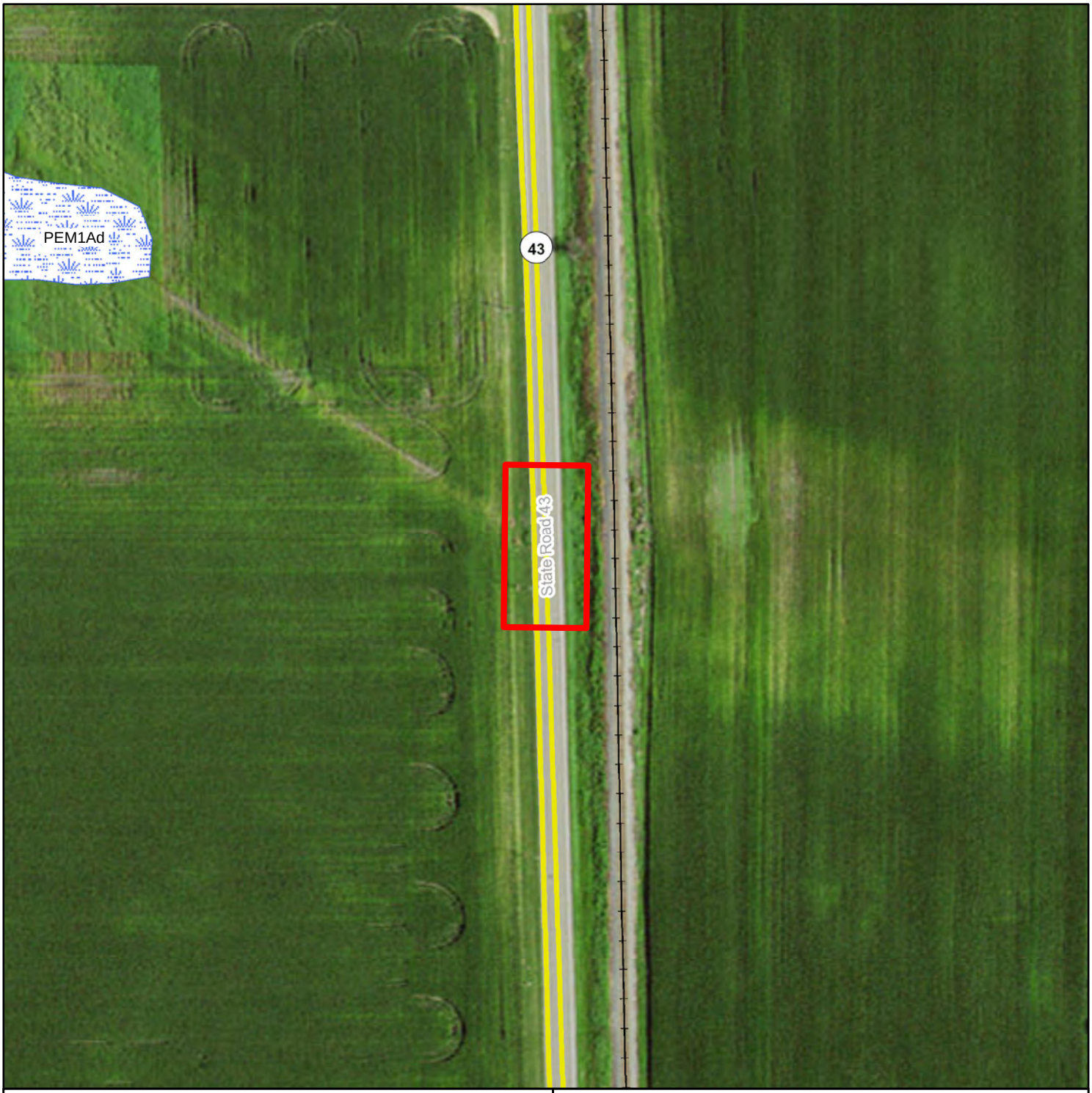
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

HUC12 Boundary

Flowline
StreamRiver
ArtificialPath
CanalDitch

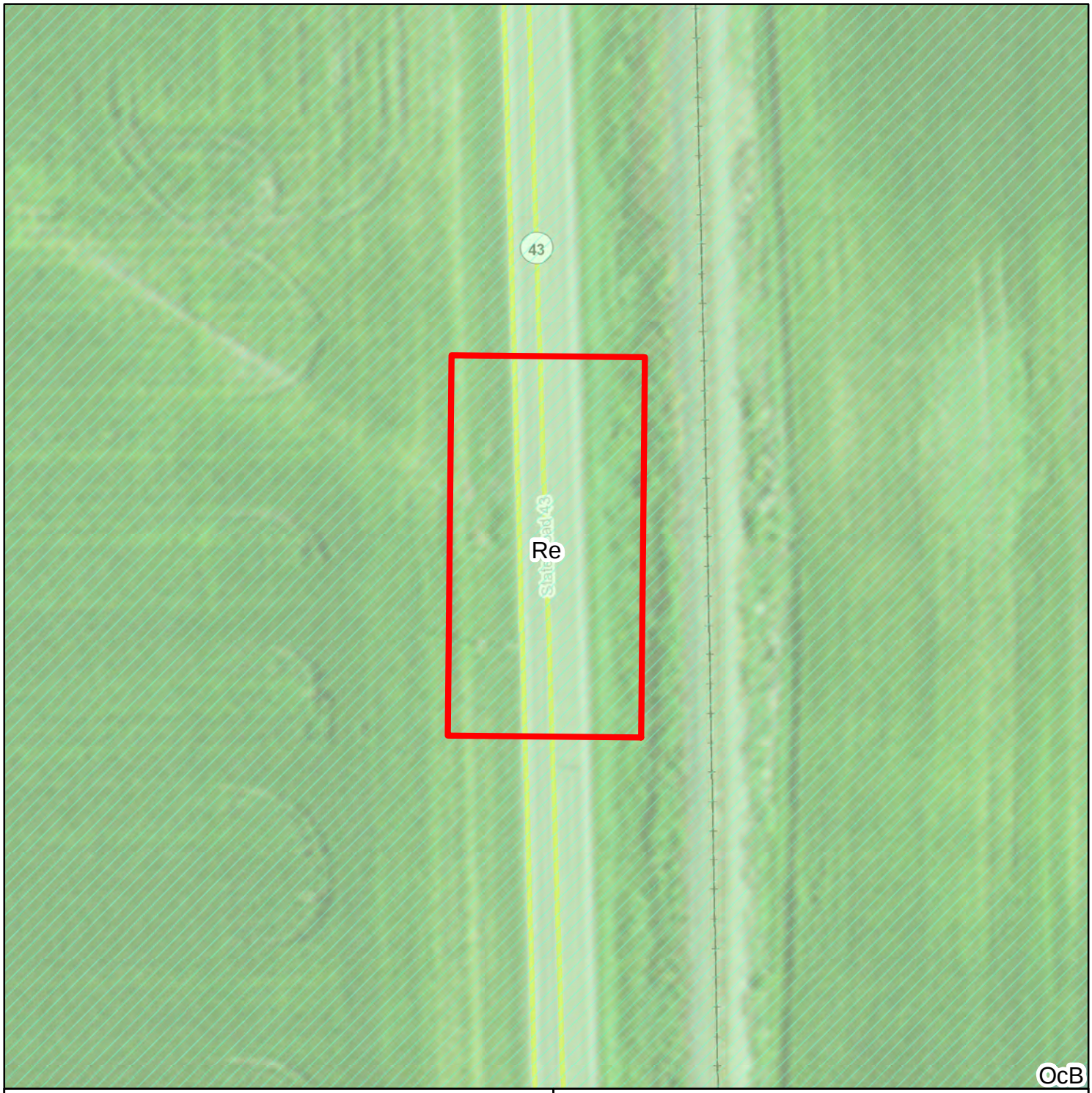
Waterbody
LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7
SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

OcB
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 20 40 80 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

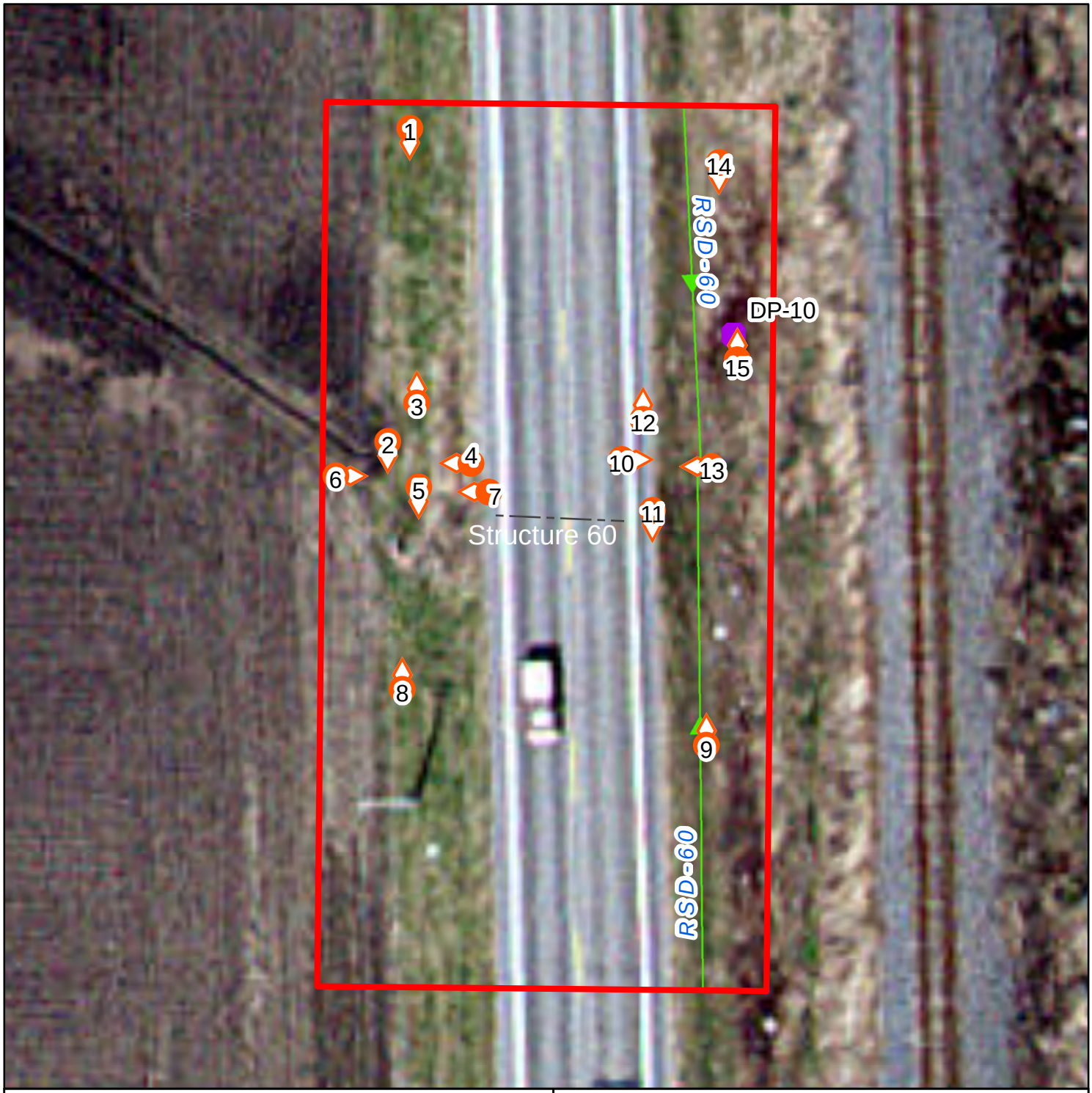


Photo Location Map
Figure 9

SR 43 Small Structure Rehabilitation
Structure # 60
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking south at the outfall for Structure 60.





Photo 4. Looking west from outfall for Structure 60.





Photo 6. Looking east at Structure 60 outfall.





Photo 8. Looking north along SB SR 43 towards outfall of Structure 60.





Photo 10. Looking east from Structure 60 inlet.





Photo 12. Looking north along NB SR 43 and roadside ditch from Structure 60 inlet.





Photo 14. Looking south along NB SR 43 and roadside ditch towards Structure 60 inlet.



WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 60 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-10

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 33, T-26-N, R-4-W

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.656039 Long: -86.86961 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	40	Yes	FACW
2. *Conium maculatum*	25	Yes	FACW
3. *Daucus carota*	20	Yes	UPL
4. *Sorghum halepense*	10	No	FACU
5. *Festuca rubra*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	65	x 2 =	130
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	20	x 5 =	100
Column Totals:	100 (A)		290 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators 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: DP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Structure 70 to 75 – INCB 54951-54 & 60-61

Structures 70 to 75 are located approximately at the intersection of SR 43 and Main Street in the Town of Chalmers (40.662126°, -86.870515°) in Section 33, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. Structures 70-75 are storm inlets that are identified as leave-in-place in initial scoping documents but were investigated for potential rehabilitation or replacement in this report.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 702 to 703 ft. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily residential and commercial.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Dieter Ditch – Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.7). This map unit was identified as being hydric (1-32%), with at least one component of each unit being identified as hydric.

Table 2.5. Structure 70-75 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Martinsville silt loam, 0-2% slopes	Well Drained	No Ponding, No Flooding	Hydric (1-32%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

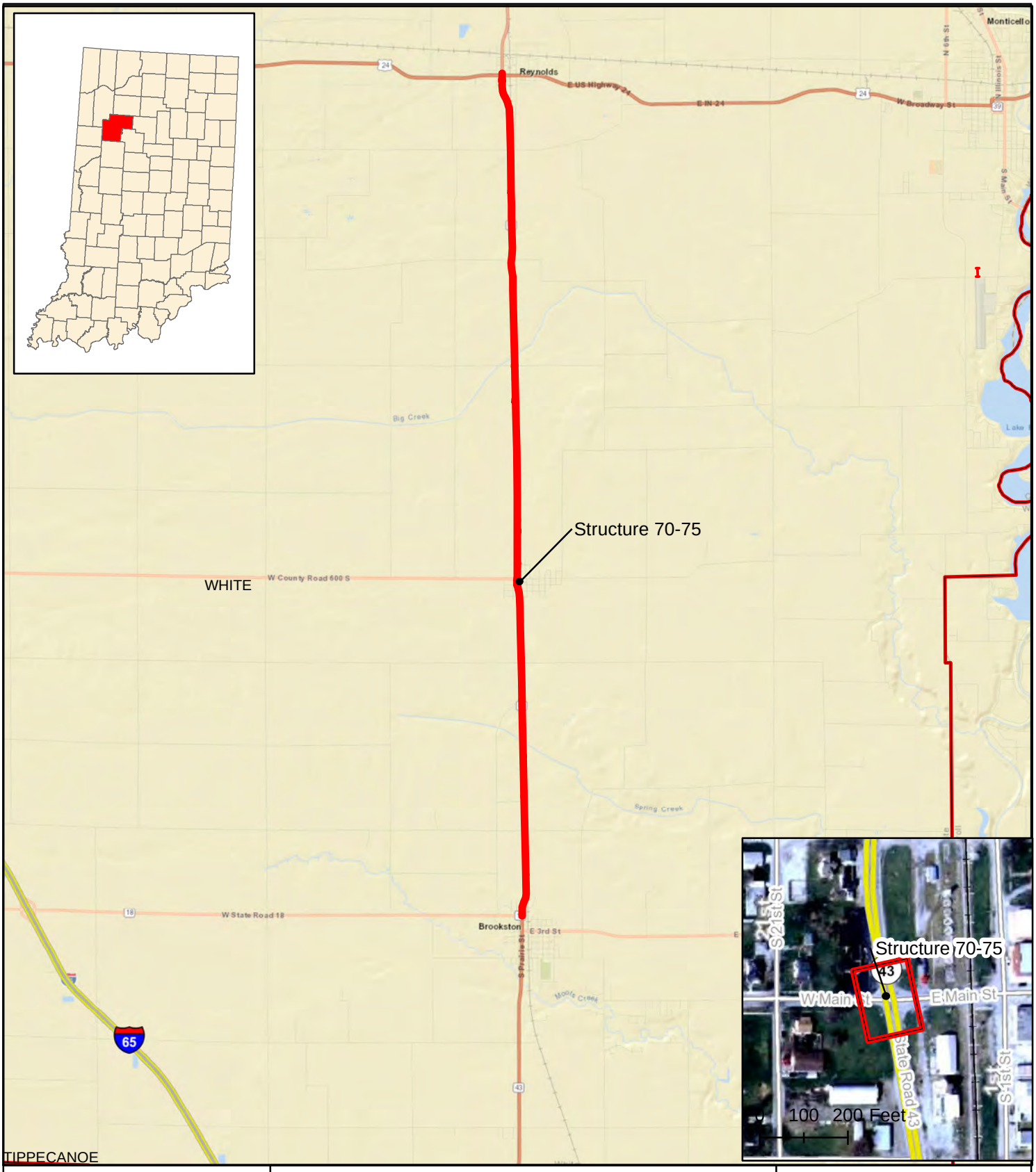
No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. The area was predominantly mowed right-of-way with the herbaceous community dominated by Bermuda grass (*Cynodon dactylon*, FACU), Kentucky bluegrass (*Poa pratensis*, FACU), and perennial ryegrass (*Lolium perenne*, FACU). No indicators of hydrology were present either. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

No roadside ditches were observed in the study area.

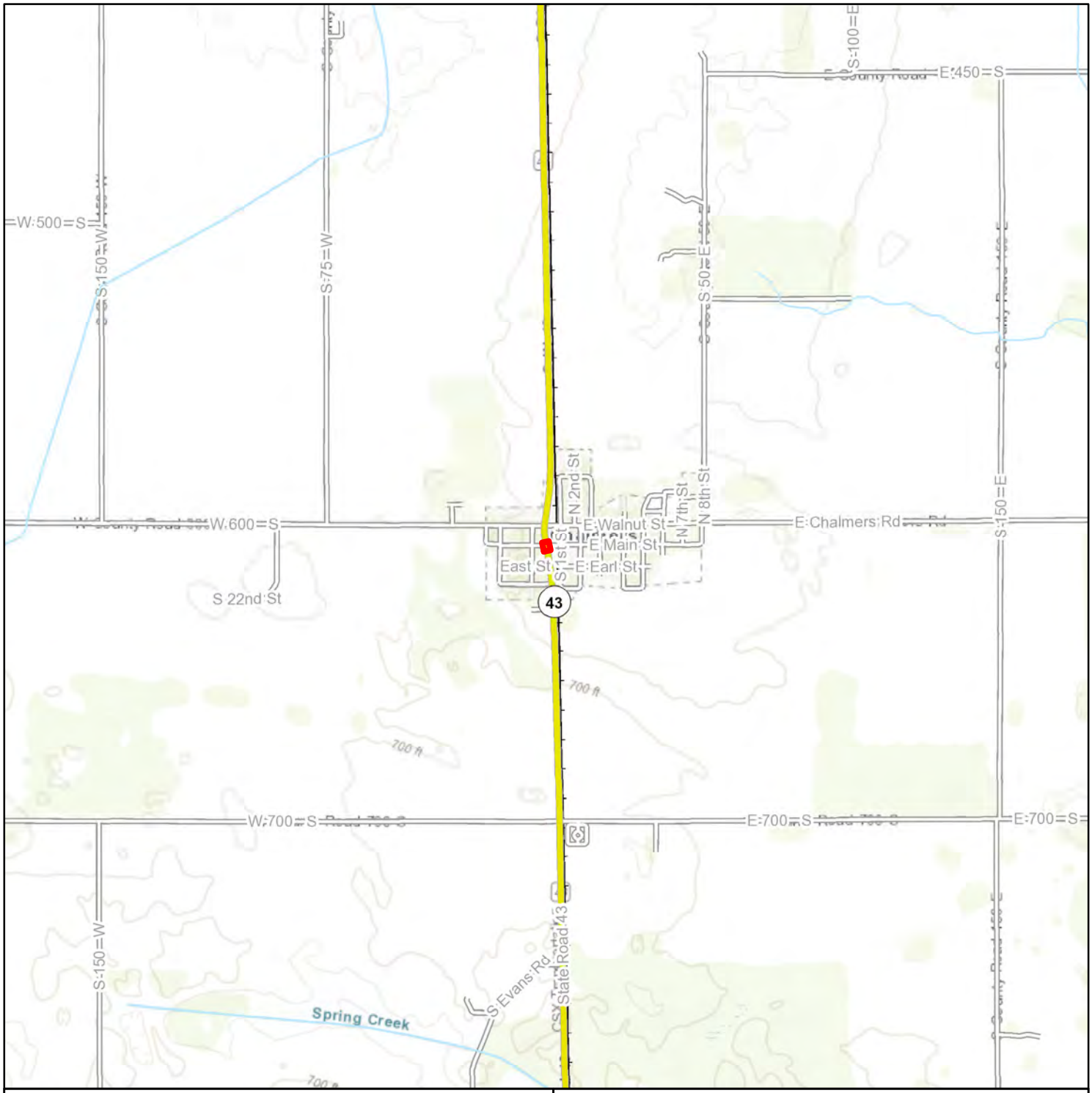


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 70-75
Des # 2100235
White County, Indiana

N

Miles
0 0.5 1 2

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

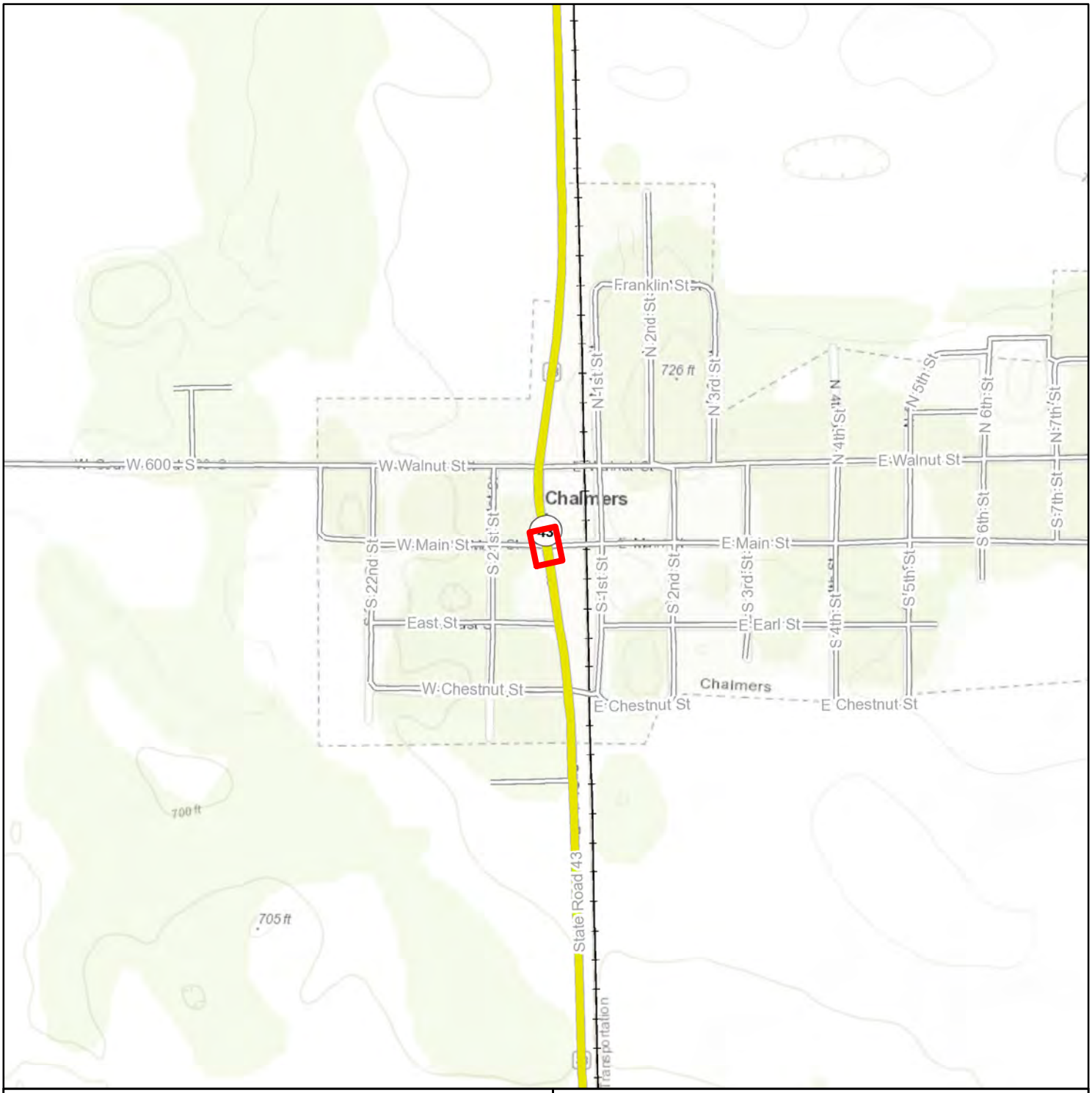
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

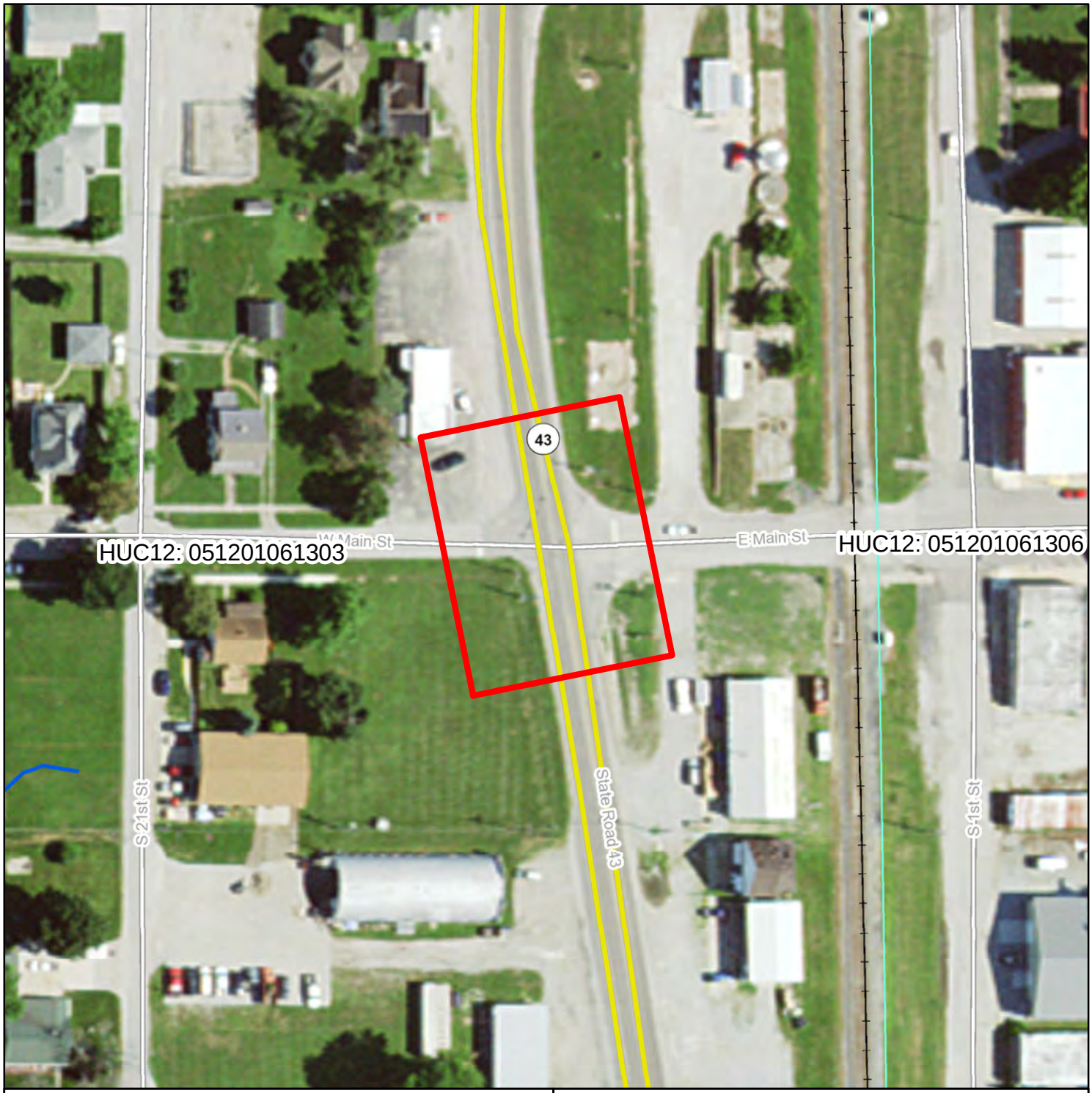
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch

Waterbody
- LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology, Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7
SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Hydric

NRCS Soil MU
MaA
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



Photo Location Map
Figure **8**

SR 43 Small Structure Rehabilitation
Structure # 70-75
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking northwest towards SR 43 from W Main St.





Photo 4. Looking south along SR 43 at intersection of W Main St. towards Structure 72 (right), Structure 73 (middle), and Structure 74 (left).





Photo 6. Looking south along SR 43 from W Main St. towards Structure 75.





Photo 8. Looking north along SR 43 at Structure 75 (left), Structure 74 (middle), and Structure 73 and 72 (top)





Photo 10. Looking northwest towards Structure 70 from SR 43.





Photo 12. Looking east towards SR 43 and Structure 70 from W. Main St.





Photo 14. Looking southeast towards Structure 71 and intersection of SR 43 and W. Main St.

Structure 80 – CLV-64405

Structure 80 is located approximately 0.55 mile north of the intersection of SR 43 and W 600 S (40.671199°, -86.870463°) in Section 28, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 1 ft. diameter by 40 ft. long metal pipe culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 702 to 704 ft. Drainage patterns appear to drain from east to west through the project study area. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Dieter Ditch - Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.8). This map unit was identified as being hydric (100%).

Table 2.8 Structure 80 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

Two isolated wetlands were delineated within the project study area (Figure 8).

Stream Features

No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM. Furthermore, the flow regime of roadside ditches were not sufficient to be classified as tributaries and were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

Two wetland features were delineated that met all three of the USACE wetland criteria within the project study area. A detailed description of the delineated features are discussed below. Completed wetland and upland determination forms from the site investigation are located in in the attachments for this section and represent data points taken to characterize the boundary interfaces of the wetland feature, summarized in Table 3. The wetland acreage includes the entire boundary as delineated in the project study area (Figure 8). Wetlands identified within the project study area are represented in Table 4.

Wetland C (0.02 acre onsite)

Wetland C is located to the west of SR 43 at the outfall of Structure 80. Wetland C was classified as an agricultural wetland and would not likely be considered a Waters of the U.S., but would be considered an isolated Waters of the State. Wetland C would be classified as a Class I wetland due to the agricultural disturbance to vegetation and natural hydrology. Additionally, Wetland C supports minimal wildlife or aquatic habitat and does not contribute significant hydrologic function. For these reasons, Wetland C would be considered poor quality. In addition, Wetland C would be considered exempt as a Class I wetland.

Upland Data Point 6 (DP-6)

The herbaceous vegetation stratum was dominated by green bristle grass (*Setaria viridis*, UPL) and Kentucky Bluegrass (*Poa pratensis*, FAC). DP-6 failed to meet any of the hydrophytic vegetation indicators, thus failing the hydrophytic vegetation criterion. The soil profile was a clay loam with a matrix color of 10YR 3/2 (100%) from the surface to 16 inches, with no redoximorphic features present. As no indicators were present, DP-6 failed to meet the hydric soils criterion. Additionally, no indicators of wetland hydrology were present. In failing to meet all three wetland criteria, DP-6 was deemed to be an upland point.

Wetland Data Point 7 (DP-7)

DP-7 had significantly disturbed vegetation due to being within an active agricultural field. Therefore in order to meet the problematic hydrophytic vegetation criteria, hydric soils and wetland hydrology

must be present. The dominant species comprising the herbaceous vegetations stratum were purple amaranth (*Amaranthus blitum*, FAC) and common purselane (*Portulaca oleracea*, FACU). The soil profile was a clay loam with a matrix color of 10YR 2/2 (100%) from the surface to 3 inches. From 3 to 16 inches the matrix color was 10YR 4/2 (85%), with 10YR 5/8 (15%) prominent redox concentrations in the pore linings. DP-7 met the indicators of depleted below dark surface (A11) and depleted matrix (F3), thus meeting the hydric soils criterion. Hydrology was met with the primary indicators of sparsely vegetated concave surface (B8), and oxidized rhizospheres on living roots (C3). Secondary indicators of hydrology included saturation visible on aerial imagery (C9), stunted or stressed plants (D1), and geomorphic position. In meeting both the hydric soils and hydrology, the problematic hydrophytic vegetation criterion was met, thus meeting all three wetland criteria, making DP-7 a wetland point.

Wetland D (0.04 acre onsite)

Wetland D is located to the east of SR 43 between the Structure 80 inlet and the CSX Railroad. Wetland D would not likely be considered a Waters of the U.S. but would be considered an isolated Waters of the State. Wetland D would be classified as a Class I wetland due to a greater than 50% areal coverage of nonnative invasive species of vegetation, minimal wildlife or aquatic habitat, and does not contribute significant hydrologic function. For these reasons, Wetland I would be considered poor quality. Additionally, as a Class I wetland, Wetland D would be considered exempt.

Upland Data Point 8 (DP-8)

Red fescue (*Festuca rubra*, FACU) dominated the herbaceous vegetation stratum, failing to meet any hydrophytic vegetation indicators. The soil profile was a clay loam with a matrix color of 10YR 3/2 (100%), with no redoximorphic features. DP-8 failed to meet any hydric soils indicators, thus failing the criterion. Hydrology also failed as no indicators were present. In failing to meet any of the wetland criteria, DP-8 was determined to be an upland point

Wetland Data Point 9 (DP-9)

Reed canary grass (*Phalaris arundinacea*, FACW) was the sole dominant species of the herbaceous stratum, thus passing the hydrophytic vegetation indicators for the rapid test, dominance test, and prevalence index. The soil profile was a clay loam throughout with a matrix color of 10YR 3/1 (99%) and 10YR 5/4 (1%) distinct redox concentrations in the matrix from the surface to 1 inch. From 1 to 6 inches the matrix color was 10YR 5/1 (100%) and from 66 to 16 inches was 10YR 3/1 (95%), with 10YR 5/4 (5%) distinct redox concentrations in the matrix. DP-9 met the hydric soils criterion with the indicators depleted matrix (F3) and redox dark surface (F6). Hydrology was met with the primary

indicator of saturation (A3, saturated from the surface) and the secondary indicators of drainage patterns (B10), geomorphic position (D2), and the FAC-neutral test (D5). By passing all three wetland criteria, DP-9 was determined to be within a wetland.

Table 3. Data Point Summary Table

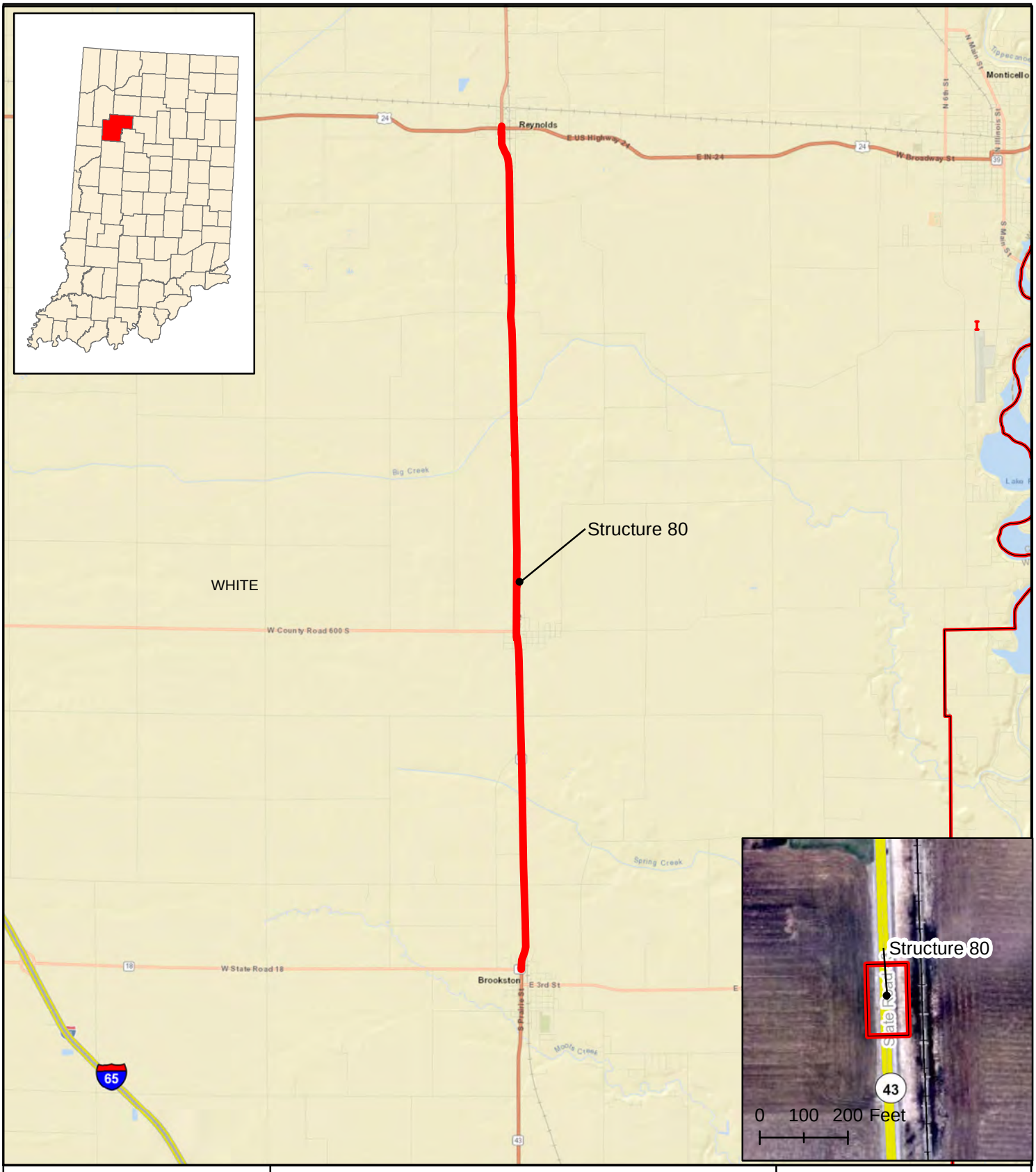
Data Point	Structure	Latitude	Longitude	Vegetation	Soils	Hydrology	Wetland
DP-6	80	40.671133	-86.87052	No	No	No	No
DP-7	80	40.671252	-86.87057	Yes	Yes	Yes	Yes
DP-8	80	40.671141	-86.87031	No	No	No	No
DP-9	80	40.671163	-86.87030	Yes	Yes	Yes	Yes

Table 4. Wetlands Delineated Within Project Study Area

Wetland Name	Structure	Photo No.	Latitude, Longitude	Type	Total Area (acres)	Quality	Waters of the U.S.	Isolated /Exempt
Wetland C	80	2-7, 10,	40.671201, -86.87057	Emergent	0.04085	Poor	No	Isolated/ Exempt
Wetland D	80	11-16, 18	40.671157, -86.87028	Emergent	0.02456	Poor	No	Isolated/ Exempt

Roadside Ditches and Other Drainages

Roadside ditches were observed in the eastern quadrants of the study area, with mowed right-of-way on the western quadrants (RSD-80). These roadside ditches drain towards Structure 80. These roadside ditches would not likely be considered jurisdictional within the study area. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.

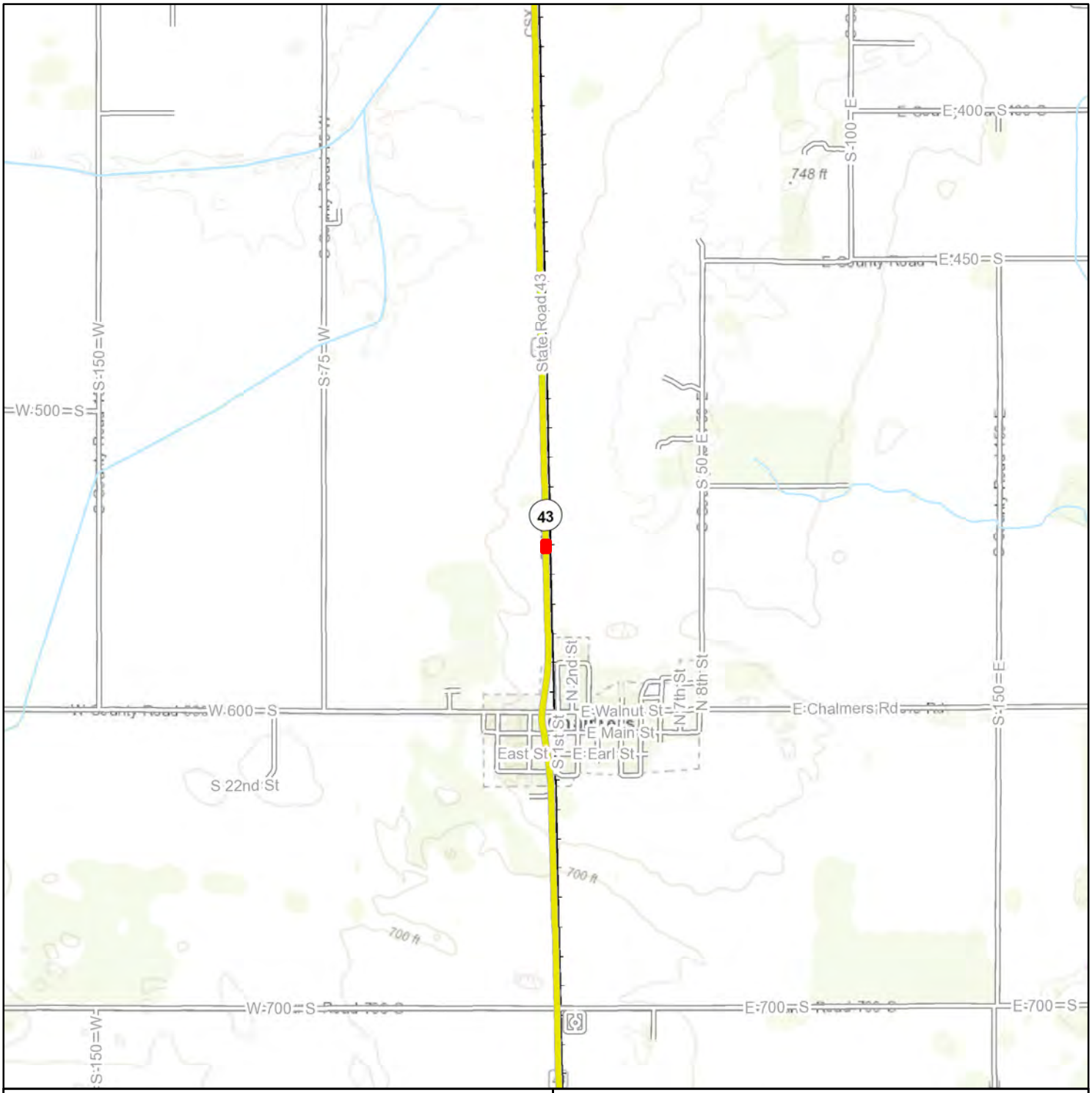


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 80
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

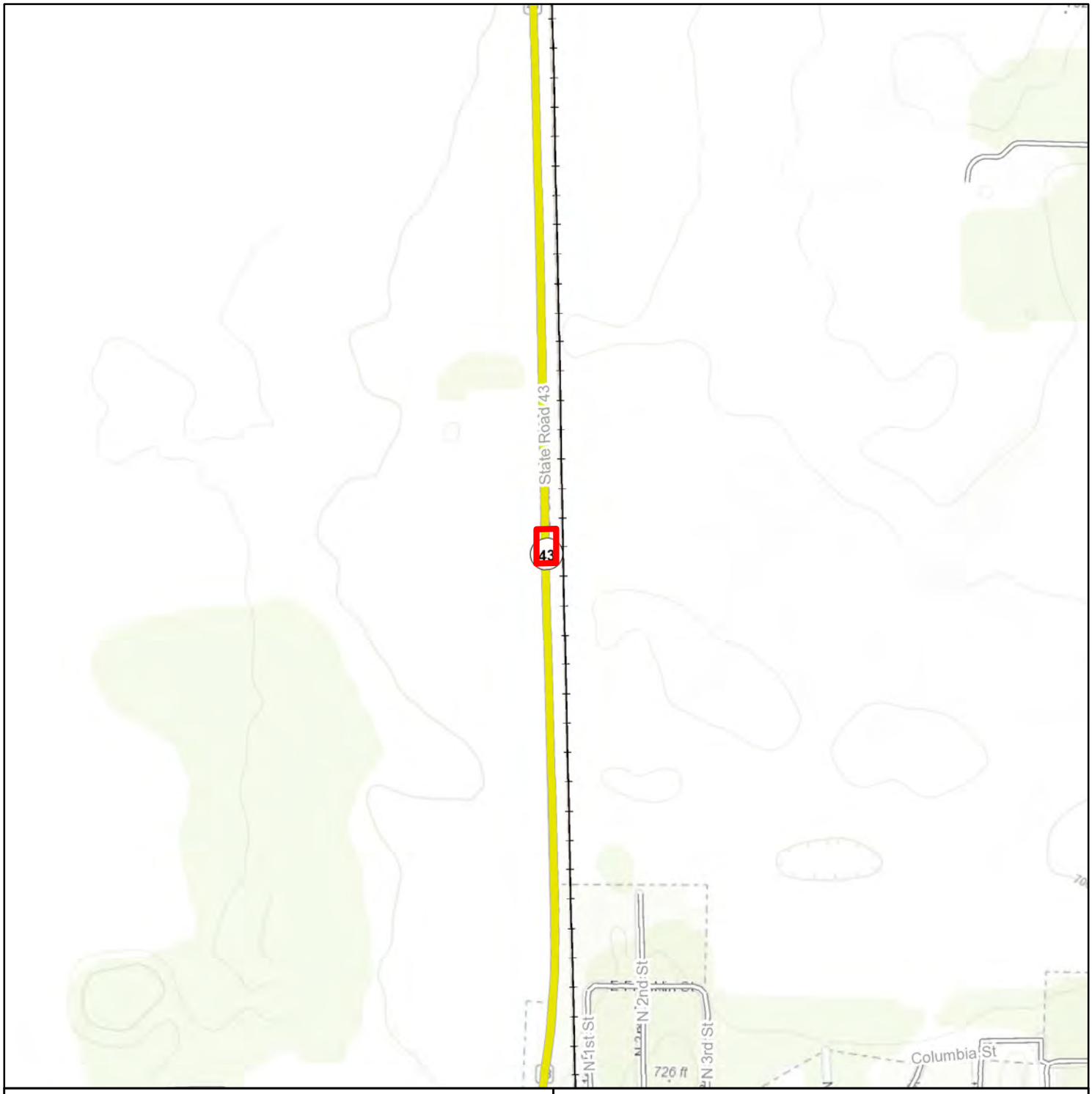
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

HUC12 Boundary

Flowline
StreamRiver
ArtificialPath
CanalDitch

Waterbody
LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Hydric

NRCS Soil MU

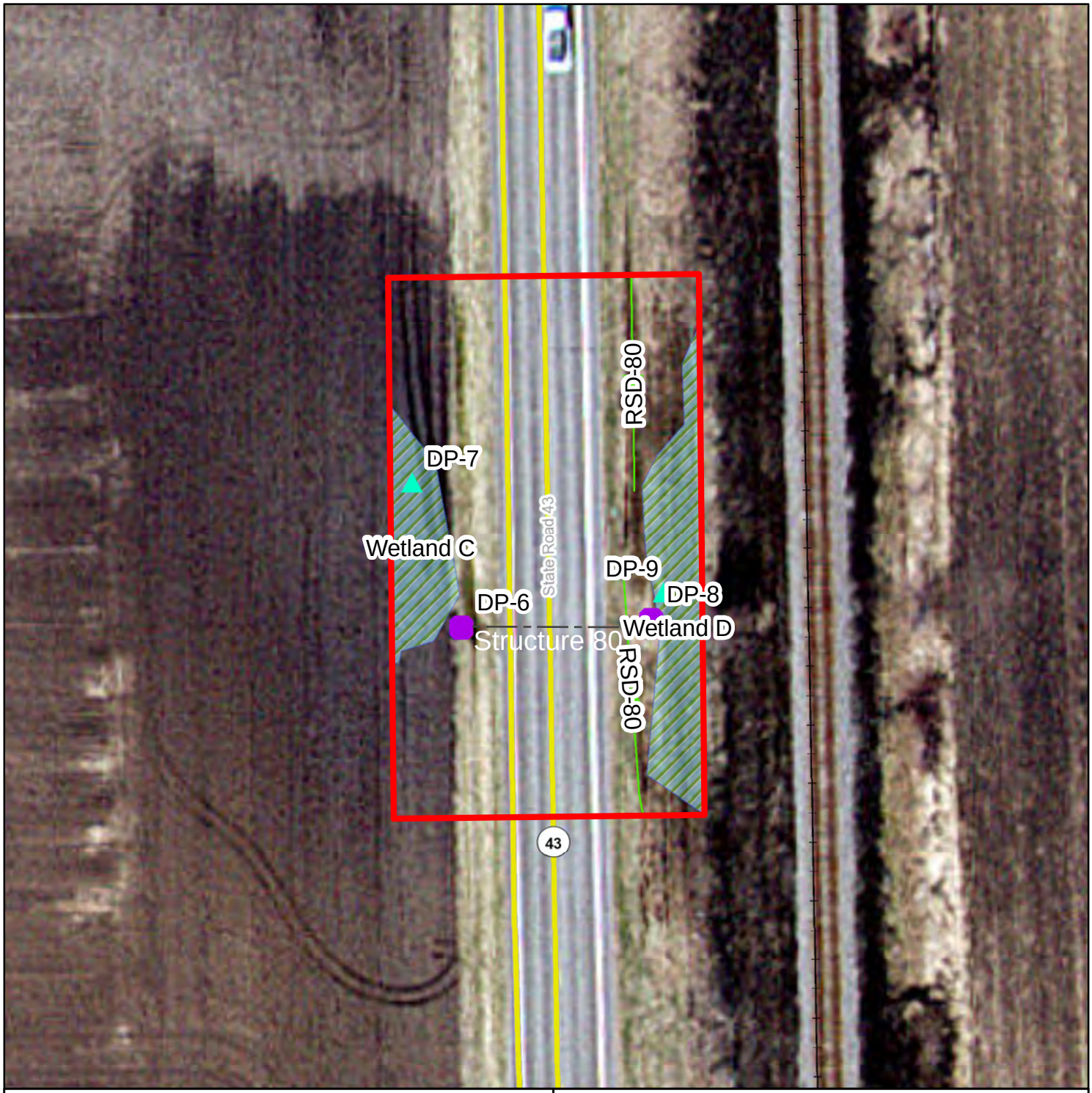
- FoA
- MaA
- Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 20 40 80 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

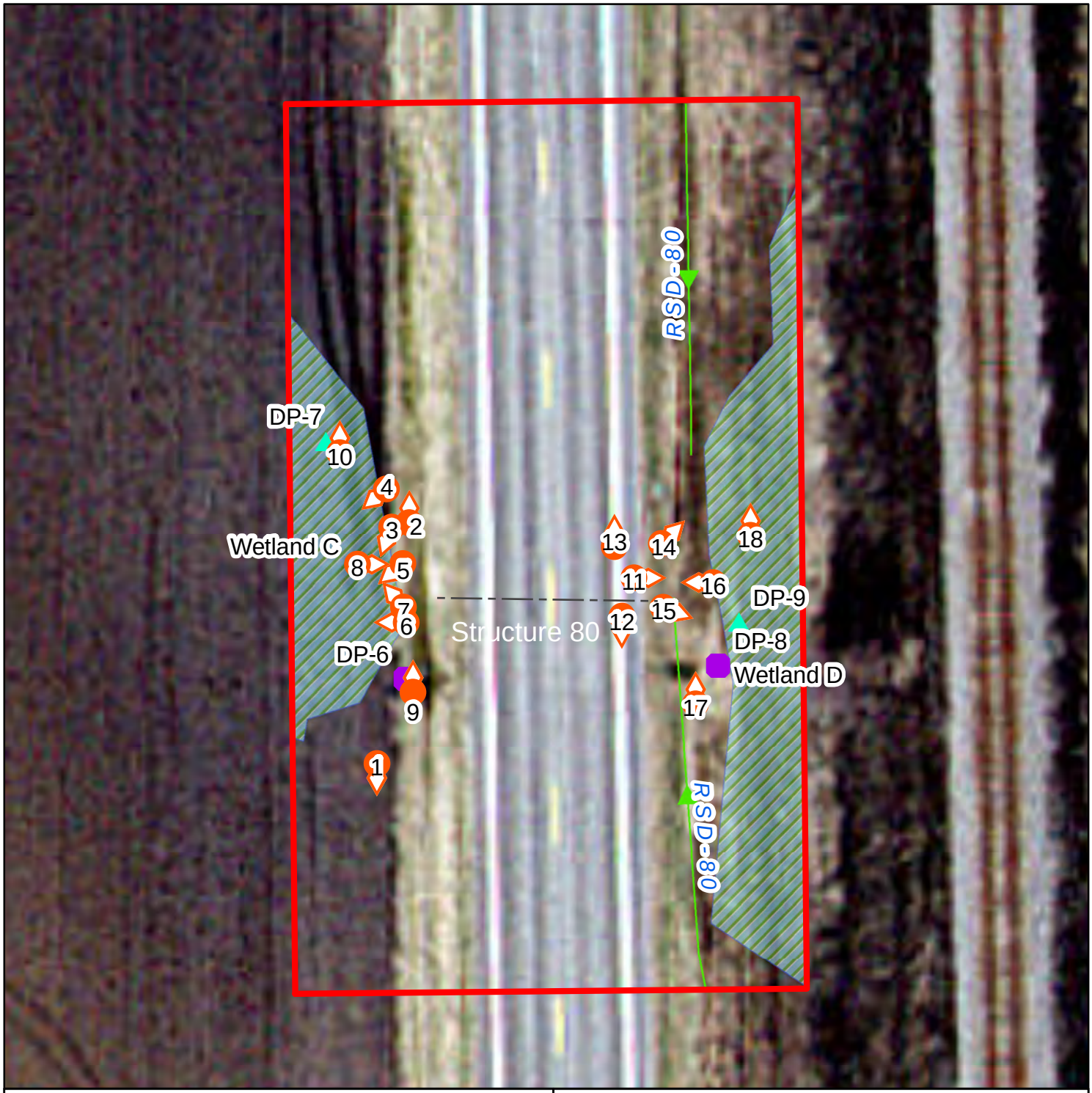


Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 80
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking north along SB SR 43 from outfall of Structure 80 with Wetland C to the west.





Photo 4. Looking southwest towards Wetland C.





Photo 6. Looking west at Wetland C from outfall at Structure 80.





Photo 8. Looking east at Structure 80 outfall.





Photo 10. Data Point 7 (DP-7) soil profile.





Photo 12. Looking south along NB SR 43, roadside ditch, and Wetland D.





Photo 14. Looking northeast at Wetland D.





Photo 16. Looking west at Structure 80 inlet.





Photo 18. Data Point 9 (DP-9) soil profile.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 80 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-6

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 28, T-26-N, R-4-W

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.671133 Long: -86.87052 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Setaria viridis*	40	Yes	UPL
2. *Poa pratensis*	30	Yes	FAC
3. *Festuca rubra*	15	No	FACU
4. *Taraxacum officinale*	10	No	FACU
5. *Lysimachia nummularia*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	30	x 3 =	90
FACU species	25	x 4 =	100
UPL species	40	x 5 =	200
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 80 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-7

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 28, T-26-N, R-4-W

Landform (hillside, terrace, etc.): None Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40.671252 Long: -86.87057 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
Edge of active Ag Field

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Amaranthus blitum*	30	Yes	FAC
2. *Portulaca oleracea*	16	Yes	FACU
3. *Ambrosia artemisiifolia*	12	No	FACU
4. *Setaria faberi*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	68 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	38	x 4 =	152
UPL species	0	x 5 =	0
Column Totals:	68 (A)		242 (B)

Prevalence Index = B/A = 3.56

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators 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.)
Active Ag Field - depression with primary and secondary hydrology indicators, including bare ground, as well as hydric soils indicators (next page)

SOIL

Sampling Point: DP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/2	100					Loamy/Clayey	
3-16	10YR 4/2	85	10YR 5/8	15	C	PL	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 80 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-8

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 28, T-26-N, R-4-W

Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.671141 Long: -86.87031 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Festuca rubra*	80	Yes	FACU
2. *Sorghum halepense*	15	No	FACU
3. *Lolium perenne*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 80 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-9

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 28, T-26-N, R-4-W

Landform (hillside, terrace, etc.): None Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 40.671163 Long: -86.87030 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes A No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	86	Yes	FACW
2. *Persicaria maculosa*	12	No	FACW
3. *Typha latifolia*	2	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	98	x 2 =	196
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		198 (B)

Prevalence Index = B/A = 1.98

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators 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: DP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 3/1	99	10YR 5/4	1	C	M	Loamy/Clayey	Distinct redox concentrations
1-6	10YR 5/1	100					Loamy/Clayey	
6-16	10YR 3/1	95	10YR 5/4	5	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Structure 90 – CLV-64406

Structure 90 is located approximately 0.71 mile mile north of the intersection of SR 43 and W 600 S (40.673093°, -86.870537°) in Section 28, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 15-inch diameter by 60 ft. long box culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 705 to 708 ft. Drainage patterns and topography appear to drain from east to west through the project study area. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Dieter Ditch - Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified two soil series within the project study area (Figure 7, Table 2.9). One map unit was identified as being hydric (100%).

Table 2.6. Structure 90 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Alvin fine sandy loam, 0-2% slopes (AsA)	Well Drained	No Ponding, No Flooding	Not Hydric
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

No waterbodies were identified withing the project study area exhibiting a bed, bank, or OHWM, though a NHD stream line intersects the project area (Figure 6). No evidence of a stream meeting the USACE criteria for a tributary was found within the project study area. All features were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches or swales.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. Hydrophytic vegetation was present around the channel and roadside ditches between SR 43 and the CSX railroad, including poison hemlock (*Conium maculatum*, FACW) and reed canary grass (*Phalaris arundinacea*, FACW). For this reason, a data point was collected, however, this data point exhibited none of the criteria necessary for a wetland to be classified as these species are considered highly adaptable and can thrive in an upland.

Upland Data Point 11 (DP-11)

DP-11 was taken approximately 13 feet from the edge of pavement in the southeastern quadrant of the project study area. Dominant vegetation included reed canary grass (*Phalaris arundinacea*, FACW) and red fescue (*Festuca rubra*, FACU), failing to meet the hydrophytic vegetation criterion with neither the dominance nor prevalence indicators. The soil profile had a matrix color of 10YR 3/2 (100%) from the surface to 16 inches, with no redoximorphic features. DP-10 did not meet any hydric soils indicators and thus failed the hydric soils criterion. Additionally, no indicators of hydrology were present within the project study area. In failing all three criteria, DP-11 was considered an upland point.

Roadside Ditches and Other Drainages

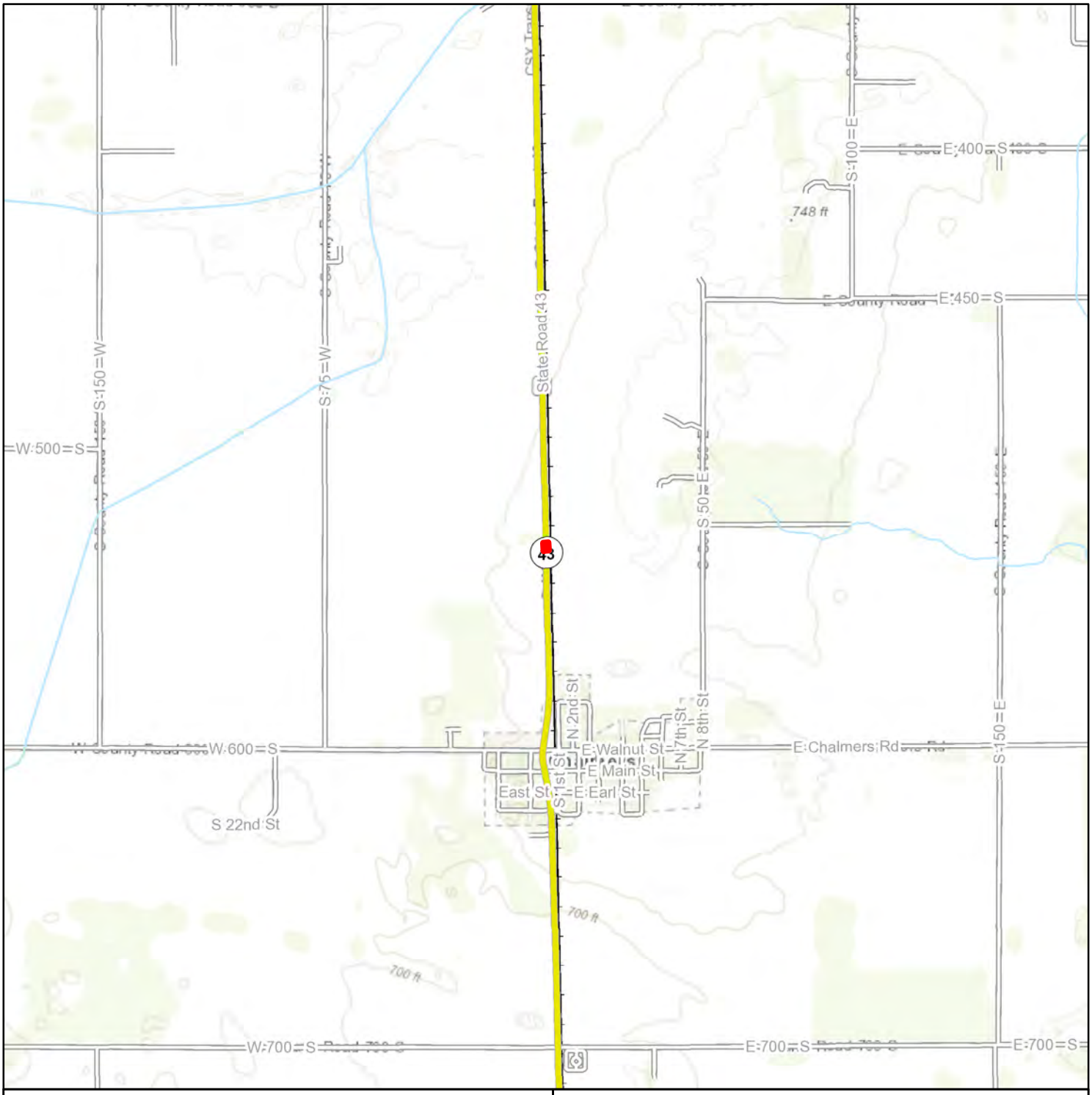
Roadside ditches (RSD-90) were present in the eastern quadrants of the project area draining towards structure 90. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation. The western quadrants did not exhibit any drainage conveyance features.



State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 90
Des # 2100235
White County, Indiana

COMPLIANCE FIELD SERVICES, INC

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3
SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

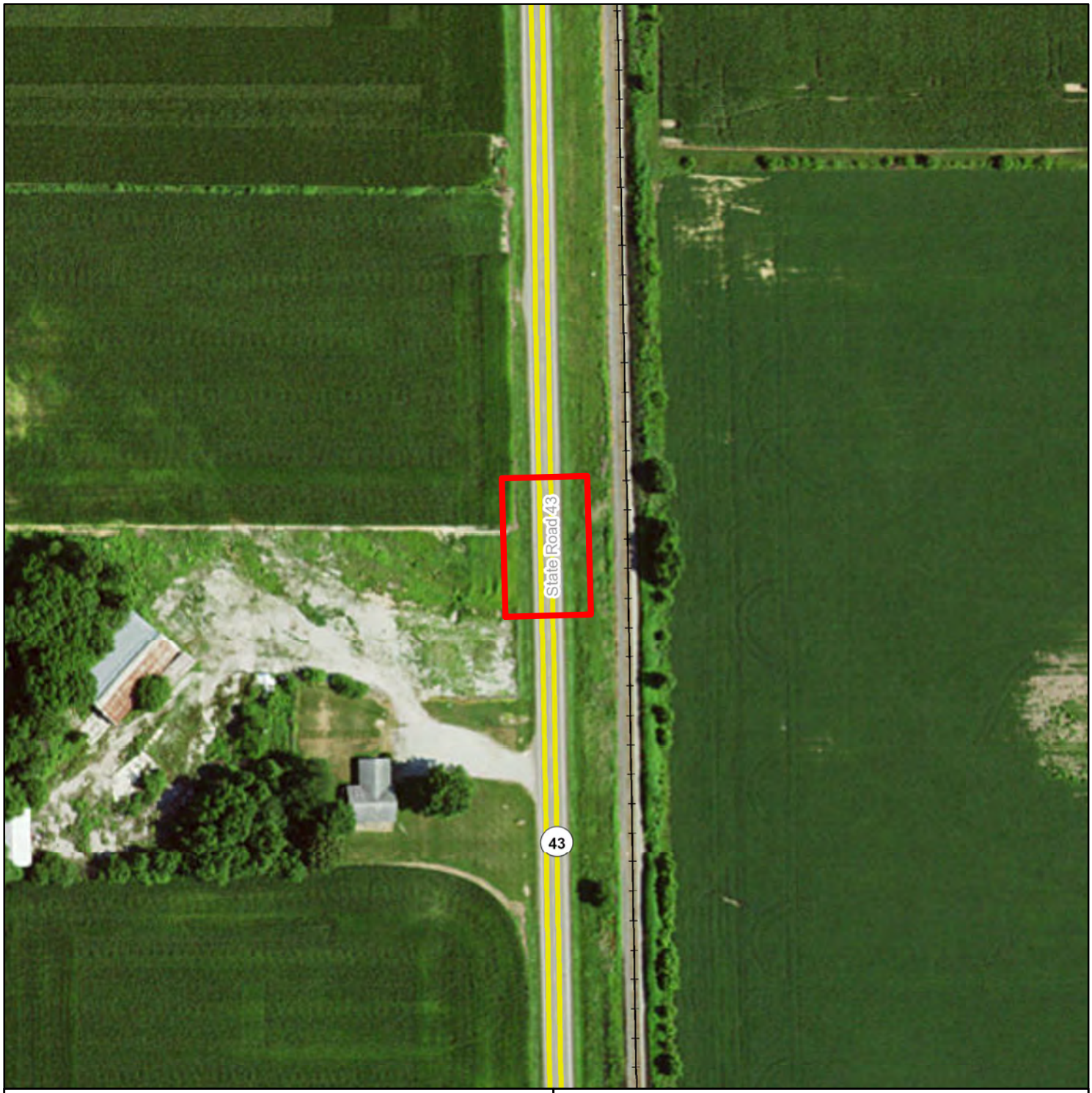
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

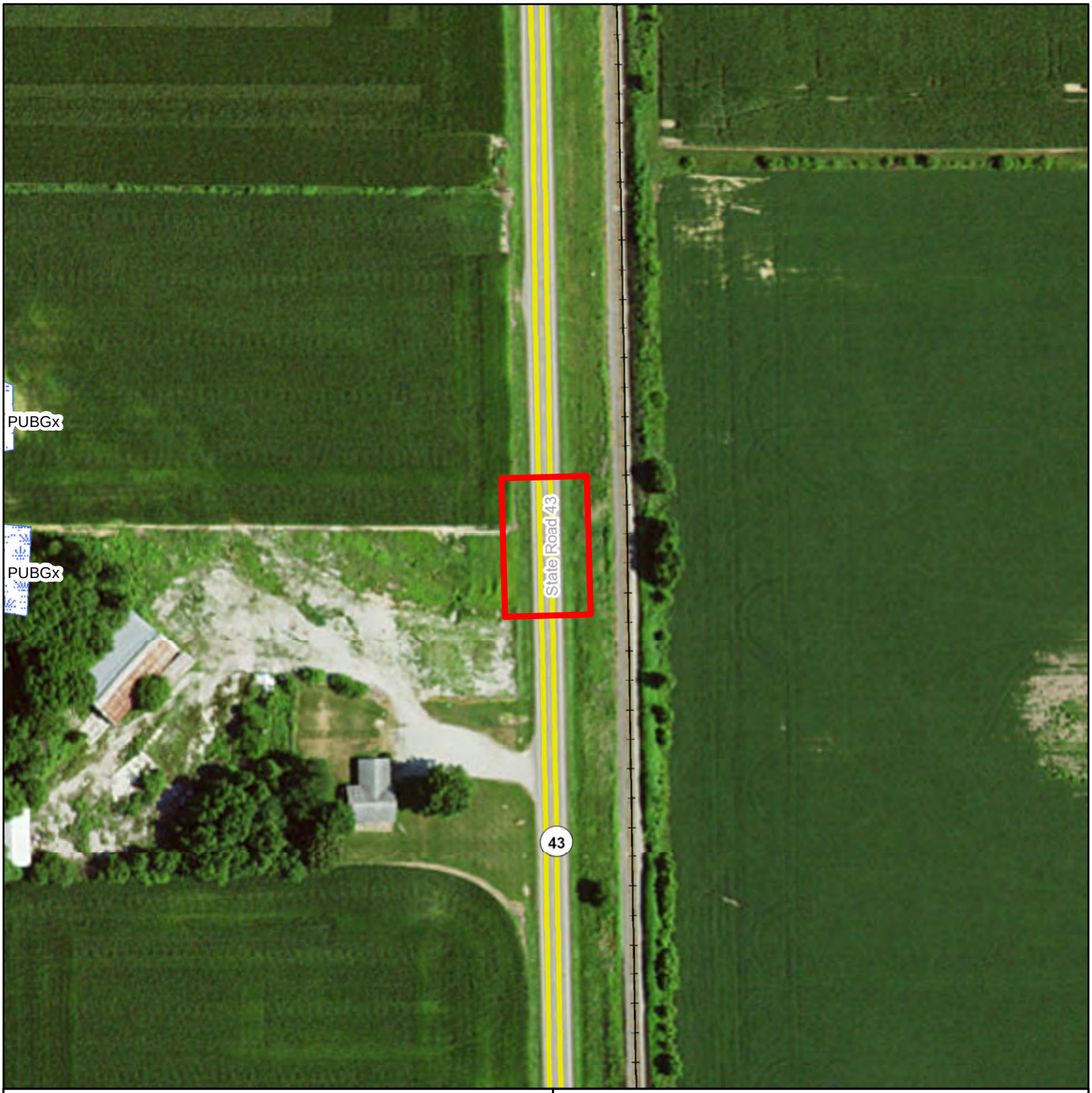
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

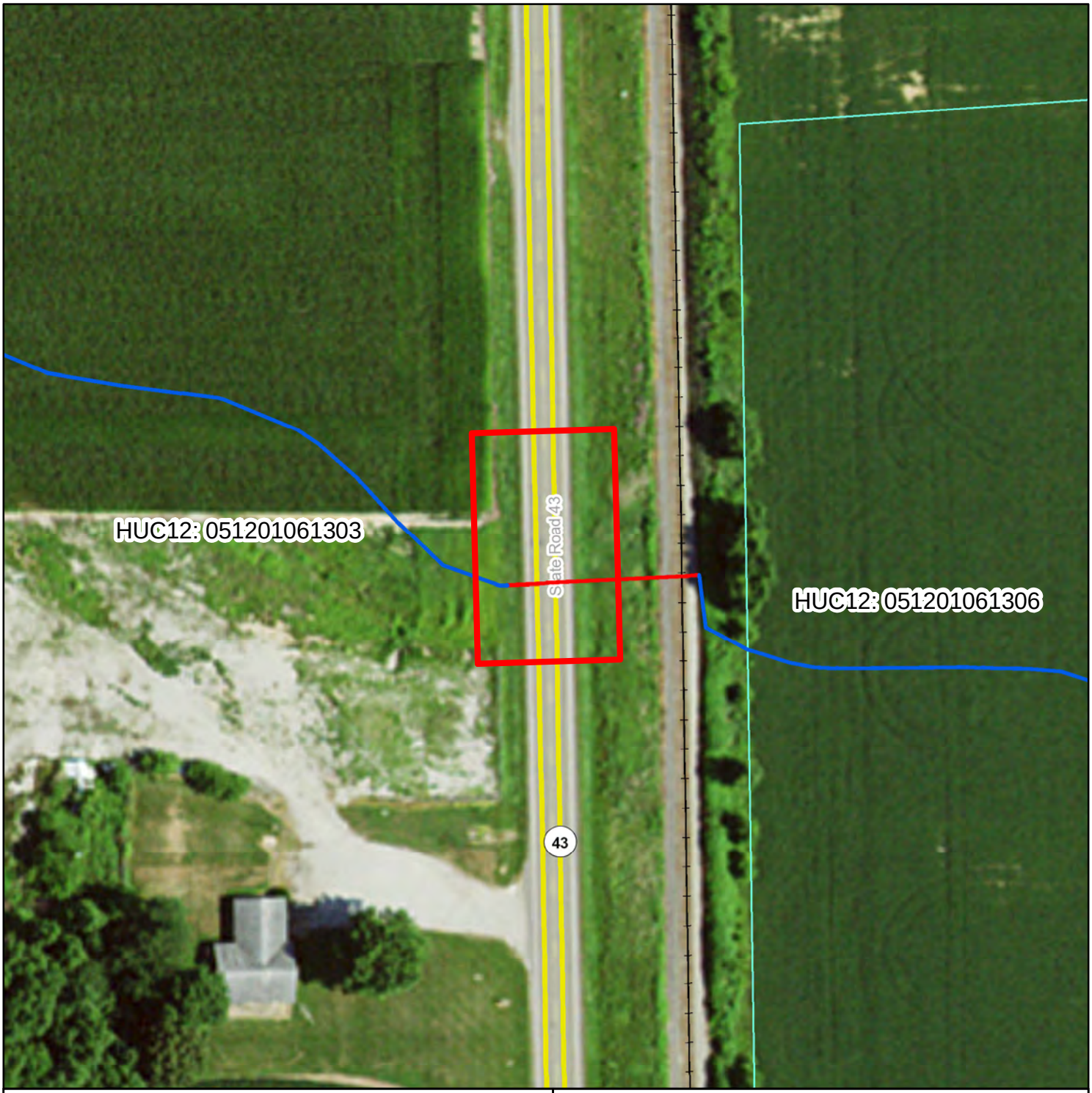
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch
- Connector

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NRCS Soils Map
Figure 7
SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

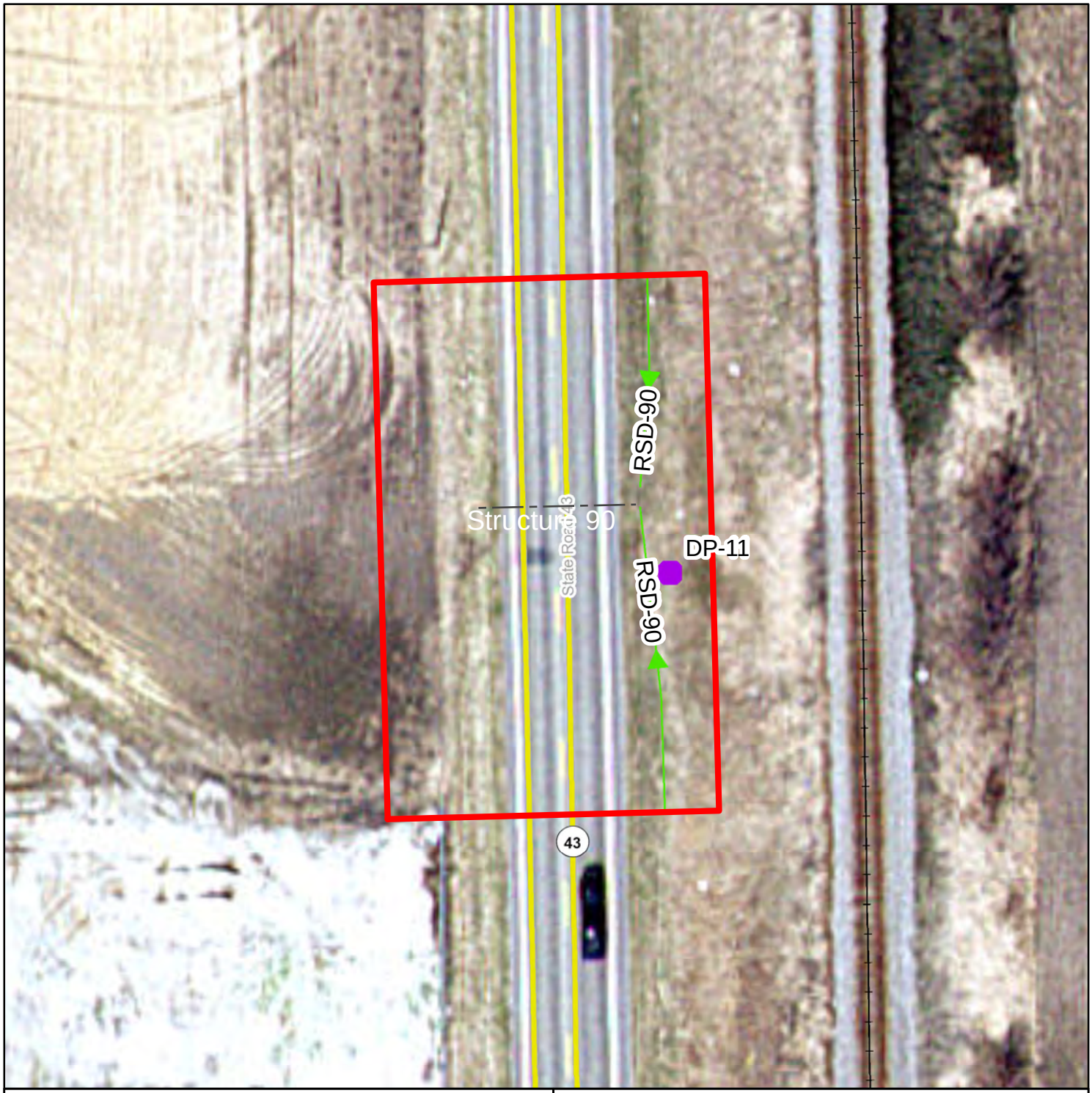
AsA
AsB
FoA
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 15 30 60 Feet

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N



Photo Location Map
Figure 9
SR 43 Small Structure Replacement
Structure # 90
Des # 2100235
White County, Indiana

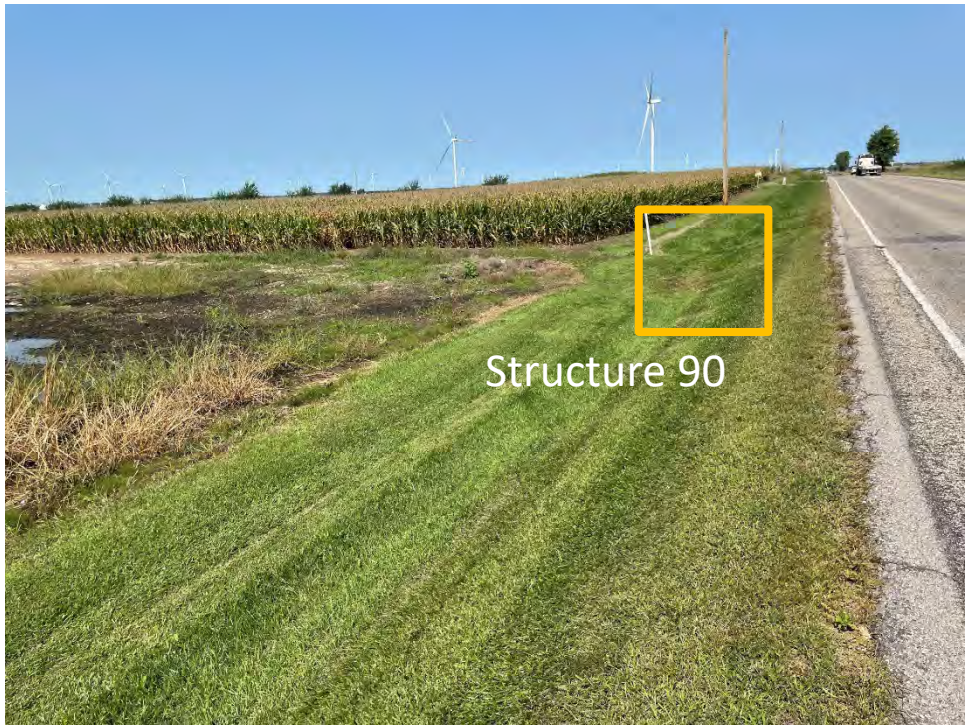
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 10 20 40 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N



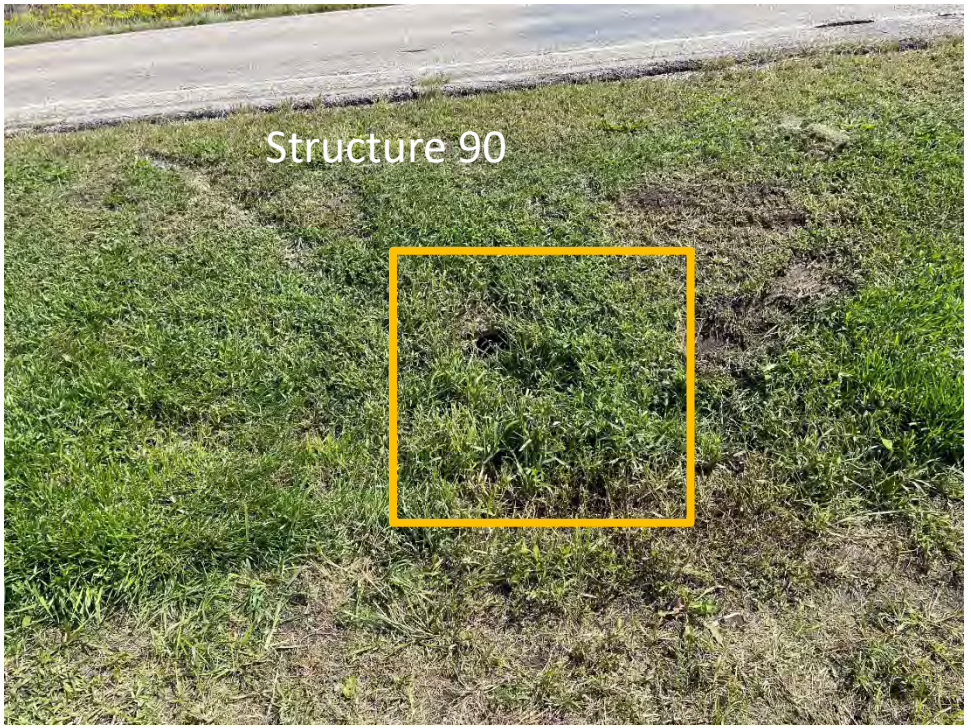


Photo 2. Looking east at outfall for Structure 90.





Photo 4. Looking north along SB SR 43 from Structure 90 outfall.





Photo 6. Looking south along SB SR 43 towards Structure 90 outfall





Photo 8. Looking west at Structure 90 inlet.





Photo 10. Looking south along NB SR 43 and roadside ditch from Structure 90 inlet.





Photo 12. Looking north along NB SR 43 and roadside ditch towards Structure 90 inlet.



WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: SR 43 / Structure 90 City/County: White Sampling Date: 9/14/2022

Applicant/Owner: INDOT State: IN Sampling Point: DP-11

Investigator(s): Paul Killian (Compliance Field Services, Inc.) Section, Township, Range: Sec 28, T-26-N, R-4-W

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None

Slope (%): 0 Lat: 40.673034 Long: -86.87039 Datum: NAD83

Soil Map Unit Name: Rensselaer clay loam (Re) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , 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 ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	32	Yes	FACW
2. *Festuca rubra*	32	Yes	FACU
3. *Daucus carota*	20	No	UPL
4. *Conium maculatum*	12	No	FACW
5. *Asclepias syriaca*	12	No	FACU
6. *Sorghum halepense*	7	No	FACU
7. *Lolium perenne*	5	No	FACU
8.			
9.			
10.			
	120	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	44	x 2 =	88
FAC species	0	x 3 =	0
FACU species	56	x 4 =	224
UPL species	20	x 5 =	100
Column Totals:	120 (A)		412 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators 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:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- x Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Structure 100 – CLV-64407

Structure 100 is located approximately 0.41 mile south of the intersection of SR 43 and W 300 S (40.693639°, -86.871376°) in Section 16, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 1 ft. diameter by 40 ft. long concrete pipe culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 687 to 690 ft. Drainage patterns and topography appear to drain from east to west through the project study area. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identified any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Deiter Ditch - Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.10). The identified series is a hydric soil (100%).

Table 2.10. Structure 100 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No likely jurisdictional wetlands or streams were identified within the study area (Figure 8).

Stream Features

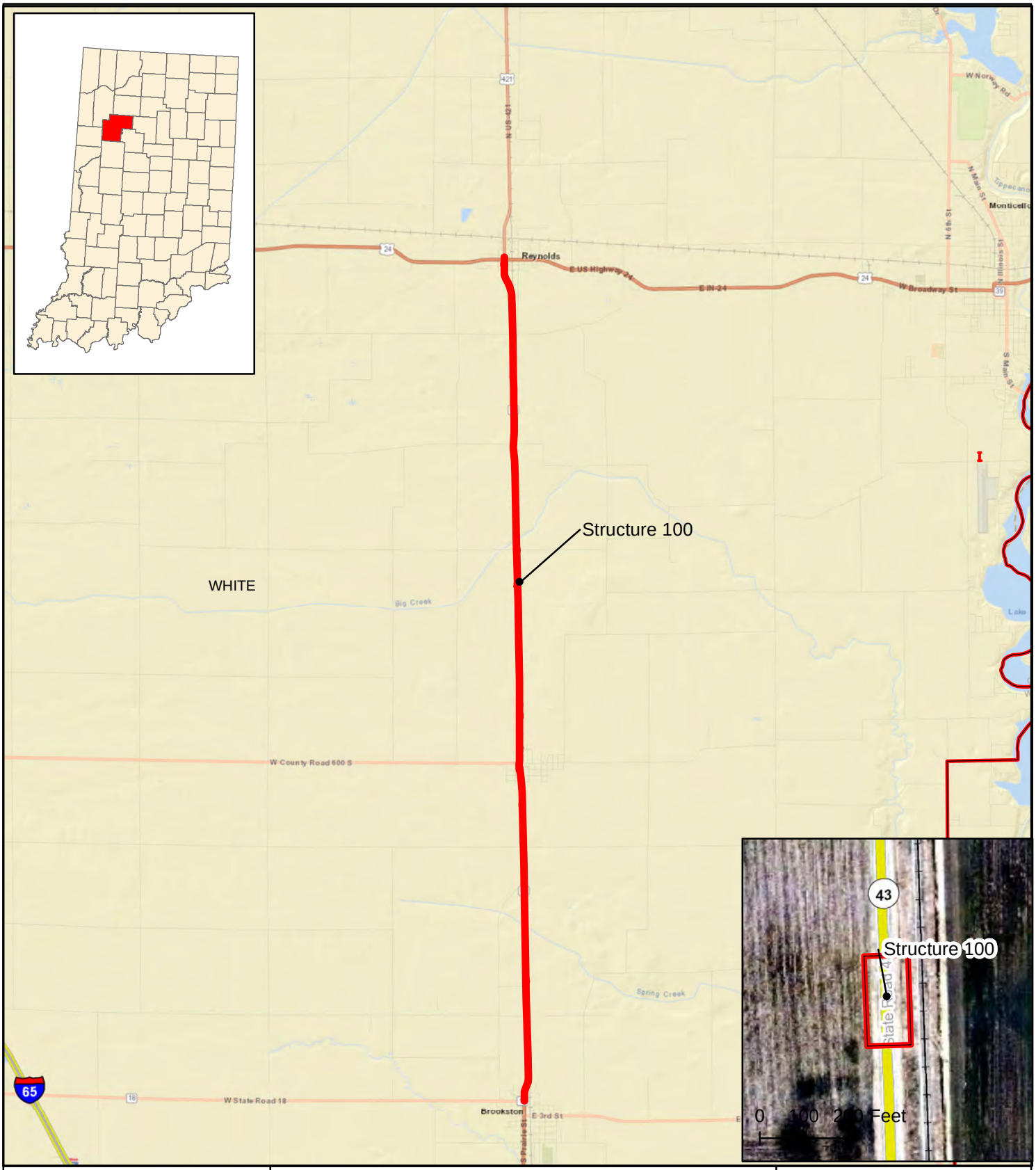
No waterbodies were identified withing the project study area exhibiting a bed, bank, or OHWM.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. Dominant vegetation included red fescue (*Festuca rubra,* FACU), dandelion (*Taraxacum officinale*, FACU), perennial ryegrass (*Lolium perenne*, FACU), and broadleaf plantain (*Plantago major*, FAC), thus unlikely to meet the hydrophytic vegetation criterion. No depressions or areas likely to hold water for more than two weeks in order to develop anaerobic conditions were present within the project study area. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

Roadside ditches (RSD-100) were present in the eastern quadrants of the project area draining towards structure 100. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation. The western quadrants did not exhibit any drainage conveyance features.



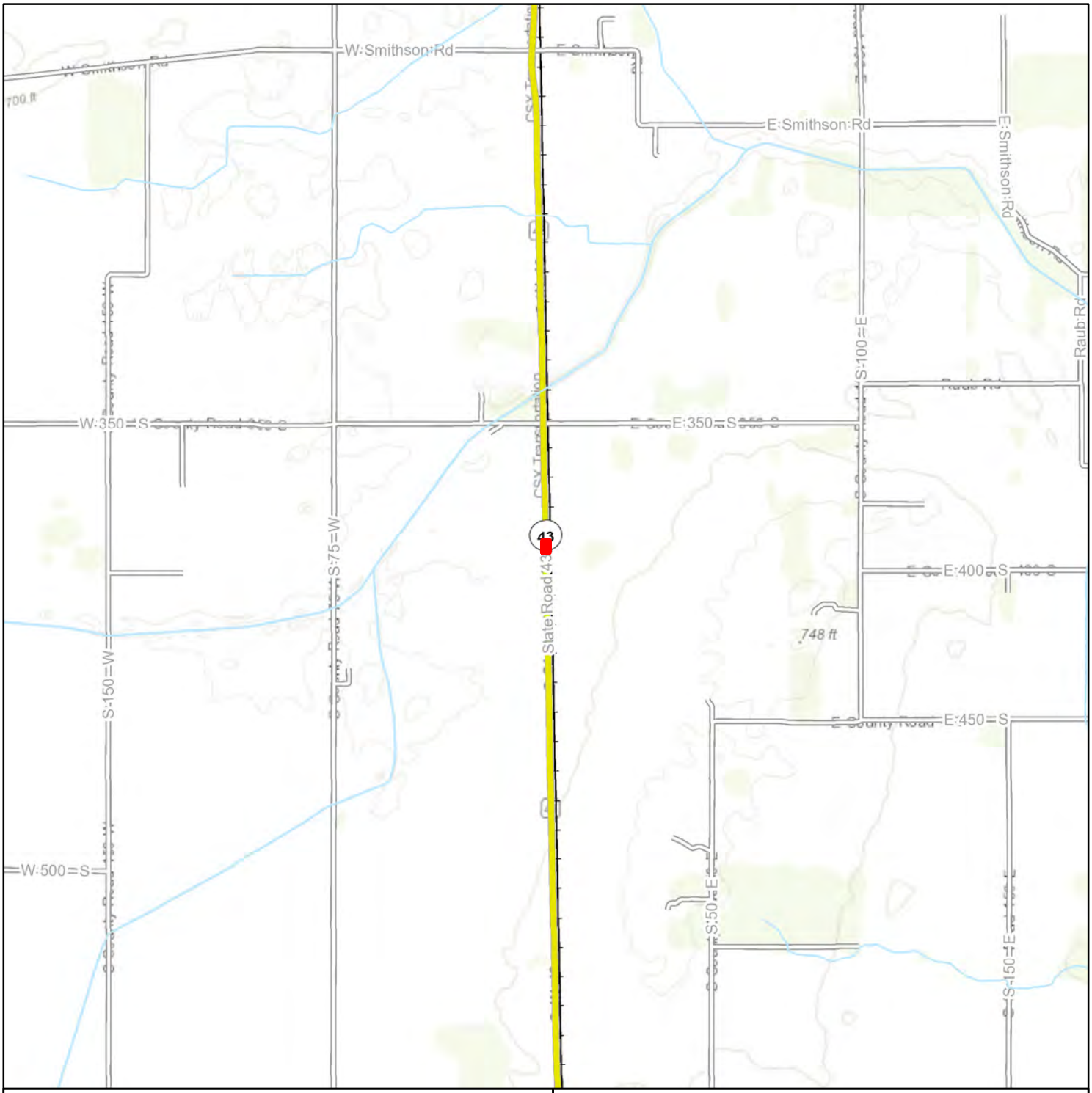
State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 100
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

COMPLIANCE FIELD SERVICES, INC

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

N



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch

Waterbody
- LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

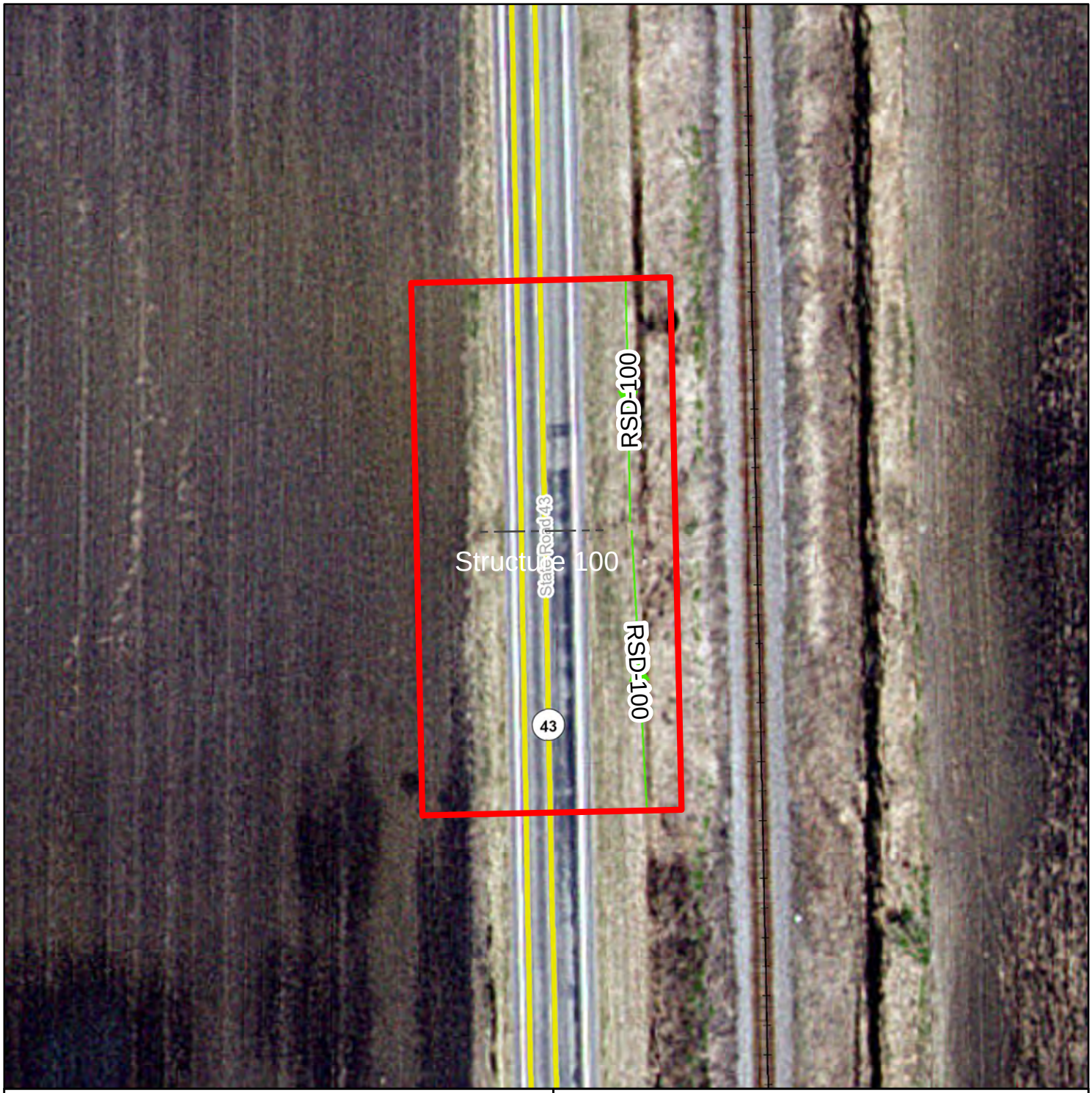
Study Area
Interstate
State Route
US Route
Local Road
Railroad
Hydric
NRCS Soil MU
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 25 50 100 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

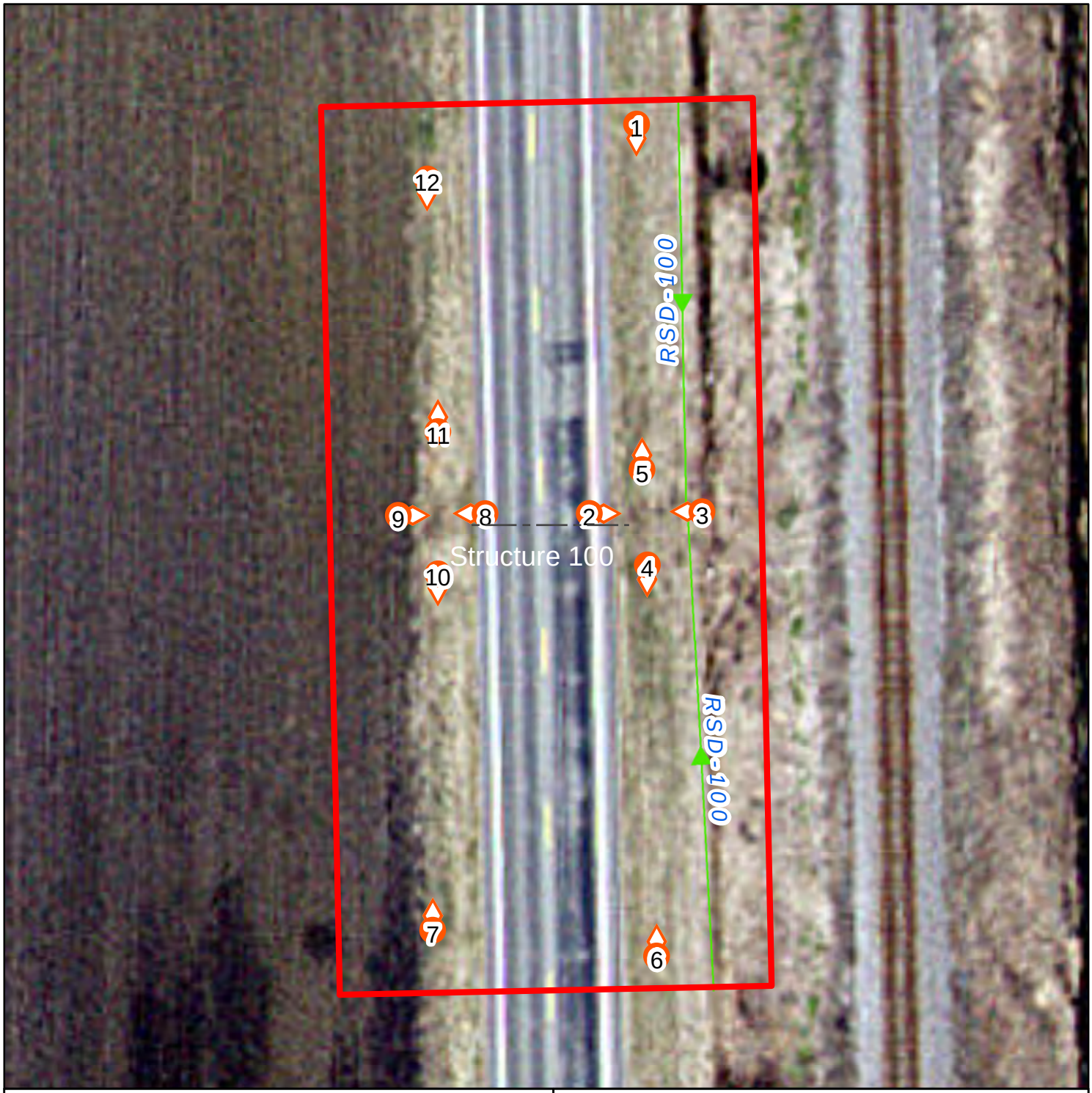


Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 100
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 15 30 60 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking east from inlet at Structure 100.





Photo 4. Looking south along NB SR 43 and roadside ditch from inlet at Structure 100.



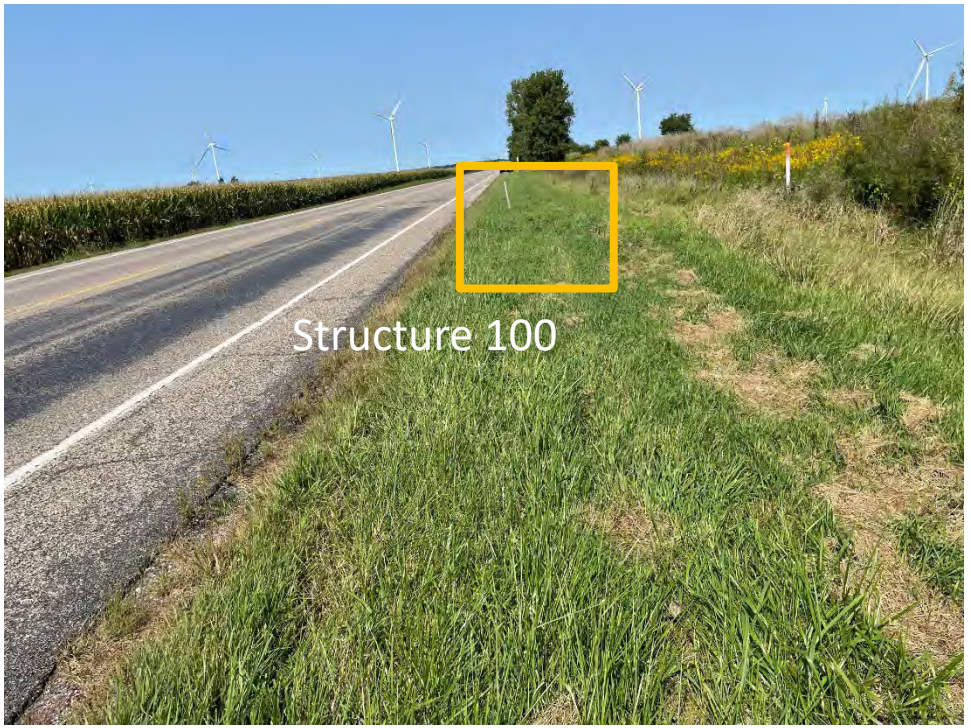


Photo 6. Looking north along NB SR 43 and roadside ditch towards inlet at Structure 100.





Photo 8. Looking west from outfall at Structure 100.





Photo 10. Looking south along SB SR 43 from outfall at Structure 100.



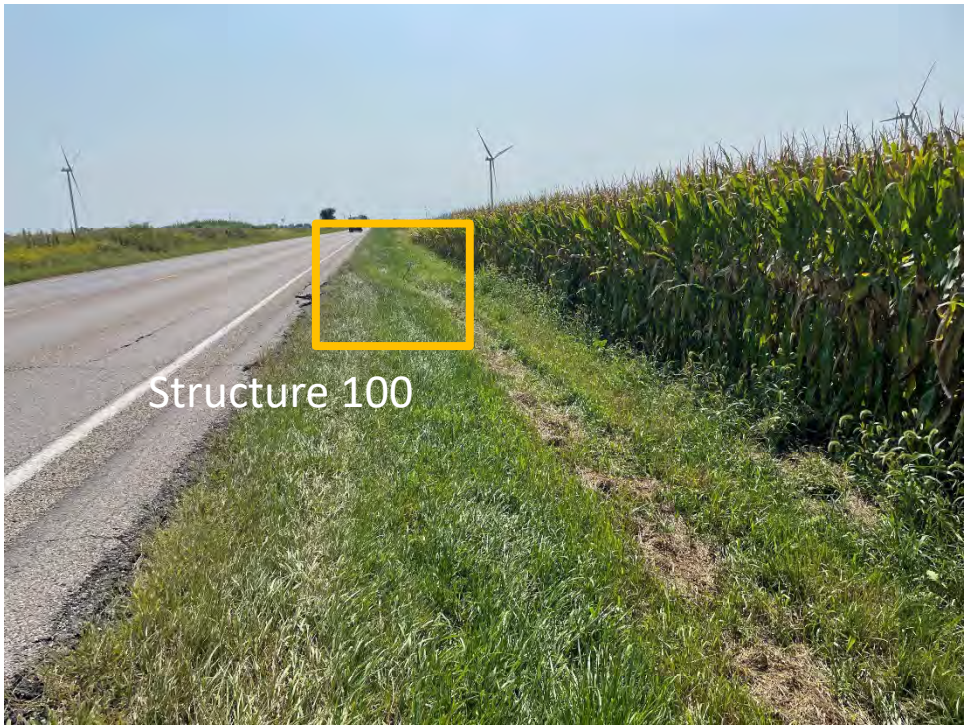


Photo 12. Looking south along SB SR 43 towards outfall at Structure 100.

Structure 110 – CLV-64408

Structure 110 is located at the intersection of SR 43 and W 350 S (40.699573°, -86.871503°) in Section 16, Township 26 North, Range 4 West, Big Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 2 ft. diameter by 35 ft. long plastic liner culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 685 to 687 ft. Drainage appears to drain from south to north through the project study area, as evidenced by topographic elevations. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area. Big Creek is approximately 575 feet to the north of the project study area.

Watersheds

The project study area is in the Deiter Ditch - Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.11). This map unit was identified as being hydric (100%).

Table 711. Structure 110 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

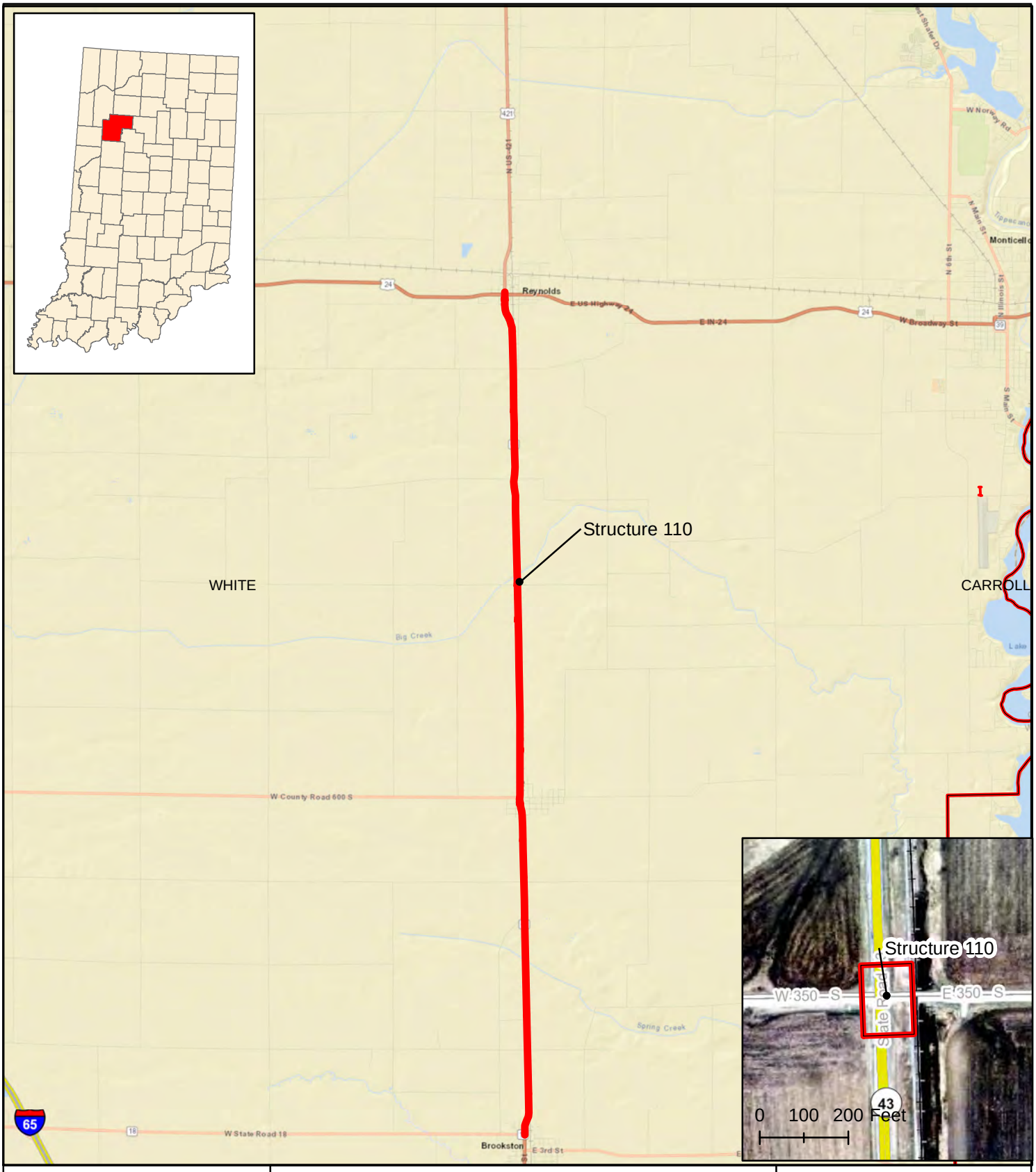
No waterbodies were identified withing the project study area exhibiting a bed, bank, or OHWM. Furthermore, the flow regime of roadside ditches were not sufficient to be classified as tributaries and were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. Dominant vegetation included red fescue (*Festuca rubra,* FACU), dandelion (*Taraxacum officinale*, FACU), perennial ryegrass (*Lolium perenne*, FACU), and broadleaf plantain (*Plantago major*, FAC), thus unlikely to meet the hydrophytic vegetation criterion. No depressions or other indicators of hydrology were present within the project study area. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

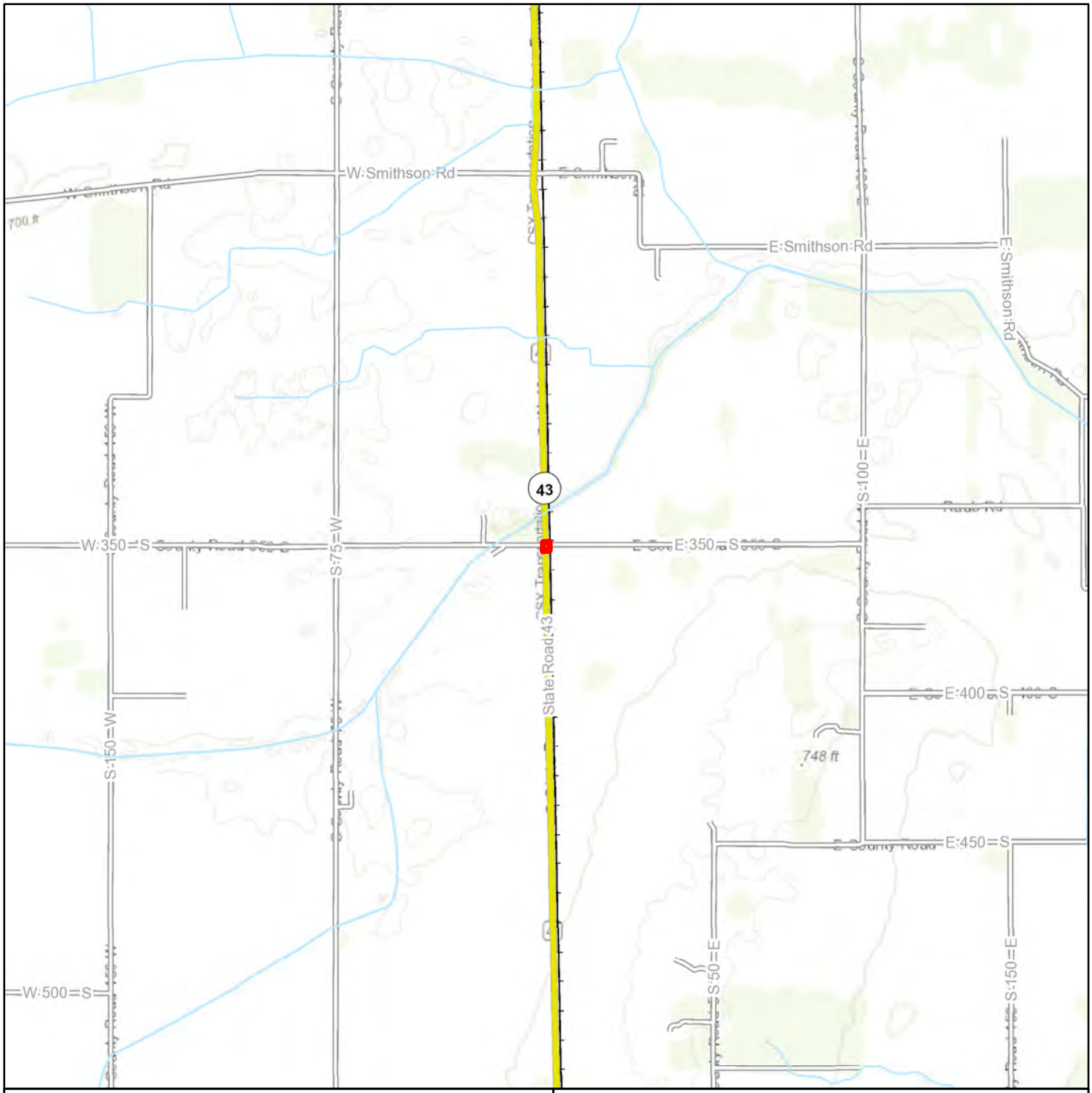
A ditch feature with a scoured channel flows through Structure 110 from south to north through the study area (RSD-110). This roadside ditch would not likely be considered jurisdictional within the study area. This feature was excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.



State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 110
Des # 2100235
White County, Indiana

COMPLIANCE FIELD SERVICES, INC

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3
SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

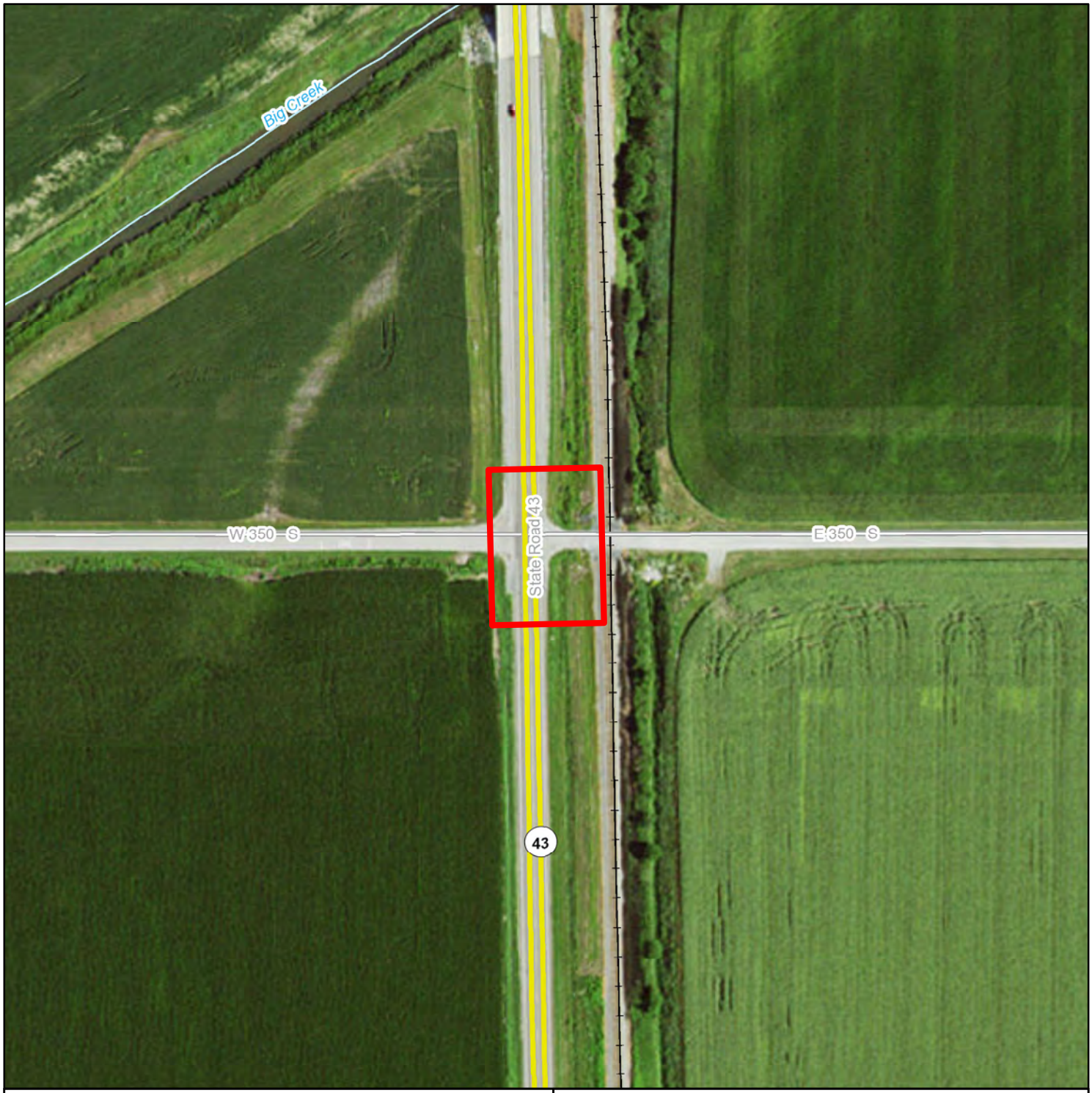
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

N



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

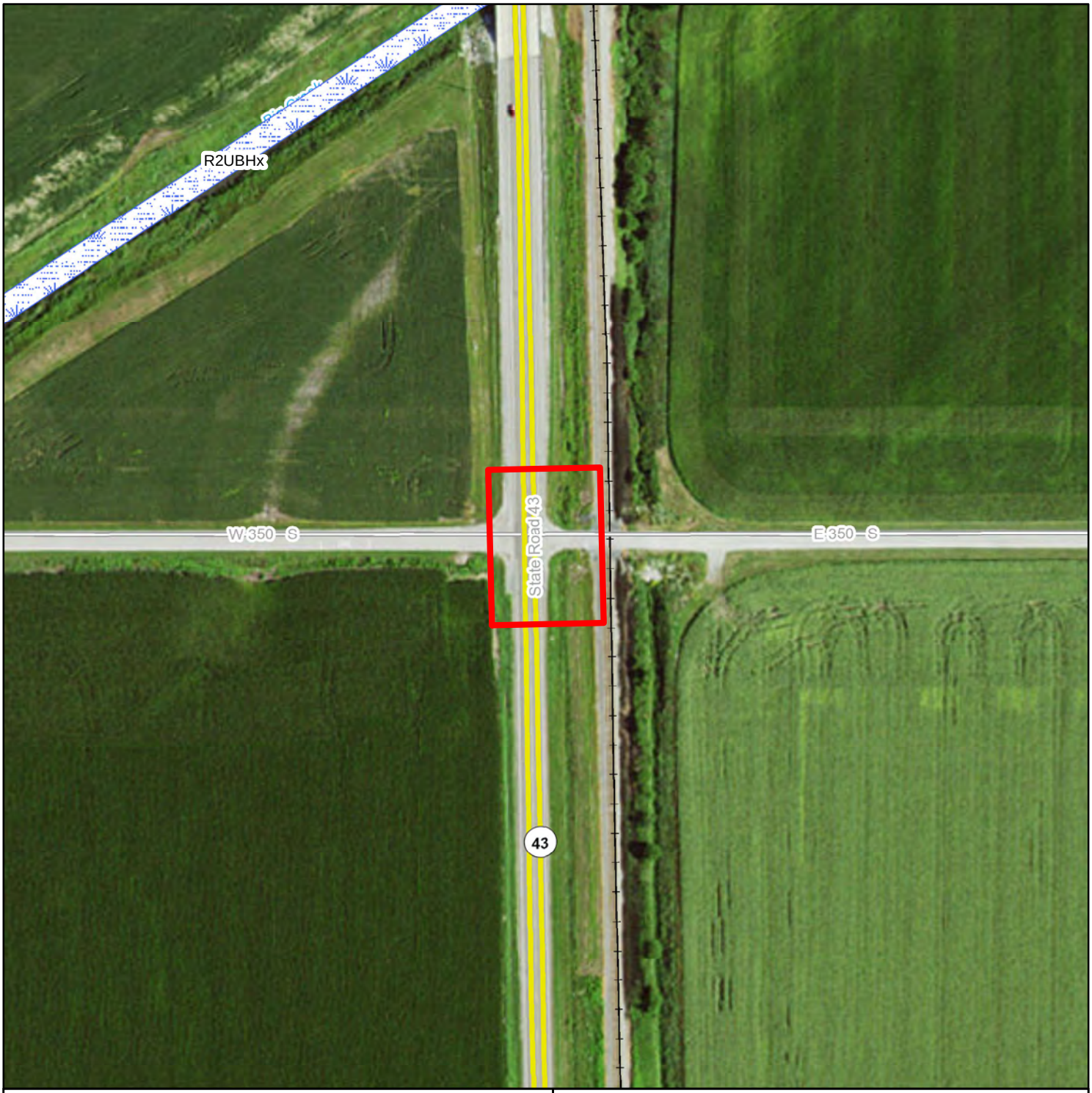
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

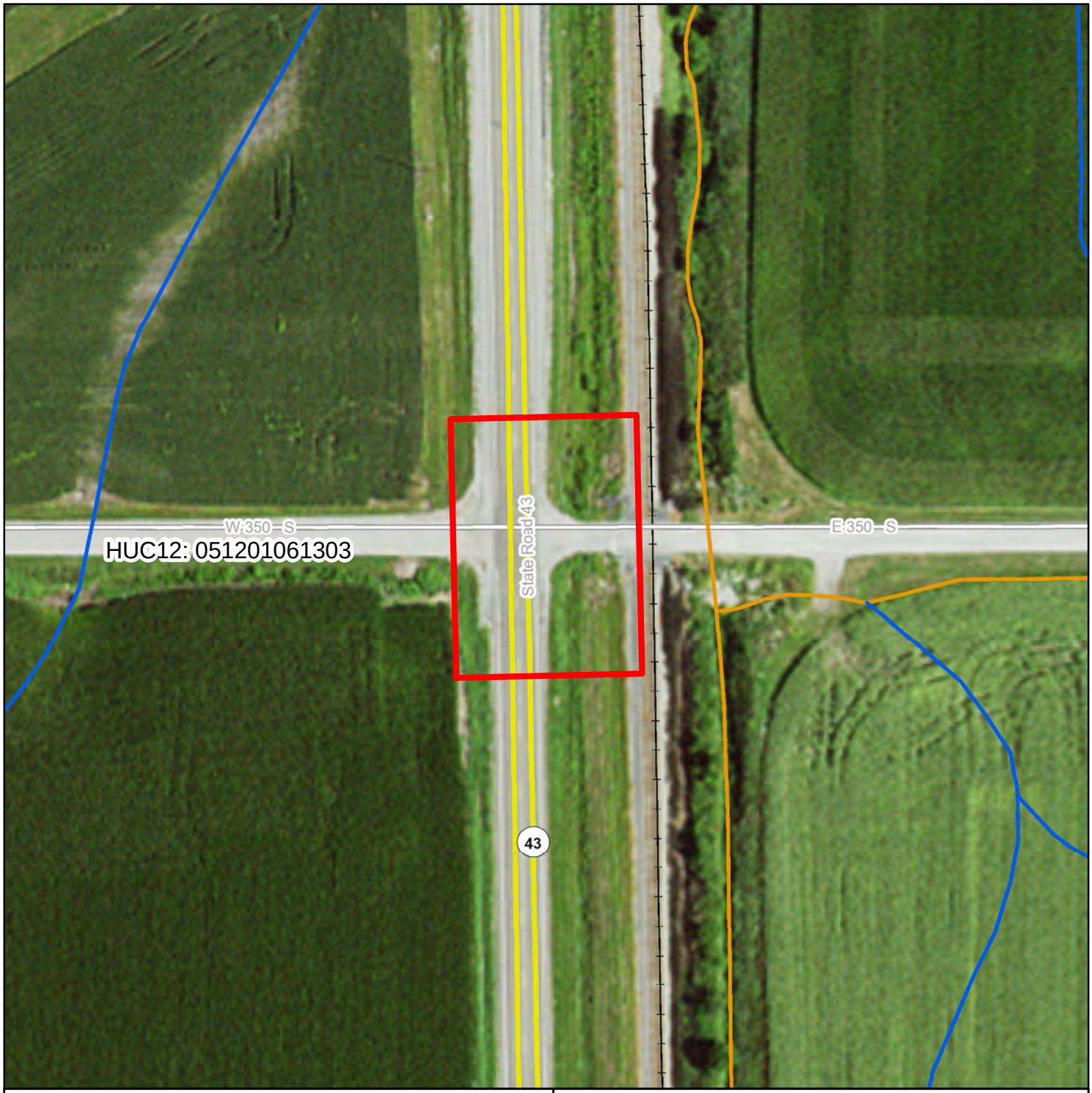
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

HUC12 Boundary

Flowline
StreamRiver
ArtificialPath
CanalDitch

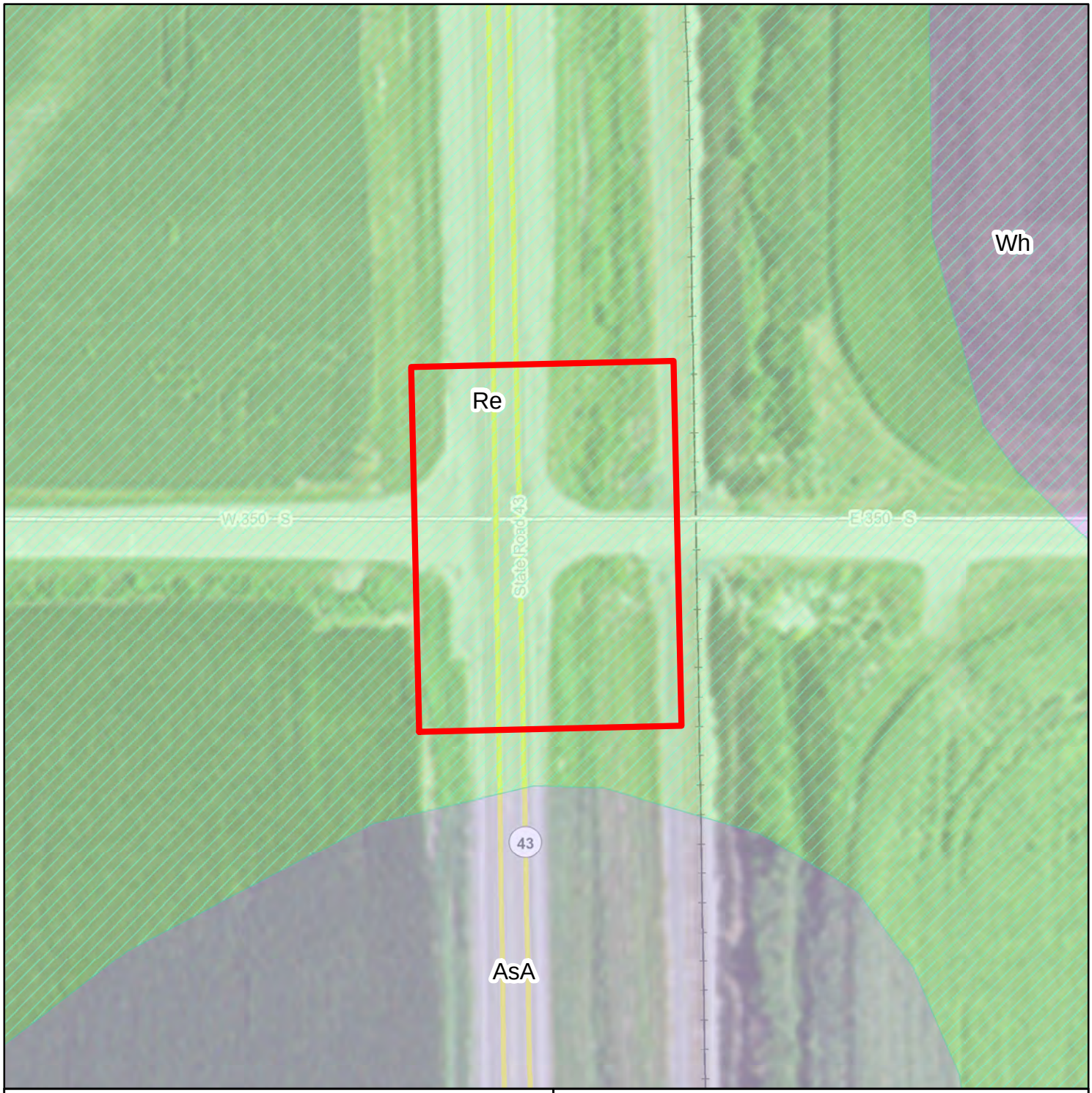
Waterbody
LakePond

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
Indiana Department of Natural Resources, Indiana Office of Technology,
Indiana Geographic Information Council, USGS, AECOM



NRCS Soils Map
Figure 7

SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

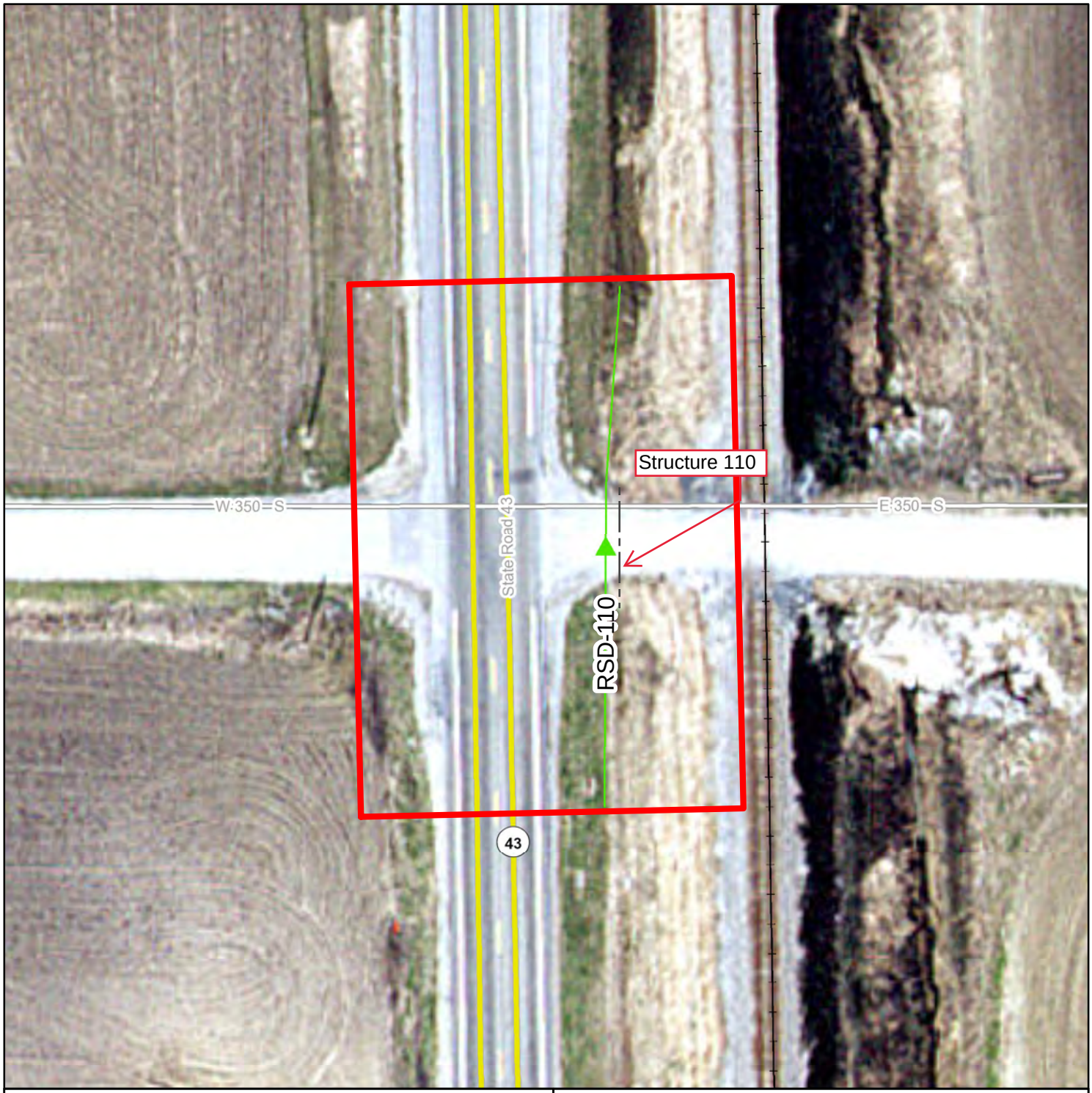
AsA
Re
Wh

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 20 40 80 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

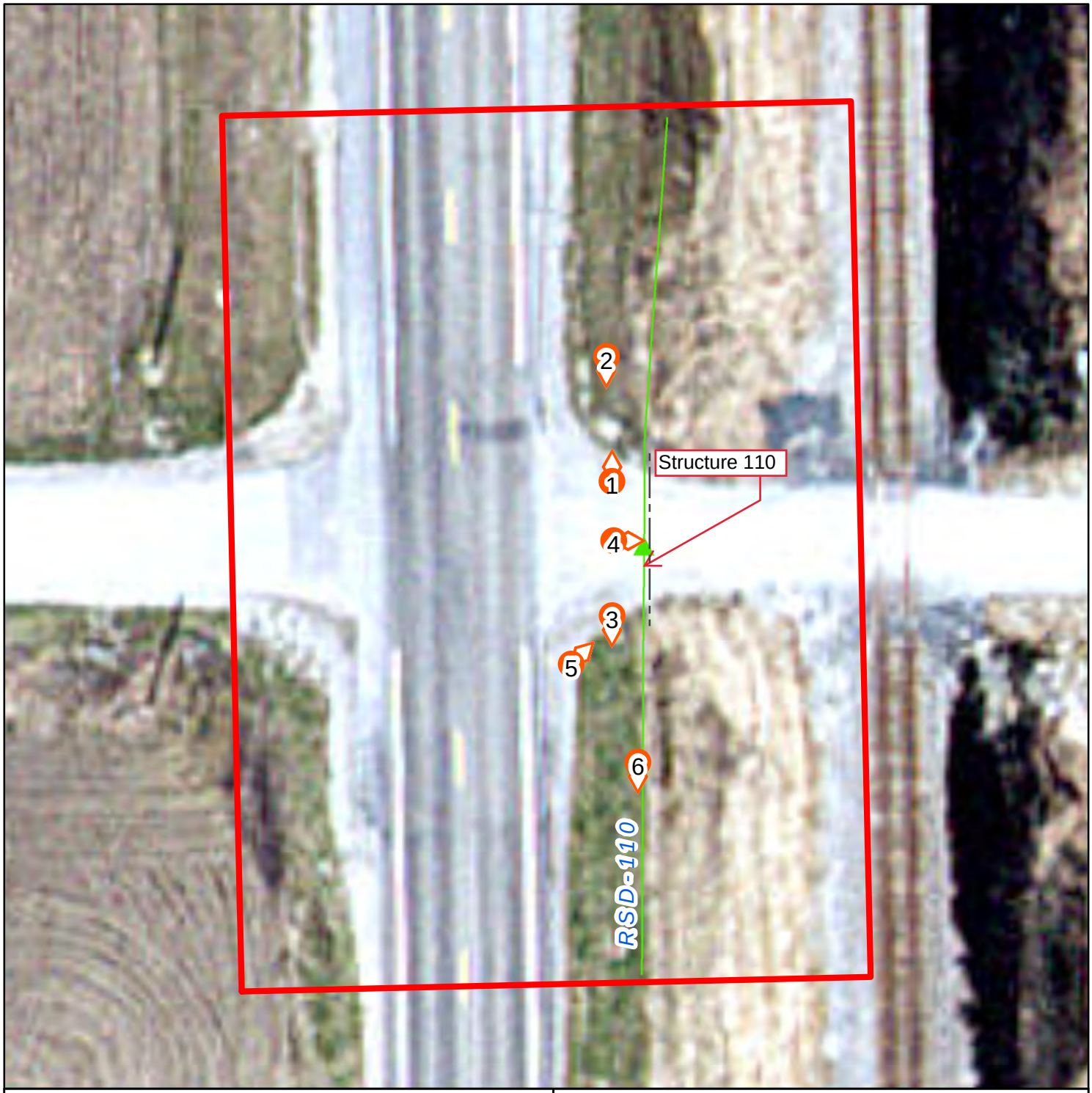


Photo Location Map
Figure 9
SR 43 Small Structure Replacement
Structure # 110
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking south towards Structure 110





Photo 4. Looking east along E 350 S at Structure 110.





Photo 6. Looking south along NB SR 43 from Structure 110.

Structure 120 – CLV-64409

Structure 120 is located approximately 0.49 mile south of the intersection of SR 43 and W 100 S (40.729371°, -86.872809°) in Section 4, Township 26 North, Range 4 West, Honey Creek Township, White County, Indiana as shown in the Monticello South USGS 7.5 Minute Topographic Map. The existing 15-inch span by 36-inch rise by 55 ft. long box culvert is recommended for replacement.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 684 to 688 ft. Topography indicates drainage patterns from west to east through the project area. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area. Johnson Ditch begins approximately 90 feet to the east, on the east side of the CSX railroad.

Watersheds

The project study area is in the Dieter Ditch - Big Creek watershed, 12-digit hydrologic unit code (HUC12): 51201061303.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.12). This map units was identified as being hydric (100%).

Table 812. Structure 120 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Rensselaer clay loam (Re)	Poorly Drained	No Ponding, Frequent Flooding	Hydric (100%)

Field Reconnaissance

No wetlands or streams were identified within the study area (Figure 8).

Stream Features

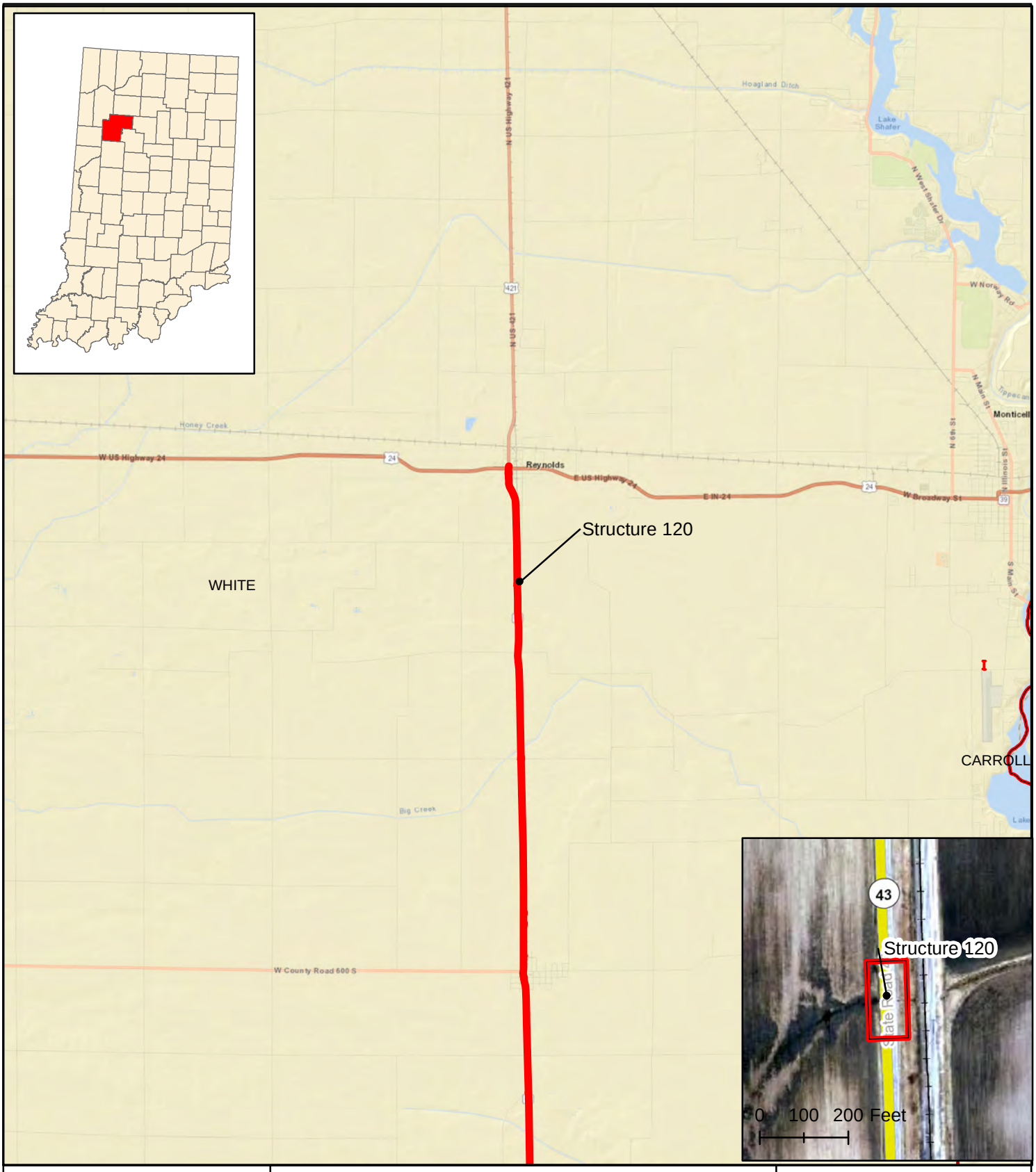
No waterbodies were identified withing the project study area exhibiting a bed, bank, or OHWM, despite the NHD map (Figure 6) indicating a stream intersecting the project area. Furthermore, the flow regime of roadside ditches were not sufficient to be classified as tributaries and were built solely as a means of stormwater diversion and management, thus all water conveyances were deemed to be non-jurisdictional roadside ditches.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. Though hydrophytic vegetation (reed canary grass, *Phalaris arundinacea*, FACW) was pronounced around the channel, the interspersed upland vegetation indicated this is an artifact of the drainage. Furthermore, no depressions or areas likely to hold water for more than a week to develop anaerobic conditions were present within the project study area. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

Roadside ditches were observed in the eastern quadrants of the study area (RSD-120), with mowed right-of-way on the western quadrants. These roadside ditches drain towards Structure 120, with a scoured drainage feature through Structure 120 (DF-120). These roadside ditches and drainage feature would not likely be considered jurisdictional within the study area. These features were excavated in upland soils to convey upland drainage and had no defined bed and bank or flow regime to establish a Waters of the U.S. designation.

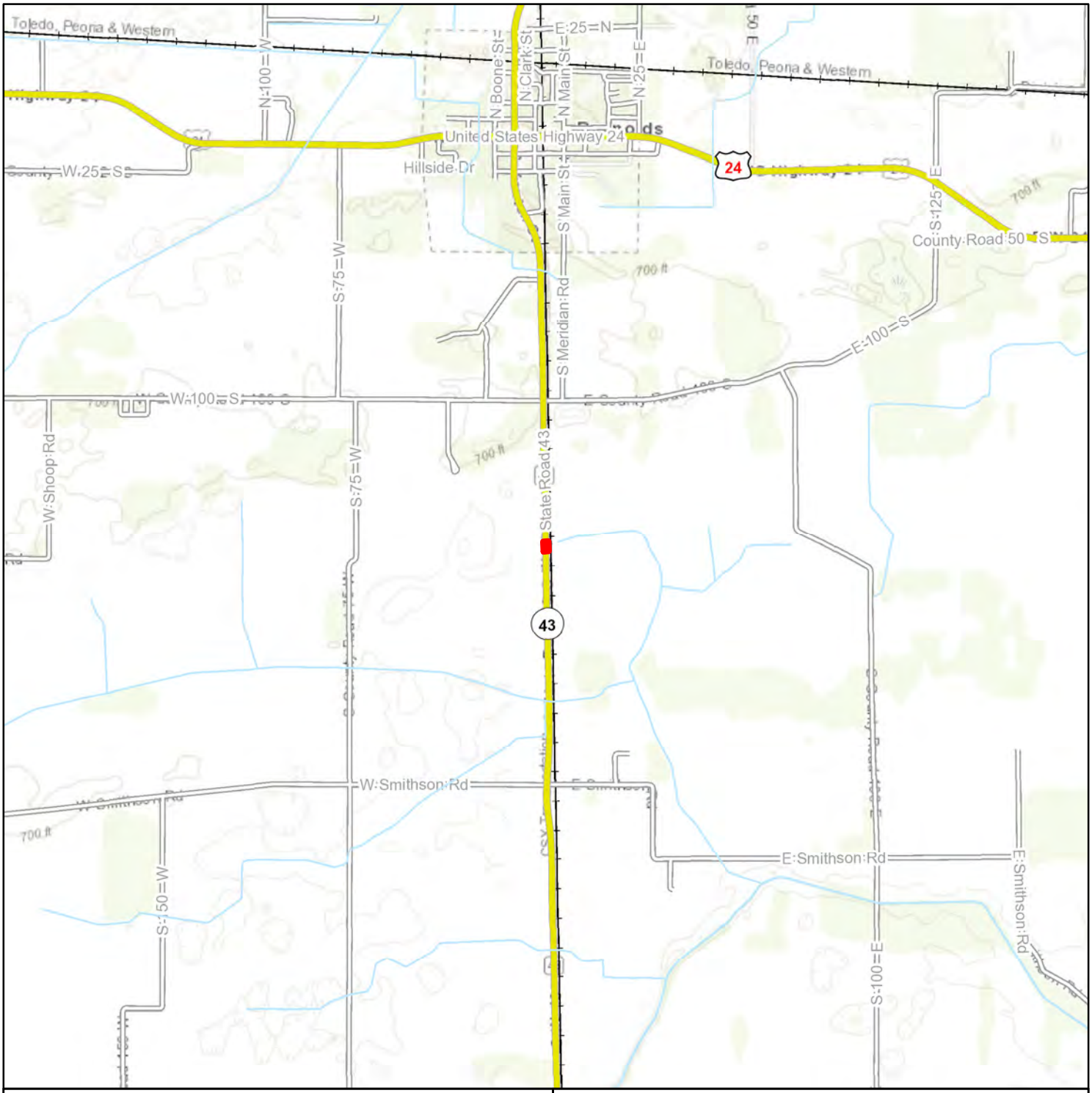


State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 120
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

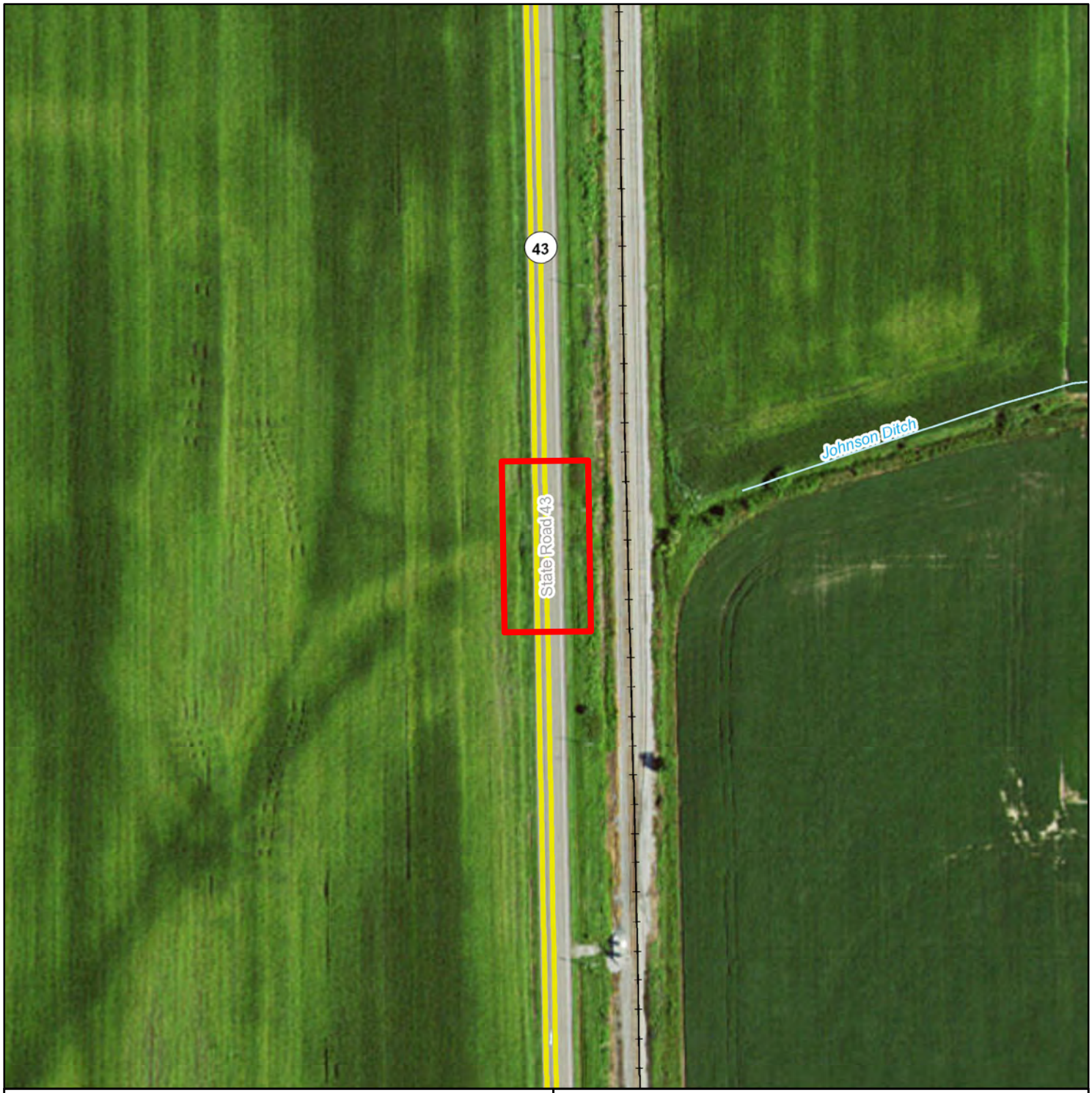
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map
Figure 4

SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

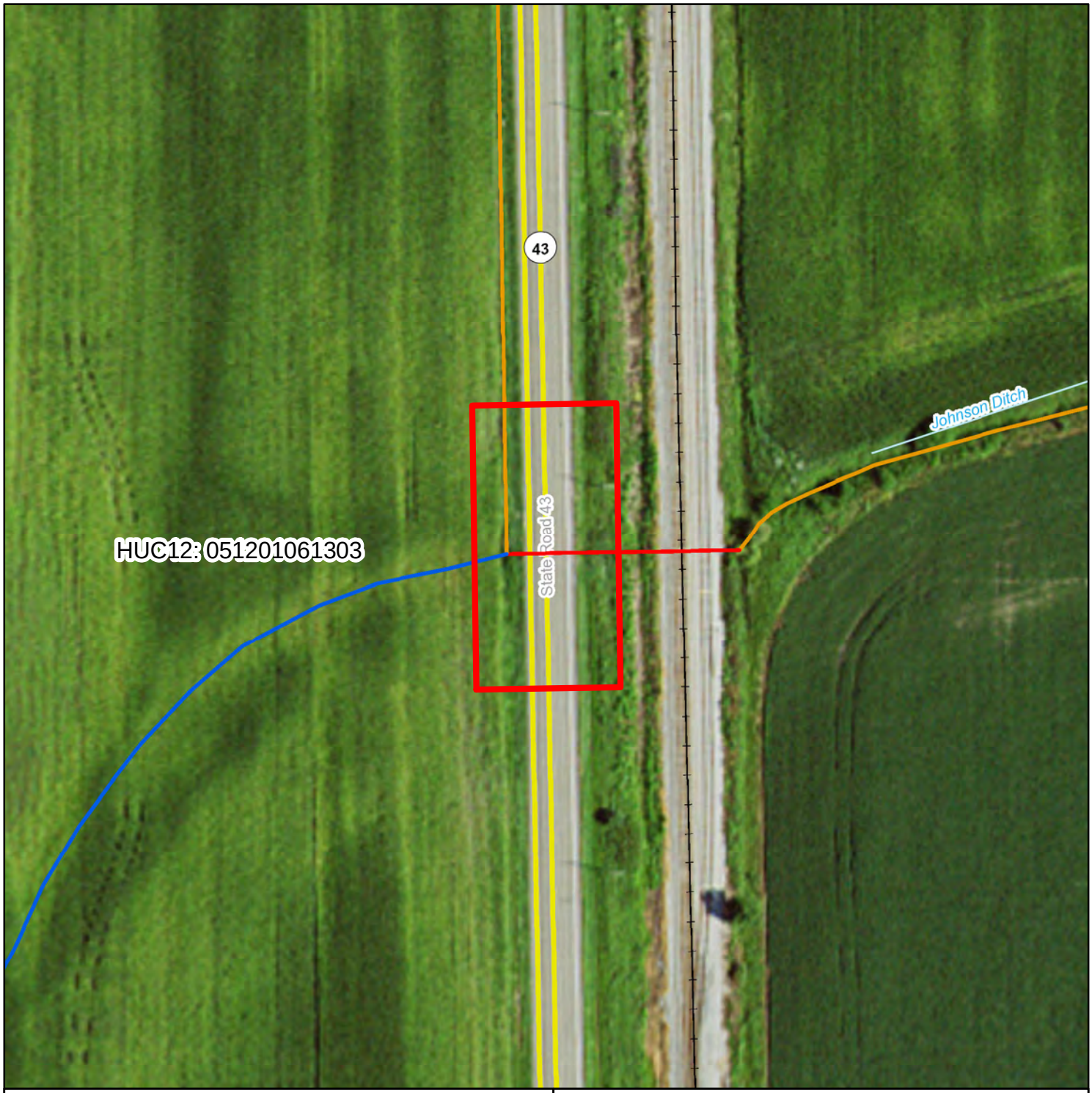
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N



NHD Map
Figure 6

SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

Flowline
- StreamRiver
- ArtificialPath
- CanalDitch
- Connector

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NRCS Soils Map
Figure 7
SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Hydric
NRCS Soil MU
Re

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



Waters of the U.S. Investigation Map
Figure **8**

SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 20 40 80 Feet

N

Service Layer Credits: INDOT
Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

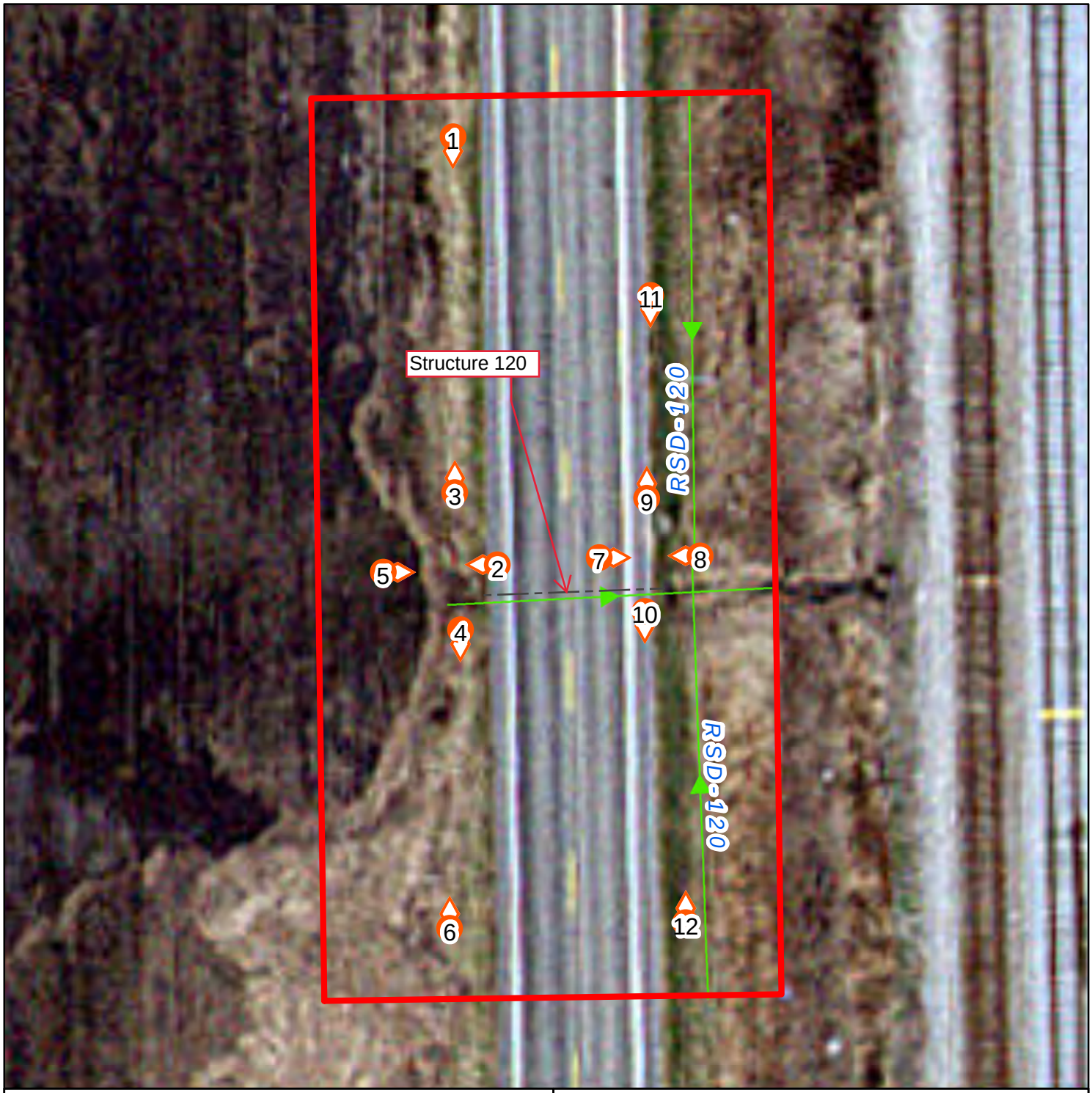


Photo Location Map
Figure 9

SR 43 Small Structure Replacement
Structure # 120
Des # 2100235
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 12.5 25 50 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N

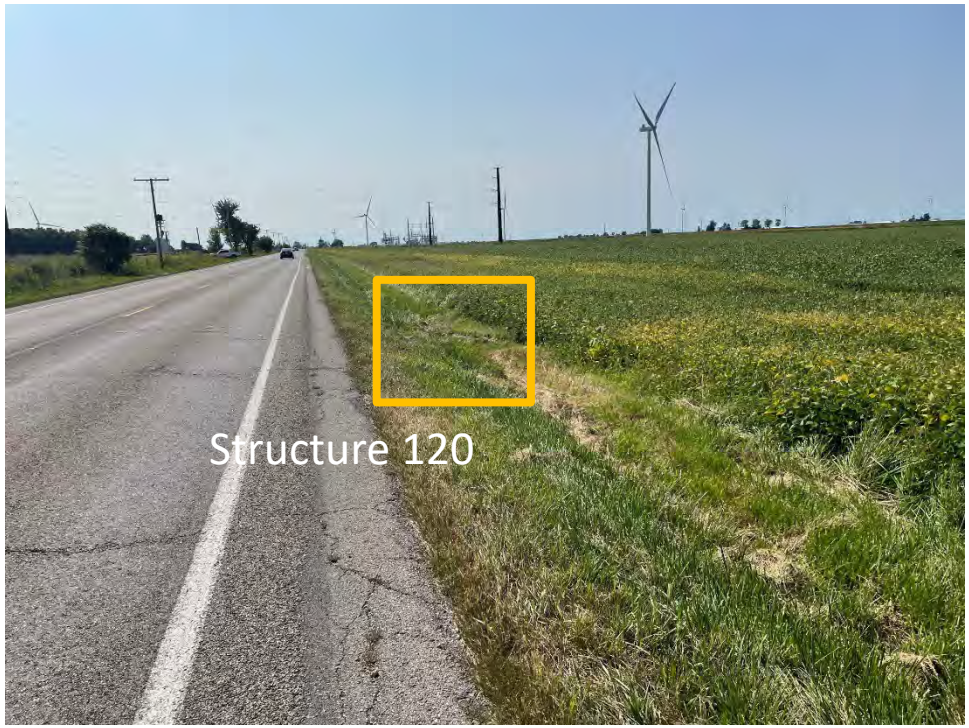




Photo 2. Looking west from inlet at Structure 120.





Photo 4. Looking south along SB SR from inlet for Structure 120.



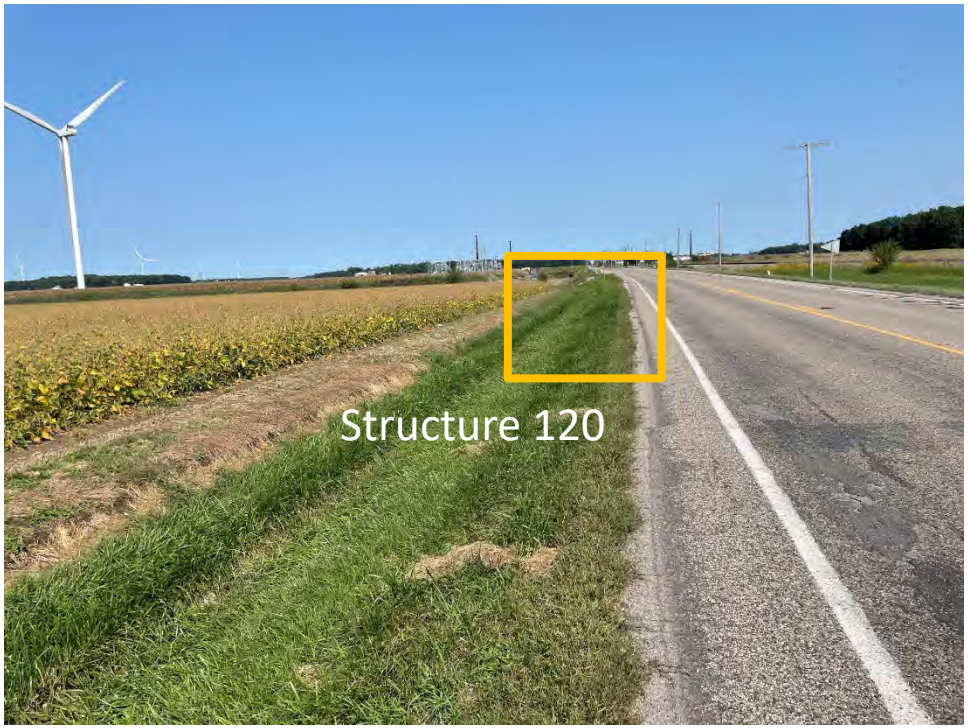


Photo 6. Looking north along SB SR towards inlet for Structure 120.





Photo 8. Looking west (upstream) along DF-120 toward Structure 120 outfall.





Photo 10. Looking south along NB SR 43 and roadside ditch from outfall for Structure 120.

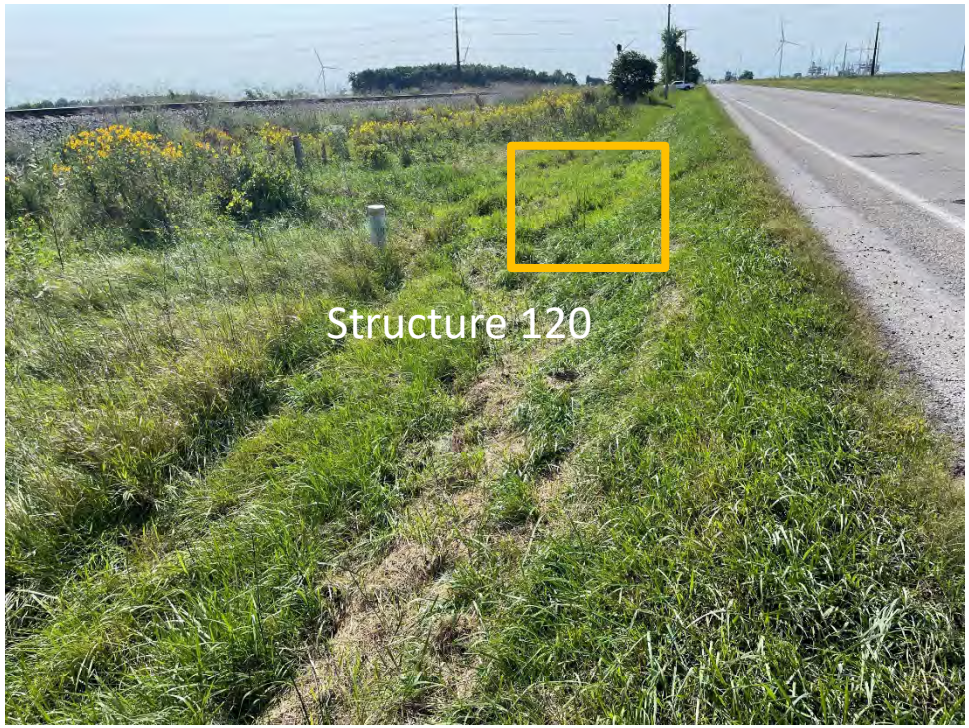




Photo 12. Looking north along NB SR 43 and roadside ditch towards outfall for Structure 120.

Structure 130 – INCB-54959

Structure 130 is located at the intersection of SR 43 and and E 4th Street in Reynolds (40.747615°, -86.875048°) in Section 33, Township 27 North, Range 4 West, Honey Creek Township, White County, Indiana as shown in the Brookston NW USGS 7.5 Minute Topographic Map. The existing inlet is recommended for casting furnish and adjustment to grade.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 697 to 698 ft. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Honey Creek-Tippecanoe watershed, 12-digit hydrologic unit code (HUC12): 51201061207.

NRCS Soil Survey

The NRCS Soil Survey of White County identified one soil series within the project study area (Figure 7, Table 2.13). This series was identified as being hydric (1-32%).

Table 9.13 Structure 130 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Morocco fine sand (Mr)	Somewhat Poorly Drained	No Ponding, No Flooding	Hydric (1-32%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM to be considered as Waters of the U.S.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. The area was predominantly mowed right-of-way with the herbaceous community dominated by Bermuda grass (*Cynodon dactylon*, FACU), Kentucky bluegrass (*Poa pratensis*, FACU), and perennial ryegrass (*Lolium perenne*, FACU). No depressions or signs of hydrology were present within the project study area. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

No roadside ditches were observed in the study area.



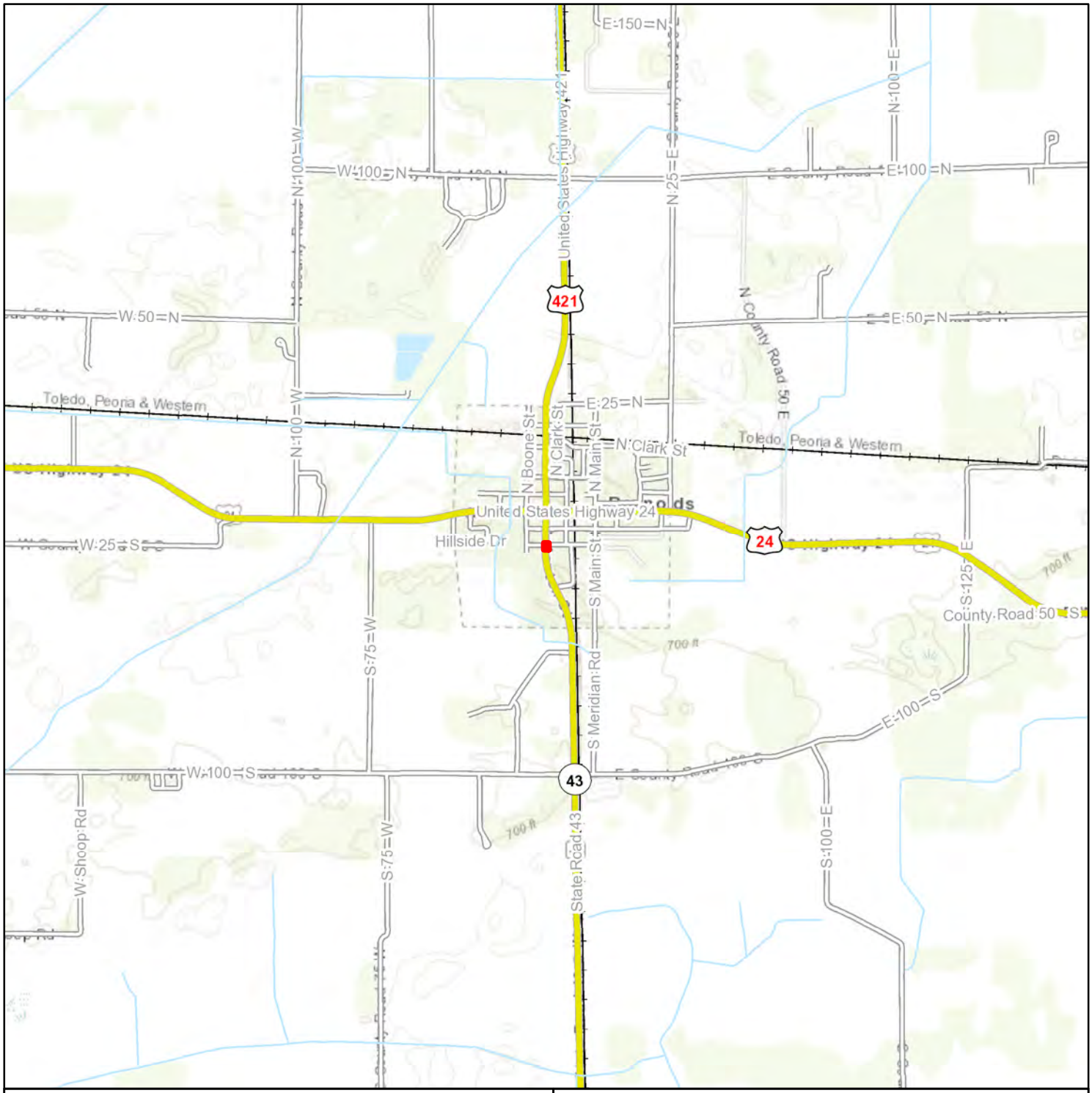
State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 130
Des # 2100235
White County, Indiana

N

0 0.5 1 2 Miles

COMPLIANCE FIELD SERVICES, INC

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2
SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



USGS Topo Map
Figure 3

SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

N



Aerial Location Map

Figure **4**

SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

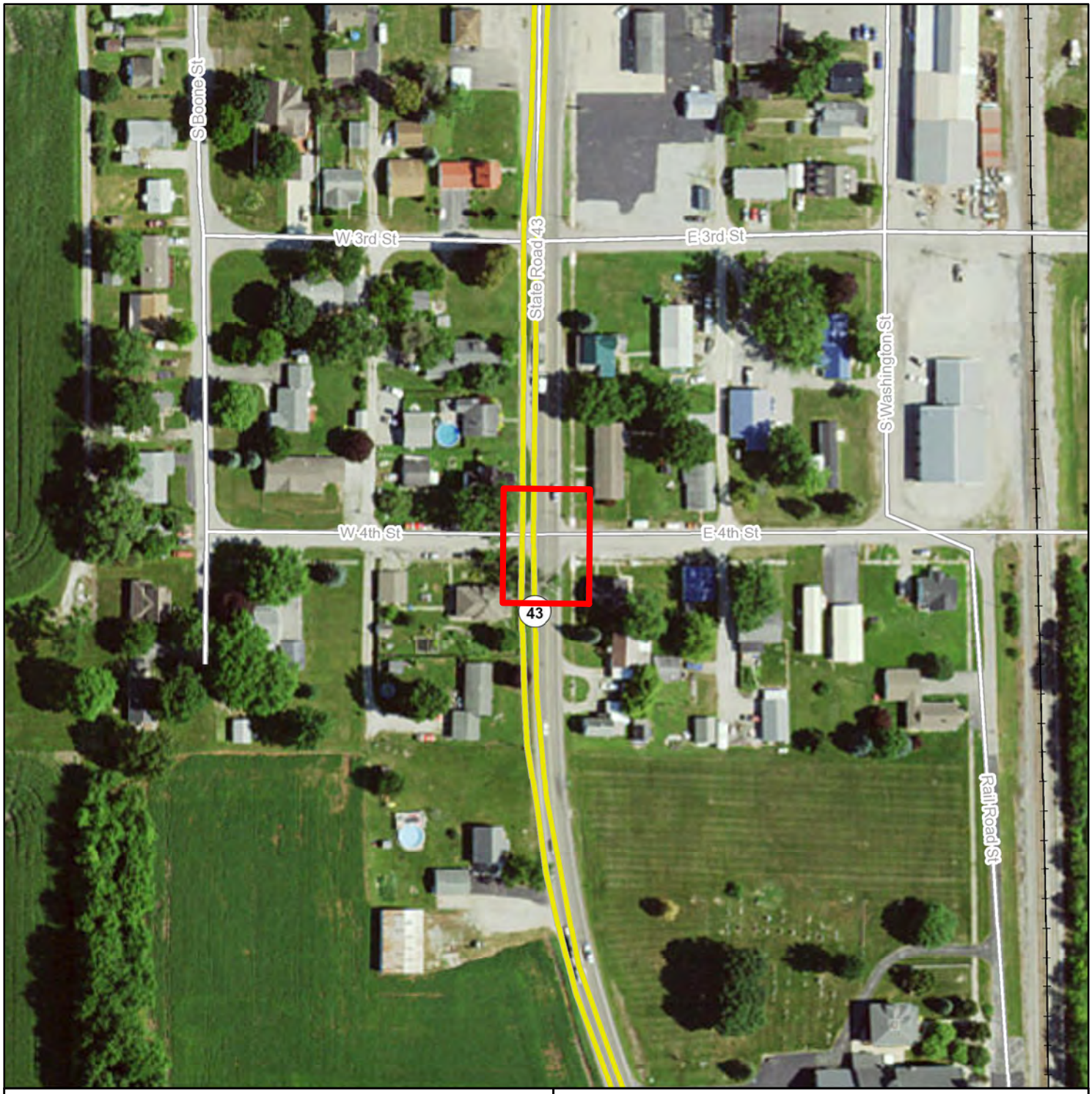
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 165 330 660 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

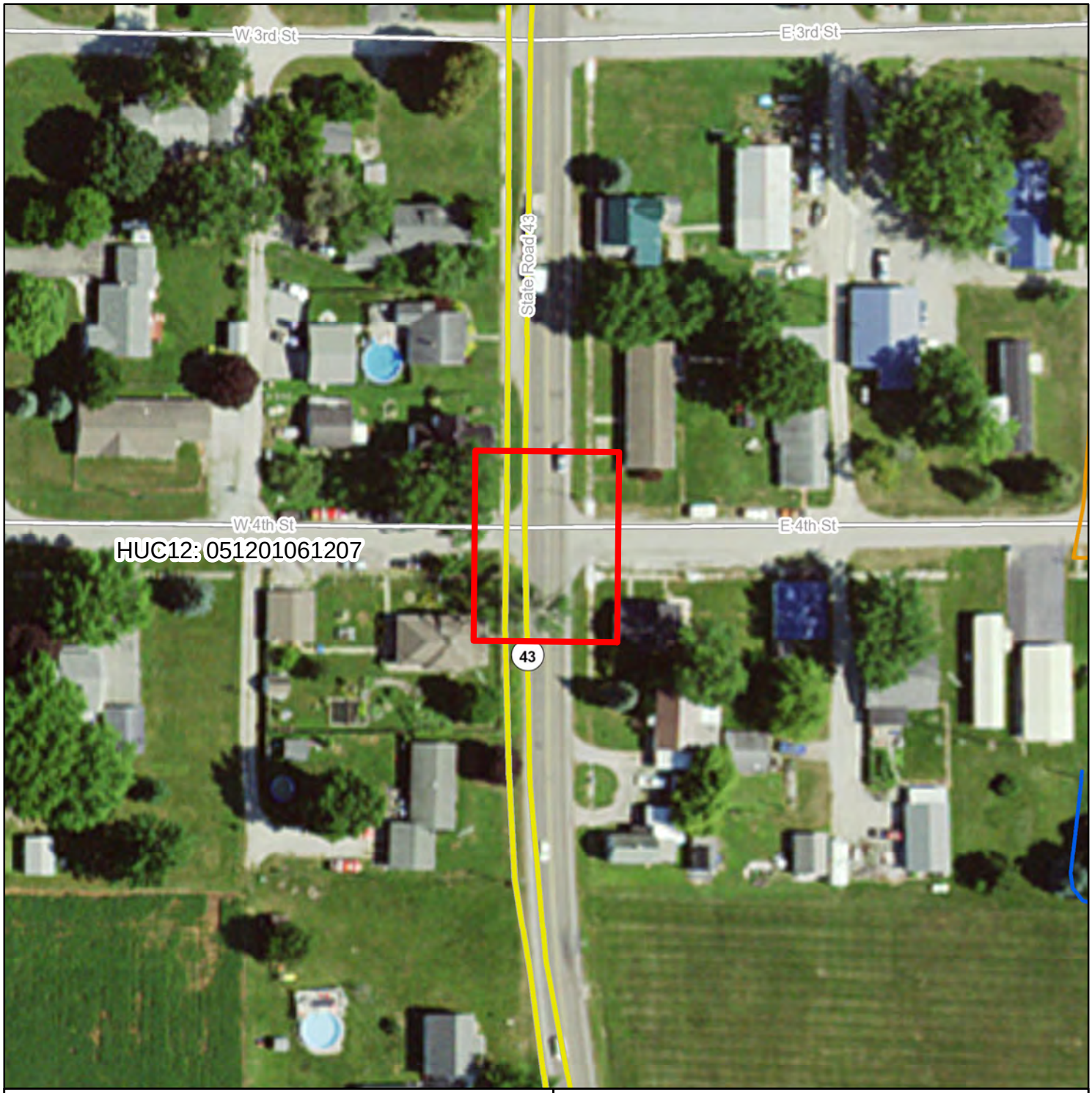
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

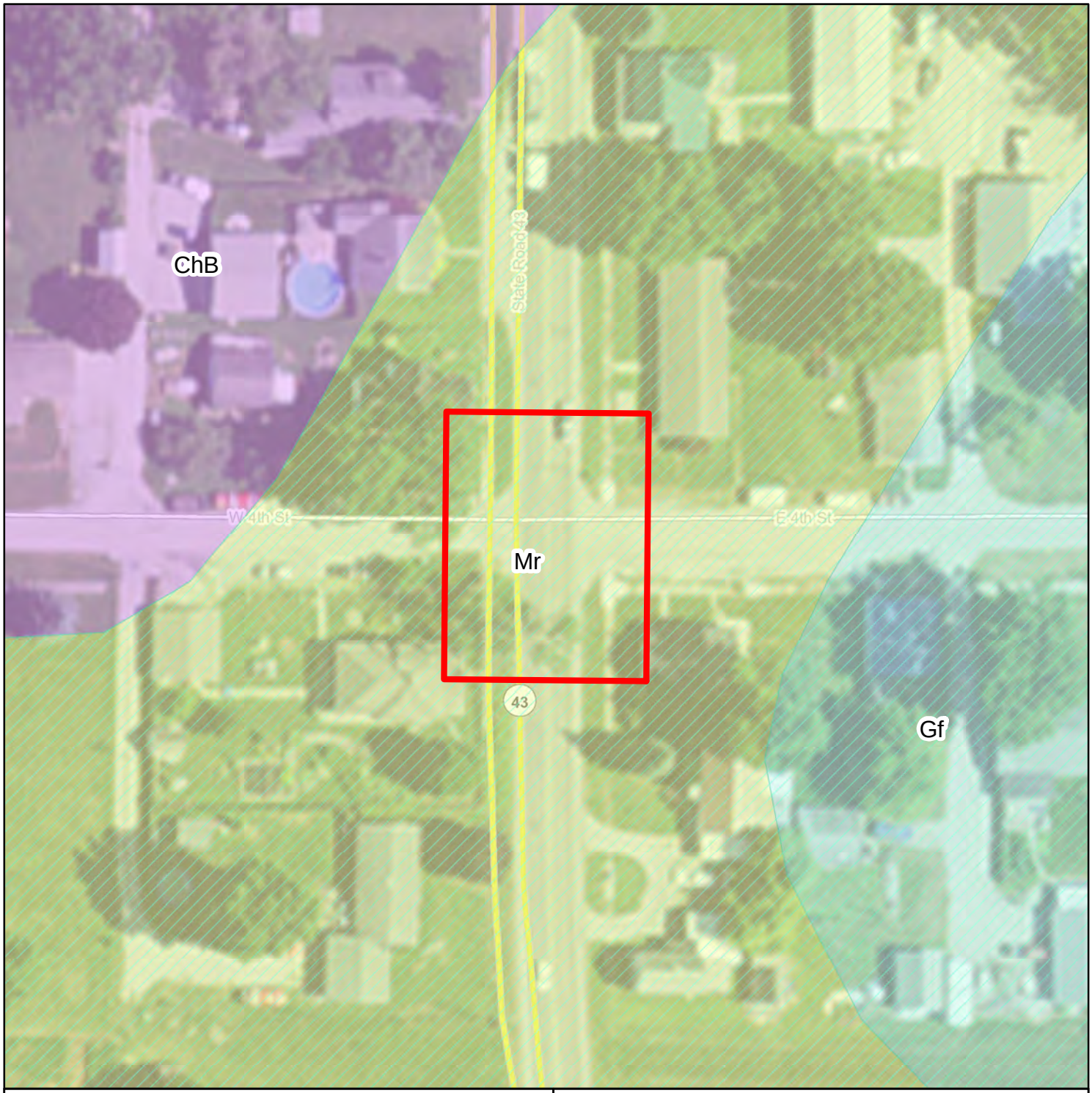
Flowline
- StreamRiver
- ArtificialPath
- CanalDitch
- Connector

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NRCS Soils Map
Figure 7
SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad

Hydric

NRCS Soil MU

ChB
Gf
Mr

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

N

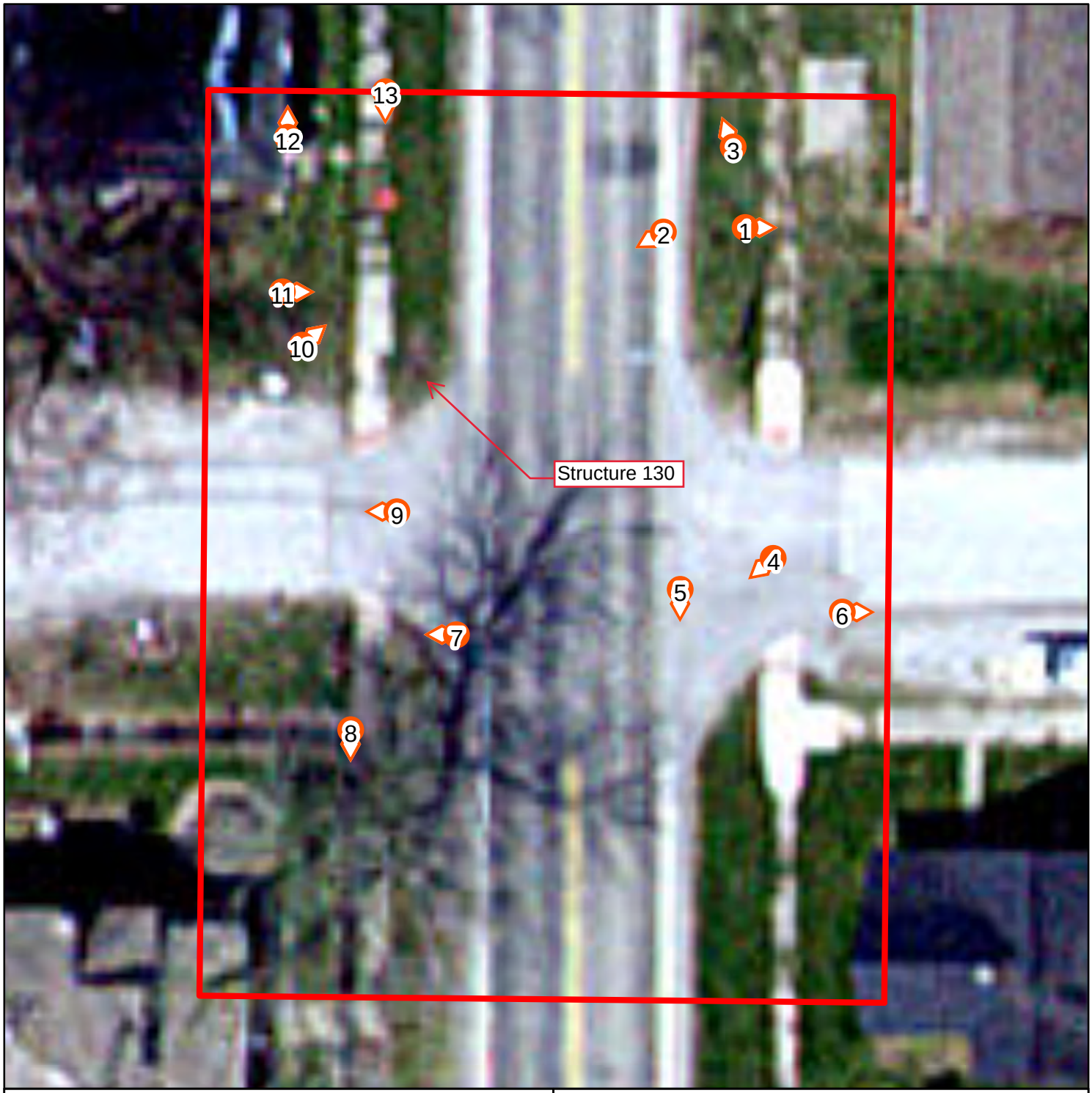


Photo Location Map
Figure 9

SR 43 Small Structure Rehabilitation
Structure # 130
Des # 2100171
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Delineated Wetland
Delineated Stream & Flow Direction
Drainage Feature & Flow Direction
Upland Data Point
Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 5 10 20 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking southwest towards Structure 130.





Photo 4. Looking southwest from E 4 th St and SR 43.





Photo 6. Looking east along south side of E 4th St from SR 43.





Photo 8. Looking south from intersection of SR 43 and E 4th St.





Photo 10. Looking northeast at Structure 130.





Photo 12. Looking north along SR 43 from Structure 130.



Structure 140 to 143 – INCB-54956-59

Structures 140 to 143 are located at the intersection of SR 43 and and E 3rd Street in Reynolds (40.748510°, -86.875129°) in Section 33, Township 27 North, Range 4 West, Honey Creek Township, White County, Indiana as shown in the Brookston NW USGS 7.5 Minute Topographic Map. The existing inlets are recommended for casting furnish and adjustment to grade.

Desktop Survey

The project study area topography is mostly flat, with elevations ranging from 697 to 700 ft. The project study area is within the Kankakee Drainageways of the Northern Moraine and Lake Region Region (Gray, 2000). Land use in the vicinity of the project is primarily rural residential and agricultural.

National Wetland Inventory

The USFWS' NWI Wetlands Mapper was reviewed for potential wetland locations. The NWI data of the area (Figure 5) did not identify any NWI wetlands within or adjacent to the project study area.

Watersheds

The project study area is in the Honey Creek-Tippecanoe watershed, 12-digit hydrologic unit code (HUC12): 51201061207.

NRCS Soil Survey

The NRCS Soil Survey of White County identified two soil series within the project study area (Figure 7, Table 2.14). One series was identified as being hydric (1-32%).

Table 1014 Structure 140-143 NRCS Soil Survey Area of Interest Results

Map Unit Name (Map Symbol)	Drainage Properties	Hydrology	Hydric Status
Chelsea fine sand, 2-6% slopes	Excessively drained	No Ponding, No Flooding	Not Hydric
Morocco fine sand (Mr)	Somewhat Poorly Drained	No Ponding, No Flooding	Hydric (1-32%)

Field Reconnaissance

No likely jurisdictional streams or wetlands were identified within the study area (Figure 8).

Stream Features

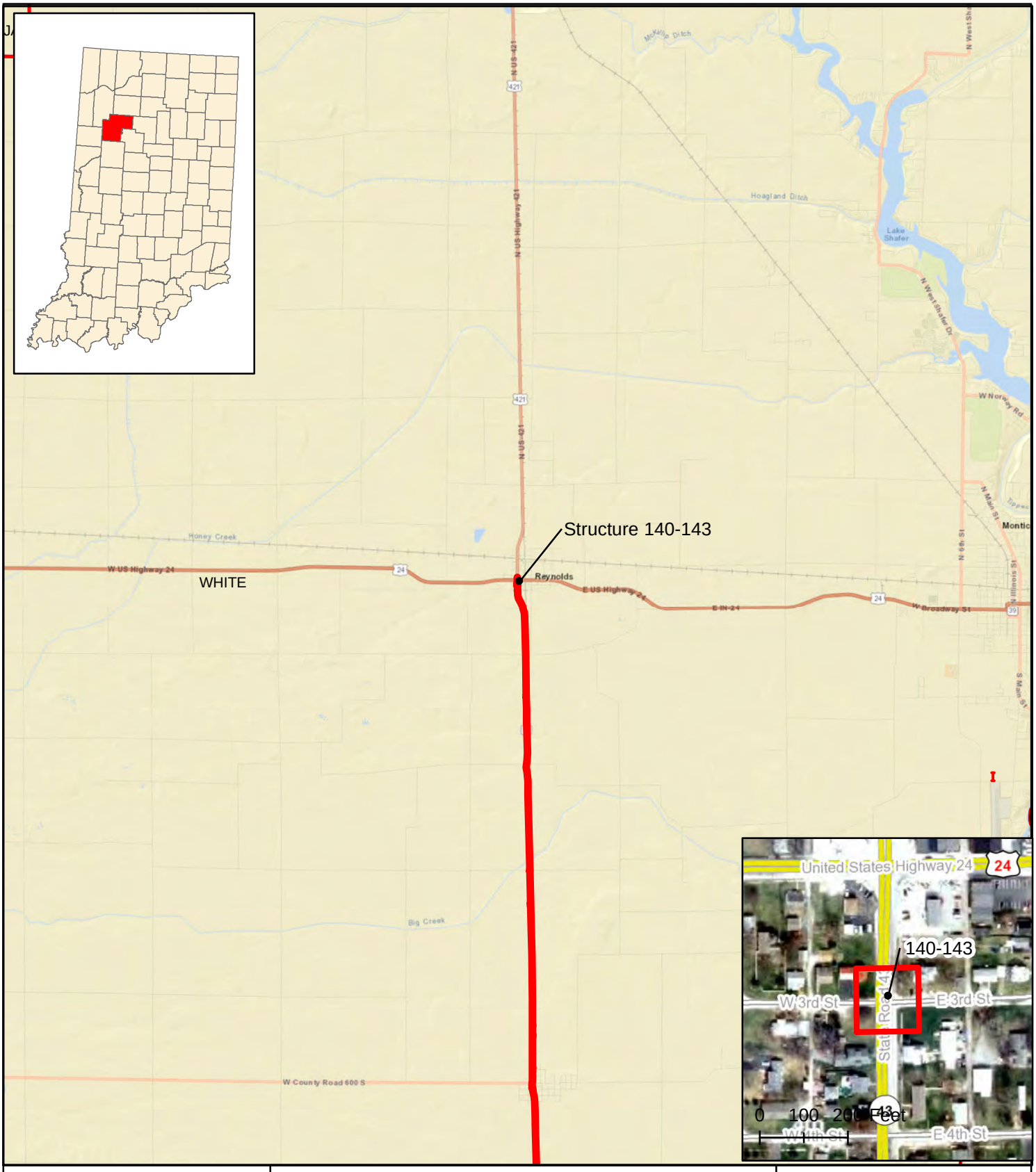
No waterbodies were identified within the project study area exhibiting a bed, bank, or OHWM to be considered as Waters of the U.S.

Wetland Features

No wetland features that met all three of the USACE wetland criteria were observed within the project area. The area was predominantly mowed right-of-way with the herbaceous community dominated by Bermuda grass (*Cynodon dactylon*, FACU), Kentucky bluegrass (*Poa pratensis*, FACU), and perennial ryegrass (*Lolium perenne*, FACU). Additionally, no indicators of hydrology were present. Therefore, due to the lack of indicators, no data points were collected at this site.

Roadside Ditches and Other Drainages

No roadside ditches were observed in the study area.



State Location Map
Figure 1
SR 43 HMA Overlay and Small Structures
Structure 140-143
Des # 2100235
White County, Indiana

COMPLIANCE FIELD SERVICES, INC

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap



USGS Topo Map
Figure 2

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 1,200 2,400 4,800 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

USGS MAP BROOKSTON NW, INDIANA



USGS Topo Map
Figure 3

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 325 650 1,300 Feet

N

Service Layer Credits: INDOT
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Aerial Location Map

Figure **4**

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

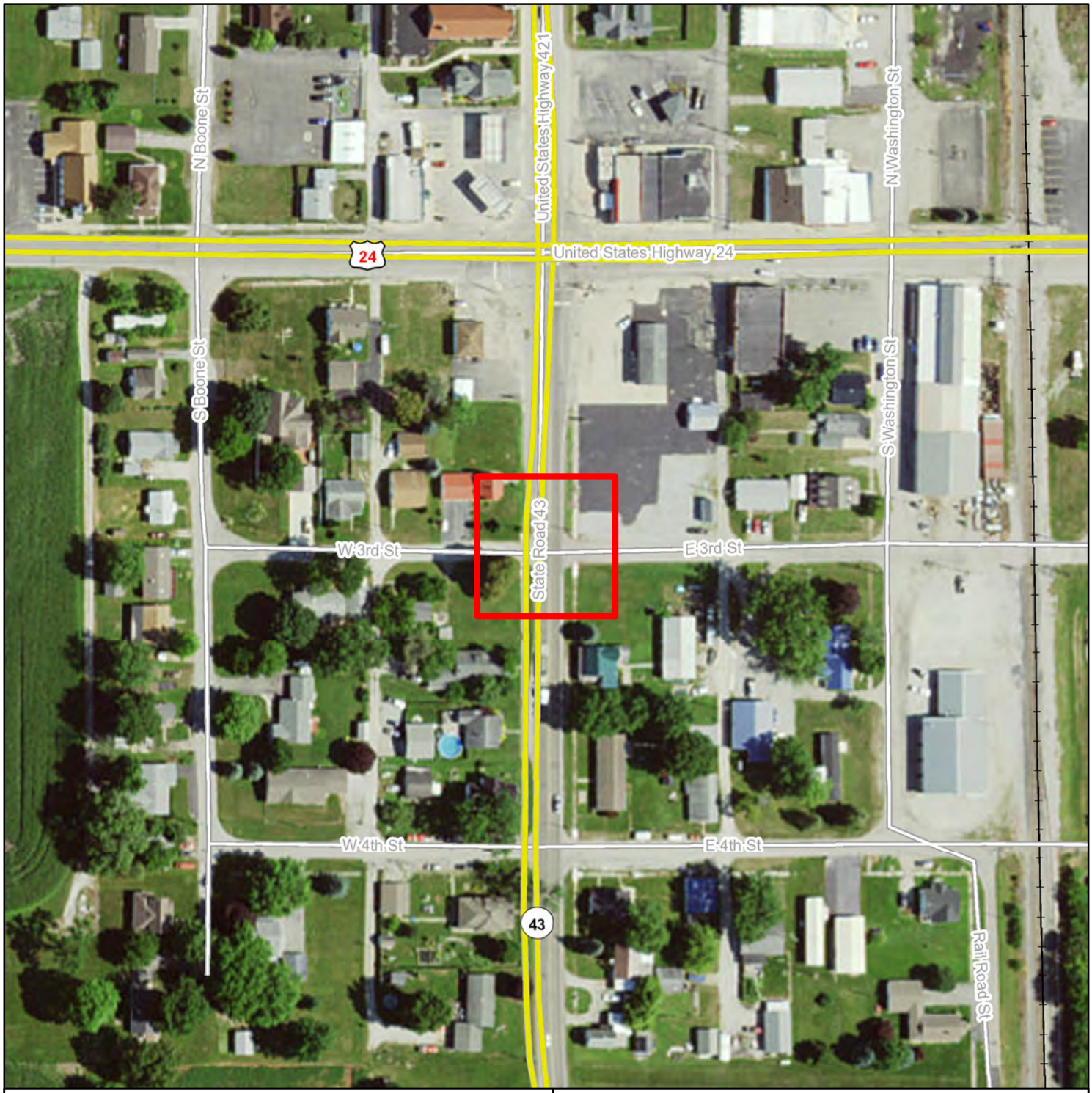
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 165 330 660 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NWI Wetlands Map
Figure 5

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

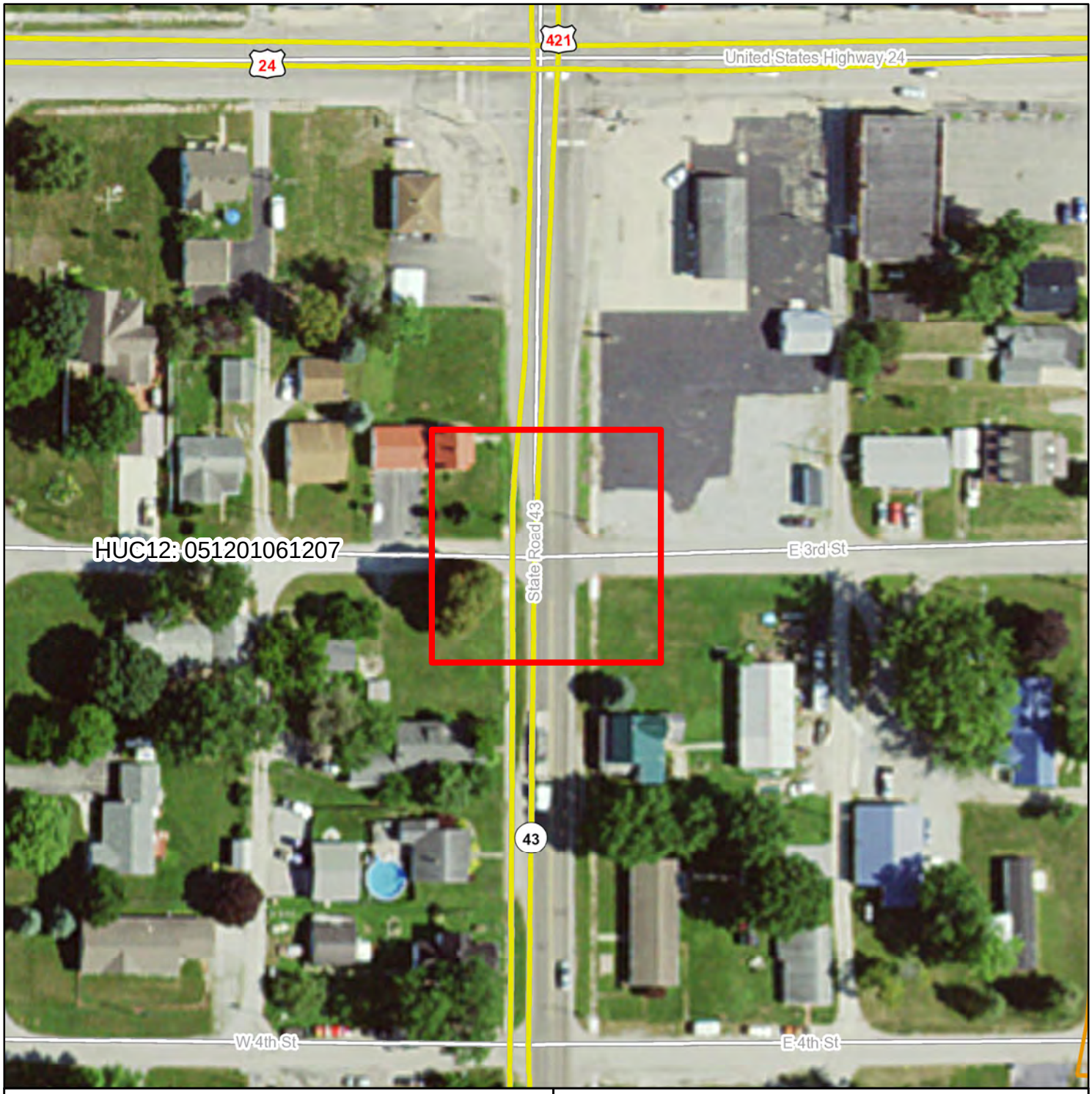
- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad

COMPLIANCE FIELD SERVICES, INC.

0 70 140 280 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NHD Map
Figure 6

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- HUC12 Boundary

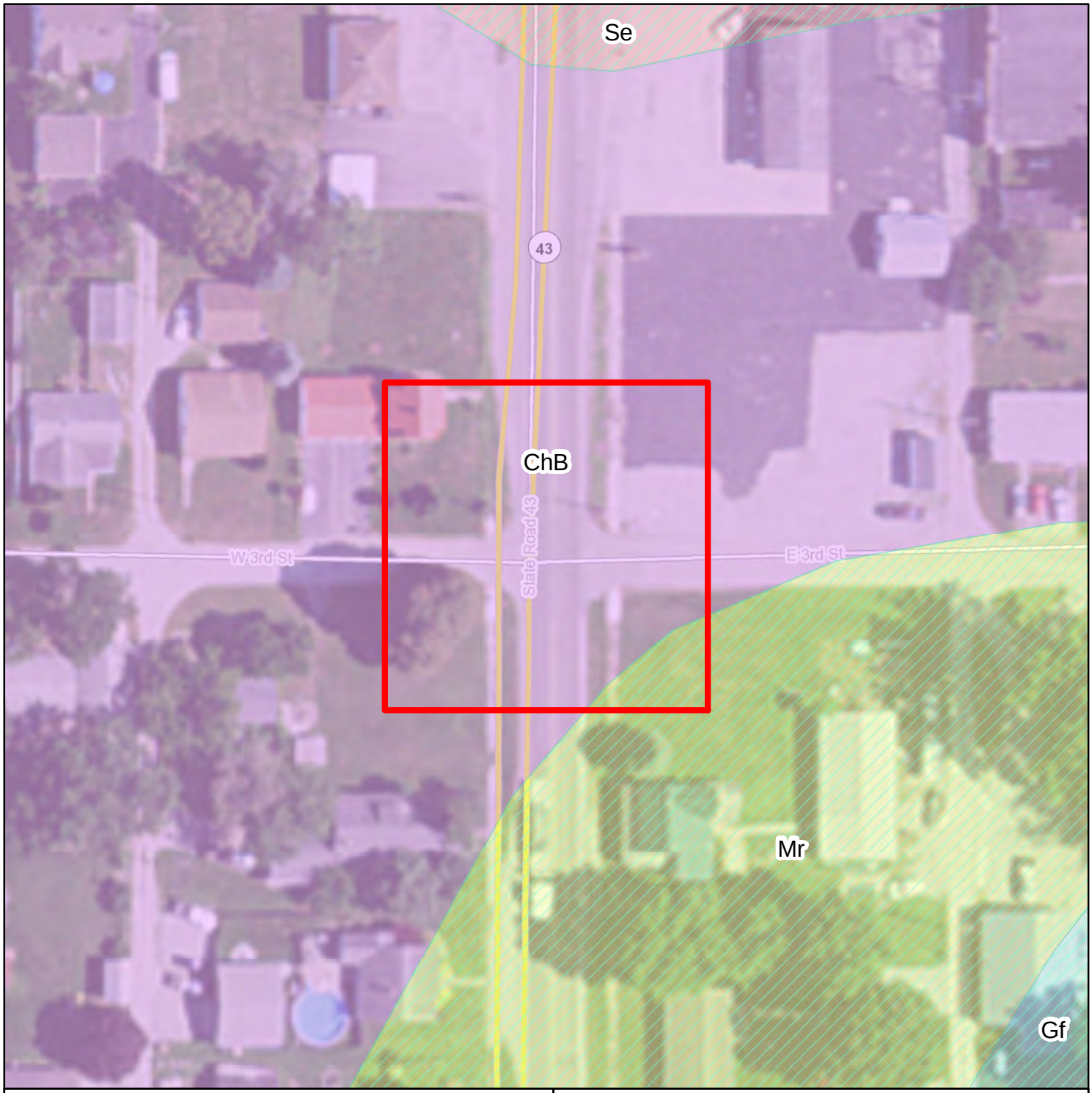
Flowline
- StreamRiver
- ArtificialPath
- CanalDitch
- Connector

COMPLIANCE FIELD SERVICES, INC.

0 40 80 160 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial



NRCS Soils Map
Figure 7

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

Study Area
Interstate
State Route
US Route
Local Road
Railroad
Hydric

NRCS Soil MU

ChB
Gf
Mr
Se

COMPLIANCE FIELD SERVICES, INC.

0 30 60 120 Feet

N

Service Layer Credits: INDOT
National Agriculture Imagery Program (NAIP), Farm Services Agency (FSA), U. S. Department of Agriculture (USDA), UITS, Indiana Spatial

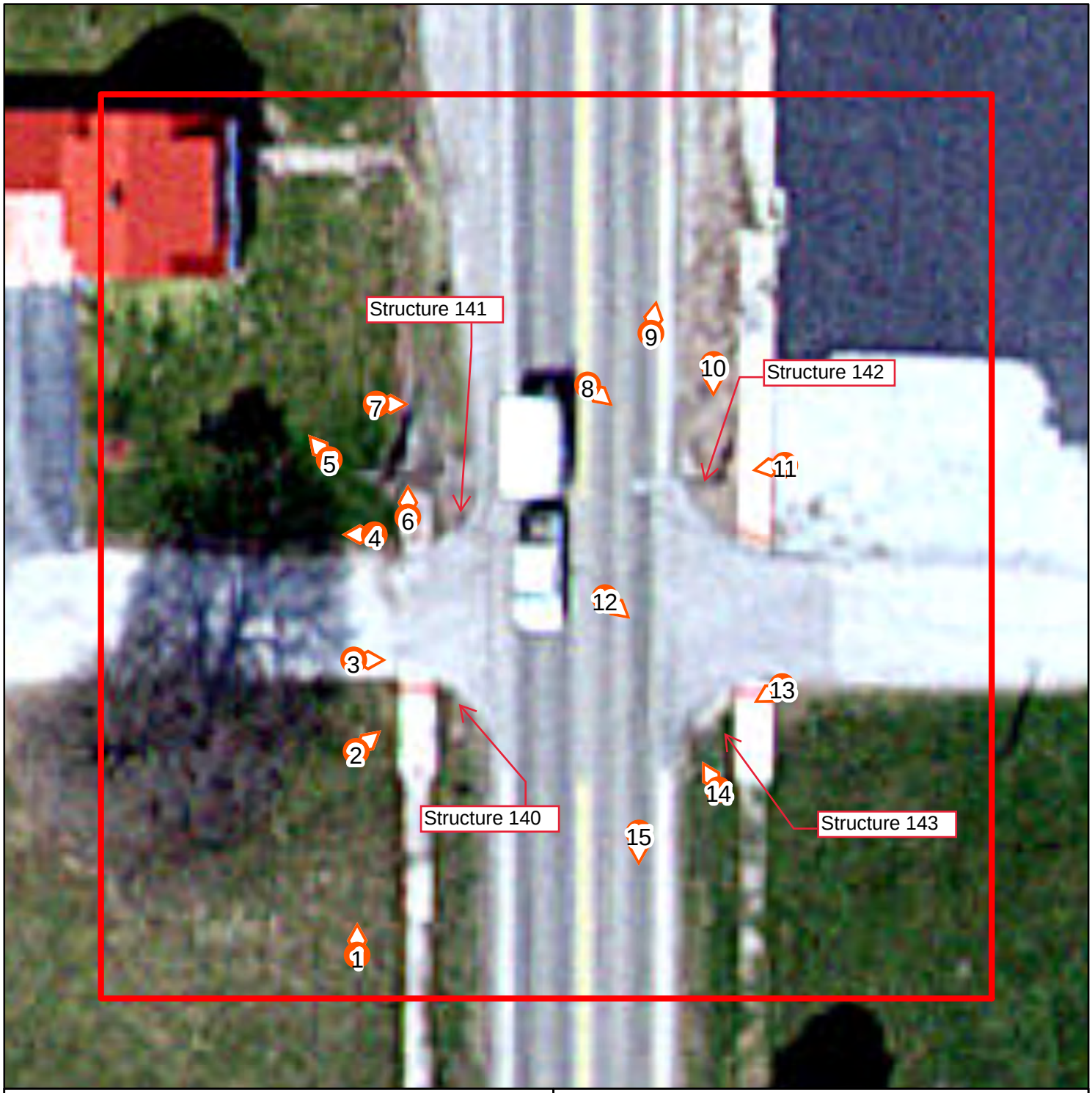


Photo Location Map
Figure **8**

SR 43 Small Structure Rehabilitation
Structure # 140-143
Des # 2100171
White County, Indiana

- Study Area
- Interstate
- State Route
- US Route
- Local Road
- Railroad
- Delineated Wetland
- Delineated Stream & Flow Direction
- Drainage Feature & Flow Direction
- Upland Data Point
- Wetland Data Point

COMPLIANCE FIELD SERVICES, INC.

0 10 20 40 Feet

Service Layer Credits: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

N





Photo 2. Looking northeast towards Structure 140 and intersection of SR 43 and W 3rd St.





Photo 4. Looking west along W 3rd St. from intersection of SR 43.





Photo 6. Looking north along SR 43 towards Structure 141.





Photo 8. Looking southeast at Structure 142.





Photo 10. Looking south along SR 43 towards W 3rd St. and Structure 142.





Photo 12. Looking southeast from intersection of W. 3rd St. and SR 43.





Photo 14. Looking northwest at Structure 143.



Wildlife Habitat

Each structure was inspected for the presence of wildlife, including bats, waterfowl, and migratory birds. No evidence was found indicating the temporary use, foraging, migration routes, or inhabitation of these structures by any protected species.

Conclusions

Wetland determinations for the SR 43 HMA Overlay and Small Structure project were conducted on September 14 and October 18, 2022. Four isolated wetlands were delineated within the project study area. No stream features were identified.

The identified wetlands are likely Waters of the State, as summarized in Tables 3 and 4, but not jurisdictional features designated as Waters of the U.S. Every effort should be taken to avoid and minimize impacts to the waterways and wetlands. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgment based on the guidelines set forth by the Corps.

Acknowledgement

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

Paul Killian



Project Manager

Compliance Field Services, Inc./INDOT Crawfordsville District

References

Cowardin, D.M., Carter, V., Golet, F.C., and La Roe, E.T. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Publication No. FWS/OBS-79/31. United States Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. United States Department of the Army, United States Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

Indiana Department of Transportation (INDOT). 2018. *Waters of the United States Documentation.* Available at https://www.in.gov/indot/2522.htm. Accessed December 2018.

Taylor University Environmental Research Group. 2005. *Indiana Wetland Rapid Assessment Protocol, InWRAP. Version 2.5.* Taylor University, Upland, Indiana.

United States Army Corps of Engineers (USACE). 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, Version 2.0.* August of 2010.

United States Army Corps of Engineers (USACE). 2020. *National Wetland Plant List, Version 3.5.* http://wetland-plants.usace.army.mil/ U.S. Army Corps of Engineers Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH.

United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2006. *Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific.* U.S. Department of Agriculture Handbook, 296.

Table 3. Data Point Summary Table

Data Point	Structure	Latitude	Longitude	Vegetation	Soils	Hydrology	Wetland
DP-1	20	40.625787	-86.86853	No	No	No	No
DP-2	20	40.625801	-86.86859	Yes	Yes	Yes	Yes
DP-3	20	40.625798	-86.86834	No	No	No	No
DP-4	20	40.62584	-86.86831	Yes	Yes	Yes	Yes
DP-5	30	40.632798	-86.86884	No	No	No	No
DP-6	80	40.671133	-86.87052	No	No	No	No
DP-7	80	40.671252	-86.87057	Yes	Yes	Yes	Yes
DP-8	80	40.671141	-86.87031	No	No	No	No
DP-9	80	40.671163	-86.87030	Yes	Yes	Yes	Yes
DP-10	60	40.656039	-86.86961	Yes	No	Yes	No
DP-11	90	40.673034	-86.87039	No	No	No	No

Table 4. Wetlands Delineated Within Project Study Area

Wetland Name	Structure	Photo No.	Latitude, Longitude	Type	Total Area (acres)	Quality	Waters of the U.S.	Isolated /Exempt
Wetland A	20	2-6, 9, 10, 12, 13	40.625785, -86.86857	Emergent	0.05823	Poor	No	Isolated/ Exempt
Wetland B	20	14-18, 20, 22, 23, 24	40.625841, -86.8683	Emergent	0.03549	Poor	No	Isolated/ Exempt
Wetland C	80	2-7, 10,	40.671201, -86.87057	Emergent	0.04085	Poor	No	Isolated/ Exempt
Wetland D	80	11-16, 18	40.671157, -86.87028	Emergent	0.02456	Poor	No	Isolated/ Exempt

Appendix G

Public Involvement

This appendix will be updated after the public involvement process is complete.

HANSON
Engineering | Planning | Allied Services

Hanson Professional Services Inc.
6510 Telecom Dr., Suite 210
Indianapolis, IN 46278
(317) 293-9024

www.hanson-inc.com

September 8, 2022

NOTICE OF SURVEY

RE: **DES #2100171**: **SR 43 HMA Overlay, from 0.2-mile South of US 24 to US 24, Town of Reynolds in White County, Indiana.**

Dear Property Owner:

Our information indicates that you own or occupy property near the subject proposed highway project. Our employees will be performing 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 permitted by law per Indiana Code IC 8-23-7-26. They will show you their identification if you are available, before coming onto your property. If you have sold this property, or it is occupied by someone else, please let us know the name and address of the new owner or current occupant so we can contact them about the survey.

At this stage, we generally do not know what effect, if any, our project can eventually have on your property. If we determine later 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, buildings, fences, and drives, as well as obtaining ground elevations. This survey is needed for the proper planning and design of this highway 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 telephone number or address shown above.

Sincerely,

HANSON PROFESSIONAL SERVICES INC.

Richard P. McPhail, PS
Senior Surveyor

Appendix H
Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2024 - 2028

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2024	2025	2026	2027	2028
Performance Measure Impacted: Safety																	
Location: SR 39 02.03 N US 24 and US 421 2.29 S JCT US 24/SR 39																	
Comments:Include DES 2100894, 2100946																	
Indiana Department of Transportation	43891 / 2101077	Init.	SR 16	Small Structure Replacement	LaPorte	.1	STBG	$597,000.00	Bridge Construction	CN	$394,400.00	$98,600.00	$30,000.00		$463,000.00		
Performance Measure Impacted: Bridge Condition																	
Location: SR16 over UNT McKillip Ditch, 1.19 mi W US 421																	
Comments:Include DES 2101077																	
Indiana Department of Transportation	43896 / 2100224	Init.	US 24	HMA Overlay Minor Structural	LaPorte	8.396	NHPP	$7,369,000.00	Road Construction	CN	$4,707,200.00	$1,176,800.00	$15,000.00		$5,869,000.00		
Performance Measure Impacted: Pavement Condition																	
Location: E. Jct of US 231 to 0.5 mi. W. of US 421 N. Jct.																	
Comments:Include DES 2100224																	
Indiana Department of Transportation	43897 / 2100235	Init.	SR 43	HMA Overlay Minor Structural	LaPorte	9.773	NHPP	$8,507,000.00	Road Construction	CN	$5,730,400.00	$1,432,600.00	$50,000.00		$7,113,000.00		
Performance Measure Impacted: Pavement Condition																	
Location: N. Jct of SR 18 to 0.2 mi. S. of US 24/421 (Reynolds) and Town of Reynolds, 0.2mi S of US 24 to US 24																	
Comments:Include DES 2100171, 2100235																	
Indiana Department of Transportation	43929 / 2100229	Init.	US 421	HMA Overlay, Preventive Maintenance	LaPorte	4.541	NHPP	$3,327,000.00	Road Consulting	PE	$72,800.00	$18,200.00			$0.00	$91,000.00	
									Road Construction	CN	$2,426,400.00	$606,600.00	$13,000.00	$500,000.00	$0.00	$2,520,000.00	
									Road ROW	RW	$40,000.00	$10,000.00	$50,000.00				
Performance Measure Impacted: Pavement Condition																	
Location: From 0.27 mi. N. of SR 16 to SR 114																	
Comments:Include DES 2100229																	
Indiana Department of Transportation	44020 / 1703039	Init.	US 24	Replace Superstructure	LaPorte	0	NHPP	$1,736,269.00	Bridge Consulting	PE	$21,600.00	$5,400.00	$27,000.00				
									Bridge Construction	CN	$991,200.00	$247,800.00	$1,239,000.00				
Performance Measure Impacted: Bridge Condition																	
Location: Us 24@.-Fraser Ditch, 00.71mi W US 421																	
Comments:Include DES 1703039, 2000680																	
White County	44104 / 2003032	Init.	IR 8063	Bridge Replacement	LaPorte	.08	STBG	$1,638,000.00	Local Funds	RW	$0.00	$13,000.00	$13,000.00				
									Local Bridge Program	RW	$50,000.00	$0.00	$50,000.00				

Report Created:8/28/2023 1:35:16PM

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

H1

Appendix I
Additional Studies/Reports

Pavement Scoping Application Report

ID: 40940 for model run date 7/27/2020

Pavement — Approved

Last Edited Date	1/15/2021		
Last Updated By	System, DTIMS	**Work Type**	HMA Overlay Minor Structural
Proposed FY	2026	**Work Category**	District Pavement Project (Non-I)
Pre-DES		**Score**	93

Pavement Project Details

Pavement Section ID	40940	**State Log Date**	07/27/2020
		From RP + Offset	46 + 026
Route	SR 43	**To RP + Offset**	46 + 046
Created Date	12/11/2019	**SL Measure From**	40.535
Location	Town of Reynolds	**SL Measure To**	40.736

Roadway Information

District	LA PORTE
Subdistricts	MONTICELLO
County(s)	91 - White

Project Length	0.2	**Pavement Area (Sq Yd)**	3,680
Number of Through Lanes	2	**Underdrains Present**	No
Number of Lane Miles	0.4	**Curbs Present**	Yes
Functional Class	3 - Principal Arterial - Other	**Known ADA Deficiencies**	No
On NHS	1 - Is on the NHS	**Est # of Lg Culverts (>48" -20')**	1
AADT Year	2018	**Est # of Sm Culverts (12-48")**	6
AADT	4,310		
AADT Truck	1,001		
Pavement Type	Composite		

Project History

Project Type	Contract #	Year	Work Type
Functional	RS-30760	2011	HMA Overlay, Preventive Maintenance
Structural	RS-20856	1994	

Maintenance History

Significance	Year	Maintenance Work Type

I1

Pavement Scoping Application Report

ID: 40940 for model run date 7/27/2020

Condition Data

	Year
% Functional Cracking	0
% Structural Cracking	0
Rut inches	0
IRI (in/mile)	0
Distress Box Area	0
Concrete Length	0
Asphalt Length	0
Concrete Faulting	0
Cost Effectiveness ($/sqyd)	0
Roadway Category	

Purpose/Need Of Project

Purpose And Need

The purpose of the project is to remove the surface distresses, increase the life of the pavement, and improve the IRI to good condition, less than 70.
The existing curbing has deteriorated. There is evidence of poor drainage. The existing pavement has severe block cracking, transverse cracking, and longitudinal joint damage.

Own It: Alternatives

Preliminary Alternatives That Are Contemplated (Analyzed) With Costs

The existing asphalt pavement be milled up to 4 inches in depth and paving with 4 inches of HMA, to be determined by the pavement design. The existing inlets and small culverts within the project limits that rate poorly should be replaced. The curb and curb ramps should be replaced.

Consequences If No Action Is Taken (Do Nothing Alternative Is Selected)

The pavement will continue to deteriorate and will require a more extensive pavement treatment.

Secondary Considerations or Goals With Costs

Improve drainage and ADA accessibility.

Will Further Analysis/Assessment Be Required Beyond This Form? No

Additional Features To be Included

RPMs	No	**Centerline Rumble Stripe**	No
Curb Ramps	Yes	**Edgeline Rumble Stripes**	No

Pavement Scoping Application Report

ID: 40940 for model run date 7/27/2020

Estimated Total Project Costs

Phase	Amount	Comments
Right of Way Purchase	$0	
Right of Way Services	$0	
Preliminary Engineering 1	$40,000	
Railroad PE 1	$0	
Utilities PE	$10,000	
Utilities CN	$0	
Construction Total $241,120		
Construction	$189,120	
RR Construction	$0	
Maintenance of Traffic	$20,000	
Environmental Mitigation	$11,000	
ADA	$21,000	
Sidewalks/ Multi Use Paths		
Construction Engineering	$11,000	
Other Considerations	$0	
Total	**$302,120**	

Maintenance of Traffic

Can this road be closed due to traffic?	Yes	**Interstate Congestion Policy Waiver Required**	No
Traffic Management Plan Required?	Yes		
Anticipated MOT Scheme Value	Flagging		

2

Other Considerations

Anticipated Number of Construction Seasons To Complete	1.00
Anticipated Number of Years To Complete Design	2.00
Environmental Document Type	CE1
Environmental Factors	

Additional Anticipated Complications

Tree Clearing	Yes
Fish	No
Bats	No
Historical	No
Potential Hazardous Coatings	No

Additional Comments

Supporting Documents

Document Type	Document Name	Date
Photos	PK 4940 Pictures.pdf	12/12/2019 2:10:33PM
SupportingDocuments	Road - 40940 Crash Analysis.pdf	12/23/2020 1:46:41PM
HydraulicReports	PK 40940 - Small Culverts.xlsx	12/23/2020 1:46:34PM
CostEstimates	EngRpt QtyCalc CostEst PK40940.pdf	12/23/2020 1:46:25PM
MiniScopeProjectReport	40940_Post Deliberation Project Scoping Report.pdf	4/5/2021 9:04:31PM

I3

ADDENDUM No. 1
TO (ABBREVIATED) ENGINEER'S REPORT

Project Number:	2100171
Route / Feature Crossed:	SR 43
Project Location:	Reynolds (0.2 miles S of US 24/421 to US 24/421)
Date:	09/22/2022

ADDENDUM JUSTIFICATION:

The original engineering assessment calls for the designer to re-evaluate the drainage structures along the corridor. It was noted that a few inlet structures may require adjustment or replacement. Hanson re-inspected the structures during a site visit on 09/08/2022 and determined that further survey is required before offering a professional recommendation. 5 inlets will be evaluated by survey crews and a recommendation will be made prior to the Stage 1 submittal. Additionally, approximate cost estimate figures have been updated.

REVISION TO ORIGINAL SCOPE DOCUMENT:
The (Abbreviated) Engineer's Report is being revised as follows:

Drainage/Structures:
This 0.2-mile section of SR 43 contains 5 inlets that were inspected on 09/08/2022. These inlets will require survey before a recommendation is made.

Right-of-Way (R/W)
R/W acquisition for this portion of SR 43 work is included in the lead Des (2100235).

Utilities and Railroad:
Utility relocations may be necessary where the sidewalk is being replaced. No reimbursable relocations are anticipated. Based on the letting date of 07/09/2025, no scheduling delays related to utilities relocations are expected.
A CSX Railroad (Monon Division) runs parallel to the highway to the East at an offset of approximately 475' from the edge of traveled way. Railroad coordination is not anticipated.

Structure #	Asset #	Span (in)	Rise (in)	Lat	Long	Recommendation
130	INCB-54959	N/A	N/A	40.748	-86.875	TBD pending survey
140	INCB-54958	N/A	N/A	40.749	-86.875	TBD pending survey
141	INCB-54957	N/A	N/A	40.749	-86.875	TBD pending survey
142	INCB-54956	N/A	N/A	40.749	-86.875	TBD pending survey
143	INCB-54956	N/A	N/A	40.749	-86.875	TBD pending survey

Table 1: Inlet Summary

Does the revision change the project's Purpose & Need statement? ☒ Yes ☐ No

Add to purpose and need:
The purpose regarding the sidewalk is to provide a walking surface consistent with current INDOT standards and that facilitates proper stormwater drainage.
The sidewalks are overgrown, deteriorating, and do not facilitate proper drainage.

Does the revision change the project's recommended alternative? ☐ Yes ☒ No

Does the revision change the project's cost estimate? ☒ Yes ☐ No

Estimated Total Project Costs	Revised Amount	Original Amount
Right of Way Purchase	$0.00	$0.00
Right of Way Services	$0.00	$0.00
Preliminary Engineering	$238,030.00	$40,000.00
Railroad PE	$0.00	$0.00
Railroad CN	-	-
Utilities PE (UT1)	$20,000.00	$10,000.00
Utilities CE (UT2)	-	-
Construction Total	$310,000.00	$252,120.00
Other Considerations	-	-
TOTAL:	$568,030.00	$302,120.00

Table 2: Estimated Total Project Costs

Does the revision change the project's environmental impacts? ☐ Yes ☒ No

Does the revision require additional Right-of-Way? ☐ Yes ☒ No

Does the revision change the project's schedule (design or construction)? ☐ Yes ☒ No

Does the revision require additional coordination with utility companies? ☒ Yes ☐ No

Pavement Scoping Application Report

ID: 40366 for model run date 7/27/2020

6/8/2021

Pavement — Approved

Last Edited Date	1/15/2021		
Last Updated By	System, DTIMS	**Work Type**	HMA Overlay Minor Structural
Proposed FY	2026	**Work Category**	District Pavement Project (Non-I)
Pre-DES		**Score**	90

Pavement Project Details

Pavement Section ID	40366	**State Log Date**	08/22/2019
		From RP + Offset	36 + 033
Route	SR 43	**To RP + Offset**	46 + 026
Created Date	12/17/2019	**SL Measure From**	30.768
Location	North Junction of SR 18 to Reynolds	**SL Measure To**	40.535

Roadway Information

District	LA PORTE		
Subdistricts	MONTICELLO		
County(s)	91 - White		
Project Length	9.77	**Pavement Area (Sq Yd)**	171,899
Number of Through Lanes	2	**Underdrains Present**	No
Number of Lane Miles	19.55	**Curbs Present**	Yes
Functional Class	3 - Principal Arterial - Other	**Known ADA Deficiencies**	No
On NHS	1 - Is on the NHS	**Est # of Lg Culverts (>48" -20')**	2
AADT Year	2019	**Est # of Sm Culverts (12-48")**	21
AADT	5,093		
AADT Truck	808		
Pavement Type	Composite		

Project History

Project Type	Contract #	Year	Work Type
Functional	RS-30760	2011	HMA Overlay, Preventive Maintenance
Structural	RS-20856	1994	

Maintenance History

Significance	Year	Maintenance Work Type

I6

Pavement Scoping Application Report

ID: 40366 for model run date 7/27/2020

Condition Data

	Year
% Functional Cracking	0
% Structural Cracking	0
Rut inches	0
IRI (in/mile)	0
Distress Box Area	0
Concrete Length	0
Asphalt Length	0
Concrete Faulting	0
Cost Effectiveness ($/sqyd)	0
Roadway Category	

Purpose/Need Of Project

Purpose And Need

The purpose of the project is to remove the surface distresses, increase the life of the pavement, and improve the IRI to good condition, less than 70.
The existing pavement section is exhibiting stripping in the wheel paths. There is some rutting present. There has been significant amount of patching to address the wheel path stripping issues.

Own It: Alternatives

Preliminary Alternatives That Are Contemplated (Analyzed) With Costs

The existing asphalt pavement be milled 4 inches in depth and paving with 4 inches of HMA, to be determined by the pavement design. The existing small culverts within the project limits that rate poorly should be replaced (approx 13 culverts). The following existing guardrail shall be addressed as follows:
Notes: LIP=Leave in Place; all runs shall be field checked for correct height
@ NBI 16270: LIP
@ NBI 16281: LIP
HMA millings may be screened and placed in lieu of new shoulder stone

Consequences If No Action Is Taken (Do Nothing Alternative Is Selected)

The pavement will continue to deteriorate and will require a more extensive pavement treatment.

Secondary Considerations or Goals With Costs

None

Will Further Analysis/Assessment Be Required Beyond This Form? Yes

Additional Features To be Included

RPMs	No	**Centerline Rumble Stripe**	Yes
Curb Ramps	No	**Edgeline Rumble Stripes**	No

Pavement Scoping Application Report

ID: 40366 for model run date 7/27/2020

Estimated Total Project Costs

Phase	Amount	Comments
Right of Way Purchase	$0	No add'l ROW required
Right of Way Services	$0	
Preliminary Engineering 1	$200,000	
Railroad PE 1	$50,000	CSX Railroad runs parallel to SR 43 and will require insurance and flagging and potenial crossing upgrade for near terminus
Utilities PE	$15,000	No utility relocations anticipated
Utilities CN	$0	
Construction Total $6,110,000		
Construction	$6,110,000	
RR Construction		Included in CN cost estimate
Maintenance of Traffic		Included in CN cost estimate
ADA		
Sidewalks/ Multi Use Paths		
Other Considerations	$0	
Total	**$6,375,000**	

Maintenance of Traffic

Can this road be closed due to traffic?	Yes	**Interstate Congestion Policy Waiver Required**	No
Traffic Management Plan Required?	No		
Anticipated MOT Scheme Value	Flagging		

2

Other Considerations

Anticipated Number of Construction Seasons To Complete	1.00
Anticipated Number of Years To Complete Design	2.00
Environmental Document Type	CE1
Environmental Factors	

Additional Anticipated Complications

Tree Clearing	No
Fish	No
Bats	No
Historical	No
Potential Hazardous Coatings	No

Additional Comments

Supporting Documents

Document Type	Document Name	Date
Photos	PK 4366 Pictures.pdf	1/8/2020 6:26:24PM
HydraulicReports	PK 40366 - Small Culverts.xlsx	12/23/2020 1:44:08PM
SupportingDocuments	Road - 40366 Crash Analysis.pdf	12/23/2020 1:44:16PM
CostEstimates	EngRpt QtyCalc CostEst PK40366.pdf	12/23/2020 1:44:00PM
MiniScopeProjectReport	40366_Post Deliberation Project Scoping Report.pdf	4/5/2021 9:10:05PM

ADDENDUM No. 1
TO (ABBREVIATED) ENGINEER'S REPORT

Project Number:	2100235
Route / Feature Crossed:	SR 43
Project Location:	Brookston (N Jct of SR 18) to Reynolds (0.2 miles S of US 24/421)
Date:	09/22/2022

ADDENDUM JUSTIFICATION:

The original engineering assessment calls for the designer to re-evaluate the drainage structures along the corridor. It was noted that a few pipes may be in poor condition and that several were not fully inspected for various reasons. Hanson re-inspected the pipes during a site visit on 09/08/2022 and determined 10 of the 11 culverts are recommended for replacement. End section installment is recommended for the remaining culvert (designated leave-in-place). 6 inlets (none connected to the aforementioned culvert pipes) will be evaluated by survey crews and a recommendation will be made prior to the Stage 1 submittal. There is a potentially hazardous embankment along the west foreslope of SR 43 in the NW quadrant of its intersection with W 700 S. Crash data has been requested, and a recommendation will be provided once an evaluation has been made. Additionally, approximate cost estimate figures have been revised based on site visit and recommendations.

REVISION TO ORIGINAL SCOPE DOCUMENT:
The (Abbreviated) Engineer's Report is being revised as follows:

Drainage/Structures:
This 9.93-mile section of SR 43 contains 18 structures (11 culverts, 6 inlets) within the scope of the project that were inspected on 09/08/2022. Of these, 10 culverts are recommended for replacement, 1 is recommended for new end sections, and the 6 inlets require survey before a recommendation is made. And open-cut method of construction will be used for the structure replacements based on the preferred Maintenance of Traffic option – Road Closure with Detour.

Right-of-Way (R/W)
R/W acquisition is anticipated for this project due to proposed culvert work. Old plans from 1929 indicate the R/W varies from 30' to 70' through the project length. However, it is not anticipated the R/W deeds and grants were recorded in a timely manner. Based on preliminary R/W research it is anticipated that 40 parcels will require acquisition. The parcels are a mix of residential and agricultural. No relocations are anticipated. Based on the scheduled letting date of 07/09/2025, no scheduling delays due to R/W acquisition are anticipated. No changes to the environmental document are anticipated. Potential changes to the environmental document based on quantity of R/W acquisition will be determined as design progresses.

Utilities and Railroad:
Utility relocations are anticipated at several culvert replacements. No reimbursable relocations are anticipated. Based on the letting date of 07/09/2025, no scheduling delays related to utilities relocations are expected.
A CSX Railroad (Monon Division) runs parallel to the highway to the East at a 40'-475' offset from the edge of traveled way. All 11 pipes that require work could potentially result in work within the railroad R/W. There are several locations where the project limits are located within the near terminus definition

limits and, therefore, will need to be included in the scope of the project. Coordination with the railroad will be necessary.

Structure #	Asset #	Span (in)	Rise (in)	Lat	Long	Recommendation
10	CLV-64399	18	18	40.612	-86.868	Replace
20	CLV-64400	36	24	40.626	-86.869	Replace
30	CLV-64401	15	15	40.633	-86.869	Replace
40	CLV-64402	15	15	40.642	-86.869	Replace
50	CLV-64403	15	15	40.649	-86.870	Replace
60	CLV-64404	15	15	40.656	-86.870	Install end sections
70	INCB-54961	N/A	N/A	40.662	-86.870	TBD pending survey
71	INCB-54960	N/A	N/A	40.662	-86.870	TBD pending survey
72	INCB-54954	N/A	N/A	40.662	-86.870	TBD pending survey
73	INCB-54951	N/A	N/A	40.662	-86.870	TBD pending survey
74	INCB-54952	N/A	N/A	40.662	-86.870	TBD pending survey
75	INCB-54953	N/A	N/A	40.662	-86.870	TBD pending survey
80	CLV-64405	10	10	40.671	-86.870	Replace
90	CLV-64406	15	15	40.673	-86.870	Replace
100	CLV-64407	15	15	40.694	-86.871	Replace
110	CLV-64408	24	24	40.700	-86.872	Replace
120	CLV-64409	36	15	40.729	-86.873	Replace

Table 1: Structure Summary

Approximate R/W Cost			
	Unit Price	Qty	Total
R/W (Land)	$10,000.00	40	$400,000.00
R/W LCRSP	$95,000.00	1	$95,000.00
R/W Eng	$3,300.00	40	$132,000.00
R/W Mgmt	$1,275.00	40	$51,000.00
APA, Appraisal, & Review (Weighted)	$1,750.00	40	$70,000.00
Buy/Closing	$2,075.00	40	$83,000.00
T&E Reports	$700.00	40	$28,000.00
Total R/W Estimate			$859,000.00

Table 2: Right-of-Way Anticipated Costs

Does the revision change the project's Purpose & Need statement? ☐ Yes ☒ No

Does the revision change the project's recommended alternative? ☐ Yes ☒ No

Does the revision change the project's cost estimate? ☒ Yes ☐ No

Estimated Total Project Costs	Revised Amount	Original Amount
Right of Way Purchase	$400,000.00	$0.00
Right of Way Services	$459,000.00	$0.00
Preliminary Engineering	$1,224,550.00	$200,000.00
Railroad PE	$50,000.00	$50,000.00
Railroad CN	-	-
Utilities PE (UT1)	$20,000.00	$15,000.00
Utilities CE (UT2)	-	-
Construction Total	$8,200,000.00	$6,110,000.00
Other Considerations	-	-
TOTAL:	$10,353,550.00	$6,375,000.00

Table 3: Estimated Total Project Costs

Does the revision change the project's environmental impacts? ☐ Yes ☒ No

Does the revision require additional Right-of-Way? ☒ Yes ☐ No

The original engineering assessment indicated no right of way would be required for this project. After inspection of the culverts, 10 will be replaced and 1 will require other work performed. Initial R/W research indicates parcel acquisition will be required at most of the structures.

Does the revision change the project's schedule (design or construction)? ☐ Yes ☒ No

Does the revision require additional coordination with utility companies? ☒ Yes ☐ No

ADDENDUM CONCURRENCE

This document was prepared by:



09/22/2022

Jason Rowley, Hanson Professional Services, Inc.
Project Manager

Reviewed by:

Christopher Vergon, P.E.
Culvert Asset Engineer, LaPorte District

Reviewed by:

Paul South, P.E.
District Scoping Manager, LaPorte District

Approved by:

Steve Benczik, P.E.
System Asset Manager, LaPorte District

Culvert Condition Rating System

The condition rating system used is based on the 2014 JTRP technical report for small culvert inspection and asset management. Within the report, guidelines for existing inspection rating and proposed inspection ratings are provided. The "proposed" rating system was used during the culvert inspection on 09/08/2022. The ratings used are N, 1, 3, 5, 7, 9 with a rating of "9" being excellent, new condition. The "N" rating represents an unknown/not found condition.

The scope of the project, HMA Minor Structural Overlay (Functional Treatment), was the determining factor in assigning a rating to culverts that were in between replacement and remain-in-place. The Indiana Design Manual indicates a 2-layer HMA overlay to have a minimum acceptable design life of 12-15 years (IDM Fig. 601-4A). Therefore, if a culvert appeared to be in fair condition but could be expected to require maintenance or replacement within the next 15 years, it was given a score of "5" or below. All culverts rated "5" or below are recommended for replacement.

Note:
Other design features, such as guardrail and clear zone improvements, are not included in this inspection report.

Proposed Rating Scale

Proposed Rating Scale		Re-inspection Frequency
9	**Excellent**: Perfect condition, recently installed or repaired	6 years
7	**Good**: No repairs needed, list specific items to consider for next inspection	4 years
5	**Fair**: Acceptable condition, increase inspection frequency	2 years
3	**Poor**: n danger of failing, needs repair	<1 year
1	**Critical**: Culvert is failing; immediate action needed	Repair plan needed this season
N	**Unknown/Not Found**	Locate culvert or remove from inventory this season

Structure Number:	10	Size & Material:	18” CMP
Direction of Flow:	East-to-West		
Embankment:	Sinkhole in shoulder on DS end, appears 3:1.		
End Sections:	No end sections. DS end buried. US end protruding CMP with damage/warping.		
Structure	Almost half-full with debris. Material deteriorating.		
Flowline	Overgrown		
General Comments:	Evidence of maintenance treatment to fill sinkhole.		
Hanson’s Recommendation:	Score “4” – Replace		







Structure Number:	20	Size & Material:	3'x2' BC
Direction of Flow:	East-to-West		
Embankment:	Appears 3:1		
End Sections:	Wingwalls poor, exposed rebar, spalling, cracking		
Structure	Reinforced concrete box, poor condition, spalling. Sediment across bottom.		
Flowline	Good vegetation, overgrown		
General Comments:	Large existing hole to north of US end (see picture to right). Undetermined if meant for drainage or dug by wildlife.		
Hanson's Recommendation:	Score "3" – Replace		











Structure Number:	30	Size & Material:	15” CCP
Direction of Flow:	East-to-West		
Embankment:	Appears 2:1		
End Sections:	Not present, US end buried		
Structure	Nearly full with sediment, signs of spalling, cracking		
Flowline	Overgrown		
General Comments:			
Hanson’s Recommendation:	Score “5” – Replace		







Structure Number:	40	Size & Material:	15” CMP
Direction of Flow:	West-to-East		
Embankment:	Appears 3:1 or steeper		
End Sections:	Pipe buried, unable to inspect, cannot confirm presence		
Structure	Pipe buried, unable to inspect		
Flowline	Overgrown		
General Comments:	According to Asset Viewer pipe has been buried for at least 3 years.		
Hanson’s Recommendation:	Score “3” – Replace		



Structure Number:	50	Size & Material:	15” CCP
Direction of Flow:	West-to-East		
Embankment:	Appears 3:1 or steeper		
End Sections:	US end not found, DS end no ES present		
Structure	US end buried, DS end barrel condition looks fair		
Flowline	Overgrown		
General Comments:	Appears that the property owner to the West graded over US end of pipe. US foreslope appears hazardous, consider regrading.		
Hanson’s Recommendation:	Score “5” – Replace		









Structure Number:	60	Size & Material:	15” CCP
Direction of Flow:	East-to-West		
Embankment:	Appears 2:1		
End Sections:	No end sections		
Structure	Barrel condition good, minor displacement on US end		
Flowline	Overgrown		
General Comments:			
Hanson’s Recommendation:	Score “7” – Leave in place, install end sections		









Structure Number:	70	Size & Material:	Inlet
Direction of Flow:	Unknown		
Embankment:	N/A		
End Sections:	N/A		
Structure	Unknown		
Flowline	N/A		
General Comments:			
Hanson's Recommendation:	To be reviewed for adjustment pending survey		



Structure Number:	71	Size & Material:	Inlet
Direction of Flow:	Unknown		
Embankment:	N/A		
End Sections:	N/A		
Structure	Unknown		
Flowline	N/A		
General Comments:			
Hanson's Recommendation:	To be reviewed for adjustment pending survey		



Structure Number:	72	Size & Material:	Inlet
Direction of Flow:	Unknown		
Embankment:	N/A		
End Sections:	N/A		
Structure	Unknown		
Flowline	N/A		
General Comments:			
Hanson's Recommendation:	To be reviewed for adjustment pending survey		



Structure Number:	73	Size & Material:	Inlet
Direction of Flow:	Unknown		
Embankment:	N/A		
End Sections:	N/A		
Structure	Unknown		
Flowline	N/A		
General Comments:			
Hanson's Recommendation:	To be reviewed for adjustment pending survey		



Structure Number:	74	Size & Material:	Inlet
Direction of Flow:	Unknown		
Embankment:	N/A		
End Sections:	N/A		
Structure	Unknown		
Flowline	N/A		
General Comments:			
Hanson's Recommendation:	To be reviewed for adjustment pending survey		



Structure Number:	75	Size & Material:	Inlet
Direction of Flow:	Unknown		
Embankment:	N/A		
End Sections:	N/A		
Structure	Unknown		
Flowline	N/A		
General Comments:			
Hanson's Recommendation:	To be reviewed for adjustment pending survey		



Structure Number:	80	Size & Material:	12” CMP
Direction of Flow:	East-to-West		
Embankment:	Appears 3:1 or steeper		
End Sections:	No end sections		
Structure	Buried, last known barrel condition scored “5” on INDOT inspection in 2019		
Flowline	Overgrown		
General Comments:			
Hanson’s Recommendation:	Score “4” – Replace		





Structure Number:	90	Size & Material:	15” CCP
Direction of Flow:	East-to-West		
Embankment:	3:1 or steeper		
End Sections:	No end sections		
Structure	Last INDOT inspection in 2019 scored barrel condition as “5”		
Flowline	Overgrown		
General Comments:			
Hanson’s Recommendation:	Score “5” – Replace		





Structure Number:	100	Size & Material:	15” CCP
Direction of Flow:	West-to-East		
Embankment:	Appears 3:1 or steeper		
End Sections:	No end sections		
Structure	Buried, no barrel condition score given in INDOT inspections records on Asset Viewer. Assume poor condition.		
Flowline	Overgrown		
General Comments:			
Hanson’s Recommendation:	Score “3” – Replace		





Structure Number:	110	Size & Material:	24” CPCP
Direction of Flow:	South-to-North		
Embankment:	Appears 4:1		
End Sections:	No end sections		
Structure	Buried, last INDOT culvert inspection from 2019 scored barrel condition at “5”		
Flowline	Good vegetation, clear		
General Comments:			
Hanson’s Recommendation:	Score “5” – Replace		





Structure Number:	120	Size & Material:	36”x15” RCB
Direction of Flow:	West-to-East		
Embankment:	Appears 3:1 or steeper		
End Sections:	Severe erosion, cracking, spalling on both ends		
Structure	Barrel scored “5” on last INDOT inspection from 2021, sediment across bottom		
Flowline	Overgrown/obstructed on US side		
General Comments:			
Hanson’s Recommendation:	Score “4” – Replace		





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

ProjectNumber	SubProjectCode	County	Property
1800574	1800574	White	Altherr Park
1800605	1800605	White	Altherr Park
1800633	1800633	White	Monon Park

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

Environmental Justice (EJ) Analysis - Des 2100235 & 2100171

Project Description

Des 2100235 & 2100171 is located on SR 43, from the north junction of SR 18 to US 24/421, in White County, Indiana, from approximately the Town of Reynolds to the Town of Brookston. This section of SR 43 is classified as a Rural Other Principal Arterial and consists of two lanes, one northbound and one southbound. This project is needed due to the deteriorated condition of the pavement along SR 43, which exhibits significant deterioration including cracking and potholing, and the drainage pipes under SR 43. The draft purpose of this project is to restore the roadway to a new condition and increase its service life.

The proposed project will meet the purpose and need by milling the existing asphalt and overlaying it with hot mix asphalt (HMA) surface material and completing partial- or full-depth patching as needed. In addition to the HMA overlay activities, work will occur to repair or upgrade adjacent curb ramps to bring them into compliance with the Americans with Disabilities Act (ADA) and replace or repair eleven small culverts (each less than 48") under SR 43, and eleven storm sewer inlets. All curb ramp repair is limited to the Town of Reynolds, and all inlet replacement to the towns of Reynolds and Chalmers. Land use in the vicinity of the project is a mix of residential and commercial primarily within the towns, and agricultural and wind farming in the rural areas. The project is expected to require the purchase of 1.53 acres of permanent right-of-way and less than 0.1 acre of temporary right-of-way to facilitate small culvert repairs and replacements.

Environmental Justice

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. This project will require 1.53 acres of new 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 concern exist 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 White County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC are Census Tracts 9584 & 9588, White 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 American Community Survey 5-year estimates was obtained from the US Census website on June 22, 2023 by H. W. Lochner. The data for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (US Census, 2023)

	COC – White County, IN	AC-1 – Census Tract 9584, White County, IN	AC-2 – Census Tract 9588, White County, IN
Percent Minority	11.4%	6.5%	4.9%
125% of COC	14.3%	AC < 125% COC	AC < 125% COC
EJ Population of Concern?	--	No	No
Percent Low-Income	8.6%	4.8%	5.2%
125% of COC	10.8%	AC < 125% COC	AC < 125% COC
EJ Population of Concern?	--	No	No

AC-1, Census Tract 9584, has a percent minority of 6.5% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 9588, has a percent minority 4.9%, which is below 50% and is below the 125% COC threshold. Therefore, both ACs do not contain minority populations of EJ concern.

AC-1, Census Tract 9584, has a percent low-income of 4.8% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 9588, has a percent low-income of 5.2% which is below 50% and is below the 125% COC threshold. Therefore, both ACs do not contain low-income populations of EJ concern.

Conclusion

The census data sheets, maps, and calculations can be found below. Both ACs were found to not have minority or low-income populations of EJ concern. No further environmental justice analysis is recommended.

Low-Income Population

	White County, Indiana	Census Tract 9584, White County,	Census Tract 9588, White County,
Label	**Estimate**	**Estimate**	**Estimate**
Population for whom poverty status is determined			
Total:	24,251	2,202	3,314
Below poverty level	2,096	105	172
Percenty below poverty level	8.6%	4.8%	5.2%

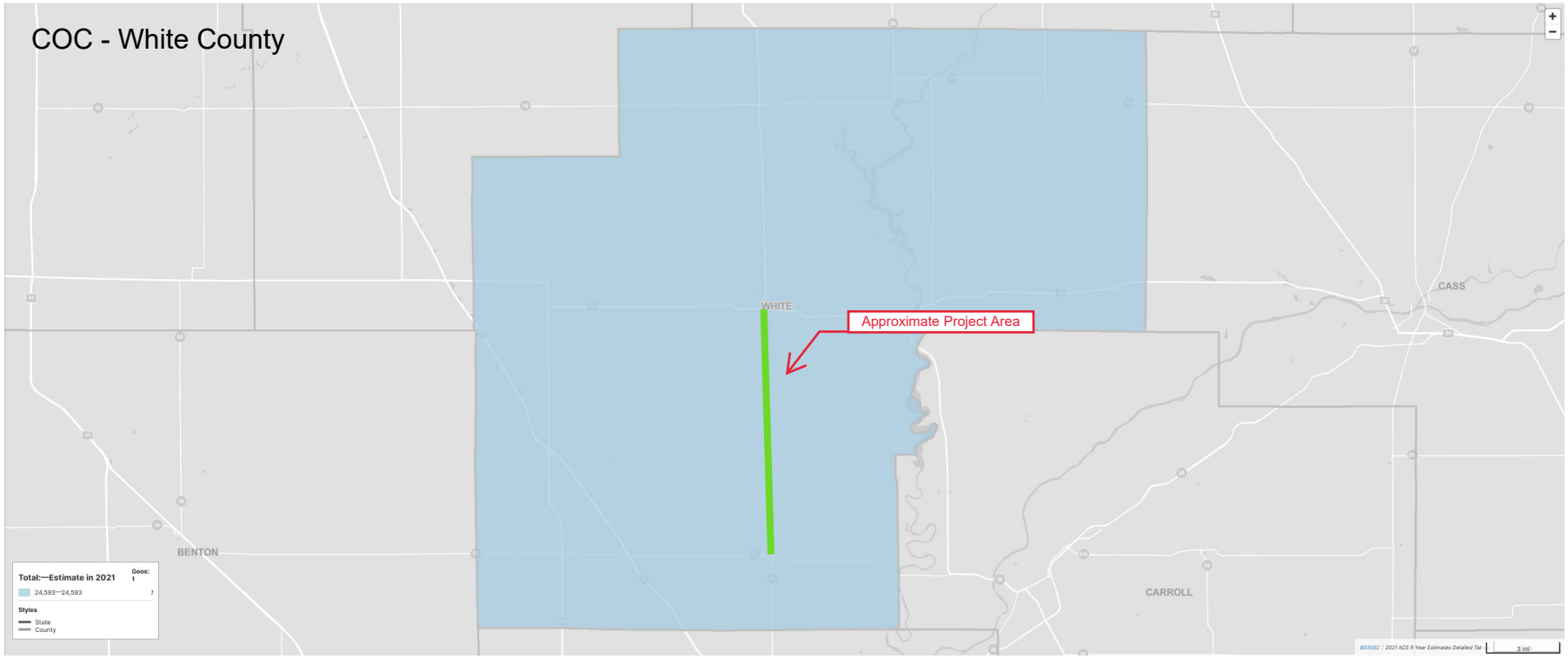
Table: S1707

Minority Population

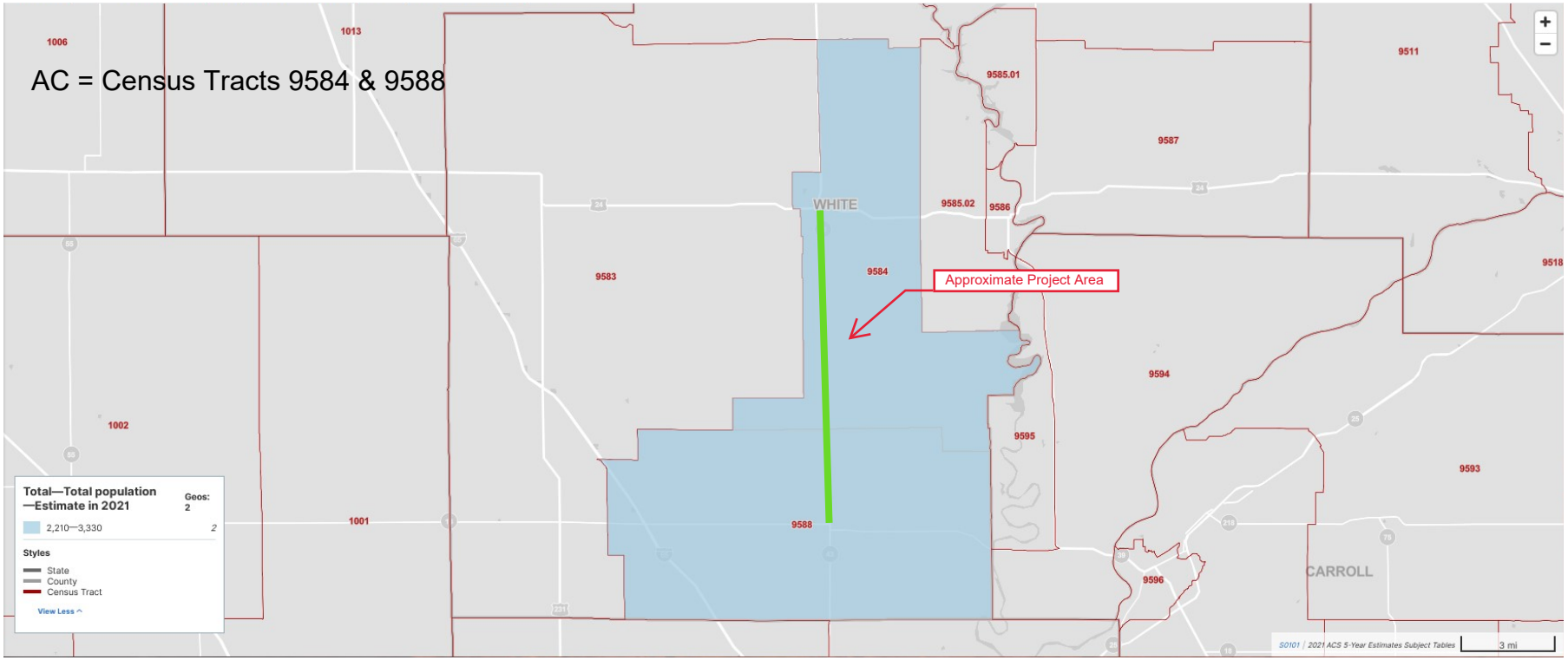
	White County, Indiana	Census Tract 9584, White County, Indiana	Census Tract 9588, White County, Indiana
Label	**Estimate**	**Estimate**	**Estimate**
Total:	24,593	2,210	3,330
White alone	21,787	2,067	3,168
Minority population	2,806	143	162
Percent minority	11.4%	6.5%	4.9%

Table: B03002

COC - White County



AC = Census Tracts 9584 & 9588



HISPANIC OR LATINO ORIGIN BY RACE

United States® Census Bureau

Note: The table shown may have been modified by user selections. Some information may be missing.

DATA NOTES	
TABLE ID:	B03002
SURVEY/PROGRAM:	American Community Survey
VINTAGE:	2021
DATASET:	ACSDT5Y2021
PRODUCT:	ACS 5-Year Estimates Detailed Tables
UNIVERSE:	Total population
FTP URL:	None
API URL:	https://api.census.gov/data/2021/acs/acs5
USER SELECTIONS	
GEOS	Census Tract 9584; White County; Indiana; Census Tract 9588; White County; Indiana; White County, Indiana
TOPICS	Hispanic or Latino
EXCLUDED COLUMNS	White County, Indiana!!Margin of Error
	Census Tract 9584, White County, Indiana!!Margin of Error
	Census Tract 9588, White County, Indiana!!Margin of Error
APPLIED FILTERS	None
APPLIED SORTS	None
PIVOT & GROUPING	
PIVOT COLUMNS	None
PIVOT MODE	Off

ROW GROUPS	None
VALUE COLUMNS	None
WEB ADDRESS	https://data.census.gov/table?t=Hispanic+or+Latino&g=050XX00US18181_1400000US18181958400,18181958800&tid=ACSDT5Y2021.B03002&moe=false
TABLE NOTES	Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.
	Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.
	Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates
	Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.
	The Hispanic origin and race codes were updated in 2020. For more information on the Hispanic origin and race code changes, please visit the American Community Survey Technical Documentation website.

	The 2017-2021 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.
	Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.
	Explanation of Symbols:- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.N The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area. (X) The estimate or margin of error is not applicable or not available.median- The median falls in the lowest interval of an open-ended distribution (for example "2,500-")median+ The median falls in the highest interval of an open-ended distribution (for example "250,000+").** The margin of error could not be computed because there were an insufficient number of sample observations.*** The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.***** A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.
COLUMN NOTES	None

Table: ACSDT5Y2021.B03002

	White County, Indiana	Census Tract 9584, White County, Indiana	Census Tract 9588, White County, Indiana
Label	**Estimate**	**Estimate**	**Estimate**
Total:	24,593	2,210	3,330
Not Hispanic or Latino:	22,426	2,199	3,211
White alone	21,787	2,067	3,168
Black or African American alone	119	33	0
American Indian and Alaska Native alone	62	7	0
Asian alone	71	2	13
Native Hawaiian and Other Pacific Islander alone	0	0	0
Some other race alone	0	0	0
Two or more races:	387	90	30
Two races including Some other race	86	14	11
Two races excluding Some other race, and three or more races	301	76	19
Hispanic or Latino:	2,167	11	119
White alone	364	0	64
Black or African American alone	10	0	0
American Indian and Alaska Native alone	0	0	0
Asian alone	0	0	0
Native Hawaiian and Other Pacific Islander alone	14	0	14
Some other race alone	1,596	7	10
Two or more races:	183	4	31
Two races including Some other race	177	4	30

Table: ACSDT5Y2021.B03002

	White County, Indiana	Census Tract 9584, White County, Indiana	Census Tract 9588, White County, Indiana
Label	**Estimate**	**Estimate**	**Estimate**
Two races excluding Some other race, and three or more races	6	0	1

POVERTY STATUS IN THE PAST 12 MONTHS

United States® Census Bureau

Note: The table shown may have been modified by user selections. Some information may be missing.

DATA NOTES	
TABLE ID:	S1701
SURVEY/PROGRAM:	American Community Survey
VINTAGE:	2021
DATASET:	ACSST5Y2021
PRODUCT:	ACS 5-Year Estimates Subject Tables
UNIVERSE:	None
FTP URL:	None
API URL:	https://api.census.gov/data/2021/acs/acs5/subject
USER SELECTIONS	
TOPICS	Income and Poverty; Poverty
GEOS	Census Tract 9584; White County; Indiana; Census Tract 9588; White County; Indiana; White County, Indiana
EXCLUDED COLUMNS	White County, Indiana!!Total!!Margin of Error
	White County, Indiana!!Below poverty level!!Margin of Error
	White County, Indiana!!Percent below poverty level!!Margin of Error
	Census Tract 9584, White County, Indiana!!Total!!Margin of Error
	Census Tract 9584, White County, Indiana!!Below poverty level!!Margin of Error
	Census Tract 9584, White County, Indiana!!Percent below poverty level!!Margin of Error

	Census Tract 9588, White County, Indiana!!Total!!Margin of Error
	Census Tract 9588, White County, Indiana!!Below poverty level!!Margin of Error
	Census Tract 9588, White County, Indiana!!Percent below poverty level!!Margin of Error
APPLIED FILTERS	None
APPLIED SORTS	None
PIVOT & GROUPING	
PIVOT COLUMNS	None
PIVOT MODE	Off
ROW GROUPS	None
VALUE COLUMNS	None
WEB ADDRESS	https://data.census.gov/table?t=Income+and+Poverty:Poverty&g=050XX00US18181_1400000US18181958400,18181958800&tid=ACSST5Y2021.S1701&moe=false
TABLE NOTES	Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.
	Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section. Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

	Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates
	Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.
	Dollar amounts are adjusted to respective calendar years. For more information, see: Change to Income Deficit.
	The 2017-2021 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.
	Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.
	Explanation of Symbols:- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.N The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area. (X) The estimate or margin of error is not applicable or not available.median- The median falls in the lowest interval of an open-ended distribution (for example "2,500-")median+ The median falls in the highest interval of an open-ended distribution (for example "250,000+").** The margin of error could not be computed because there were an insufficient number of sample observations.*** The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.***** A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.
COLUMN NOTES	None

	White County, Indiana			Census Tract 9584, White County, Indiana			Census Tract 9588, White County, Indiana		
	Total	Below poverty level	Percent below poverty level	Total	Below poverty level	Percent below poverty level	Total	Below poverty level	Percent below poverty level
Label	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
Population for whom poverty status is determined	24,251	2,096	8.6%	2,202	105	4.8%	3,314	172	5.2%
AGE									
Under 18 years	5,625	610	10.8%	472	0	0.0%	789	19	2.4%
Under 5 years	1,389	181	13.0%	139	0	0.0%	209	0	0.0%
5 to 17 years	4,236	429	10.1%	333	0	0.0%	580	19	3.3%
Related children of householder under 18	5,609	594	10.6%	472	0	0.0%	789	19	2.4%
18 to 64 years	13,893	1,240	8.9%	1,273	69	5.4%	1,885	130	6.9%
18 to 34 years	4,462	524	11.7%	419	7	1.7%	688	54	7.8%
35 to 64 years	9,431	716	7.6%	854	62	7.3%	1,197	76	6.3%
60 years and over	6,778	377	5.6%	596	55	9.2%	857	27	3.2%
65 years and over	4,733	246	5.2%	457	36	7.9%	640	23	3.6%
SEX									
Male	12,132	807	6.7%	1,166	43	3.7%	1,664	50	3.0%
Female	12,119	1,289	10.6%	1,036	62	6.0%	1,650	122	7.4%
RACE AND HISPANIC OR LATINO ORIGIN									
White alone	21,867	1,626	7.4%	2,067	94	4.5%	3,216	124	3.9%
Black or African American	93	0	0.0%	33	0	0.0%	0	0	-
American Indian and Alaska Native alone	62	0	0.0%	7	0	0.0%	0	0	-
Asian alone	71	16	22.5%	2	0	0.0%	13	13	100.0%
Native Hawaiian and Other Pacific Islander alone	14	0	0.0%	0	0	-	14	0	0.0%
Some other race alone	1,596	241	15.1%	7	0	0.0%	10	10	100.0%
Two or more races	548	213	38.9%	86	11	12.8%	61	25	41.0%
Hispanic or Latino origin (of any race)	2,148	298	13.9%	11	0	0.0%	119	19	16.0%
White alone, not Hispanic or Latino	21,507	1,582	7.4%	2,067	94	4.5%	3,152	124	3.9%
EDUCATIONAL ATTAINMENT									
Population 25 years and over	16,760	1,210	7.2%	1,552	100	6.4%	2,209	102	4.6%
Less than high school graduate	1,795	219	12.2%	123	5	4.1%	98	14	14.3%
High school graduate (includes equivalency)	6,642	607	9.1%	707	67	9.5%	709	48	6.8%
Some college, associate's degree	5,338	322	6.0%	380	28	7.4%	843	38	4.5%
Bachelor's degree or	2,985	62	2.1%	342	0	0.0%	559	2	0.4%
EMPLOYMENT STATUS									
Civilian labor force 16 years and over	11,872	513	4.3%	1,182	31	2.6%	1,748	46	2.6%
Employed	11,275	461	4.1%	1,104	31	2.8%	1,728	46	2.7%
Male	6,370	158	2.5%	618	8	1.3%	971	6	0.6%
Female	4,905	303	6.2%	486	23	4.7%	757	40	5.3%
Unemployed	597	52	8.7%	78	0	0.0%	20	0	0.0%
Male	297	13	4.4%	78	0	0.0%	13	0	0.0%
Female	300	39	13.0%	0	0	-	7	0	0.0%
WORK EXPERIENCE									
Population 16 years and over	19,227	1,546	8.0%	1,794	105	5.9%	2,590	155	6.0%
Worked full-time, year-round in the past 12	8,355	112	1.3%	767	10	1.3%	1,279	12	0.9%
Worked part-time or part-year in the past 12	4,302	476	11.1%	444	33	7.4%	543	64	11.8%
Did not work	6,570	958	14.6%	583	62	10.6%	768	79	10.3%
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS									
50 percent of poverty level	1,071	(X)	(X)	53	(X)	(X)	53	(X)	(X)
125 percent of poverty level	3,119	(X)	(X)	233	(X)	(X)	244	(X)	(X)

	White County, Indiana			Census Tract 9584, White County, Indiana			Census Tract 9588, White County, Indiana		
	Total	Below poverty level	Percent below poverty level	Total	Below poverty level	Percent below poverty level	Total	Below poverty level	Percent below poverty level
Label	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
150 percent of poverty level	4,233	(X)	(X)	350	(X)	(X)	479	(X)	(X)
185 percent of poverty level	6,587	(X)	(X)	605	(X)	(X)	795	(X)	(X)
200 percent of poverty level	7,349	(X)	(X)	626	(X)	(X)	866	(X)	(X)
300 percent of poverty level	12,165	(X)	(X)	1,072	(X)	(X)	1,439	(X)	(X)
400 percent of poverty level	17,122	(X)	(X)	1,499	(X)	(X)	2,004	(X)	(X)
500 percent of poverty level	19,267	(X)	(X)	1,695	(X)	(X)	2,406	(X)	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED	4,307	957	22.2%	385	72	18.7%	521	105	20.2%
Male	1,945	320	16.5%	208	27	13.0%	281	32	11.4%
Female	2,362	637	27.0%	177	45	25.4%	240	73	30.4%
15 years	0	0	-	0	0	-	0	0	-
16 to 17 years	16	16	100.0%	0	0	-	0	0	-
18 to 24 years	507	219	43.2%	11	3	27.3%	116	45	38.8%
25 to 34 years	530	90	17.0%	46	2	4.3%	93	3	3.2%
35 to 44 years	483	136	28.2%	23	14	60.9%	82	20	24.4%
45 to 54 years	611	134	21.9%	81	0	0.0%	75	22	29.3%
55 to 64 years	749	183	24.4%	76	17	22.4%	55	7	12.7%
65 to 74 years	729	74	10.2%	80	13	16.3%	63	4	6.3%
75 years and over	682	105	15.4%	68	23	33.8%	37	4	10.8%
Mean income deficit for unrelated individuals (dollars)	6,690	(X)	(X)	5,701	(X)	(X)	6,263	(X)	(X)
Worked full-time, year-round in the past 12 months	1,717	42	2.4%	162	6	3.7%	250	0	0.0%
Worked less than full-time, year-round in the past 12 months	909	287	31.6%	68	20	29.4%	151	62	41.1%
Did not work	1,681	628	37.4%	155	46	29.7%	120	43	35.8%
Population in housing units for whom poverty status is determined	24,210	2,079	8.6%	2,202	105	4.8%	3,314	172	5.2%