FHWA-Indiana Environmental Document

CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM

GENERAL PROJECT INFORMATION

Road No./County:	281st Street (St.), Hamilton County, IN
Designation Number(s):	2003031
Project Description/Termini:	281st St. Road Rehabilitation. Beginning at State Road (SR) 19/ Cicero Rd to SR 213/ Walnut Grove Road.

	Categorical Exclusion, Level 2 – Required Signatories: INDOT DE and/or INDOT ESD
X	**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

N/A

INDOT DE Initials and Date

ADWP September 4, 2024

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: Jenna Garrison, RQAW

County Hamilton Route 281st Street Des. No. 2003031

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 July 5, 2023, 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; G-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: Federal Highway Administration (FHWA) and Hamilton County INDOT District: Greenfield

Local Name of the Facility: 281st Street

Funding Source (*mark all that apply*): Federal [X] State [ ] Local [X] 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:
The need for this project stems from 281st St. failing to meet the minimum INDOT design standards for a Major Collector roadway in a rural area with an annual average daily traffic (AADT) of < 1000 vehicles per day (VPD). Current INDOT design standards require a Major Collector roadway in a rural area with an AADT <1000 VPD to have a minimum of 10-foot-wide travel lanes with 2-foot-wide usable shoulders. The AADT is expected to increase to 1157 (2046) and the current INDOT design standards require a Major Collector roadway in a rural area with an AADT > 1000 to have minimum 11-foot-wide travel lanes with 3-foot usable shoulder and 2-foot paved shoulder in each direction. Please refer to Appendix I, page I-10 for the traffic analysis that was completed for this project that shows current and design year AADT for this section of 281st St. In addition, while not the primary need for the project there is minimal to no roadside ditches present to carry roadway runoff.

Purpose:
The purpose of this project is to improve 281st St. to meet minimum INDOT design standards for a Major Collector roadway in a rural area with an AADT of > 1000 VPD which requires a minimum 12-foot-wide travel lanes with 3-foot usable and 2-foot wide paved shoulders. A secondary outcome of this project is to ensure positive drainage along 281st St. in this area.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Hamilton Municipality: 281st Street

Limits of Proposed Work: From SR 19 to SR 213

Total Work Length: 4.4 miles Mile(s) Total Work Area: 59 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.

Hamilton County and the Federal Highway Administration (FHWA) intend to proceed with the roadway improvement project along 281st St in Hamilton County, Indiana.

Location:
This project is located on 281st St. and extends from SR 19/ Cicero Rd and continues to 4.4 miles east to SR 213/ Walnut Grove Rd. The project is further described as being within Jackson and White River Civil Townships, Section 12 of Township 20 North, Range 4 East, Sections 7-10 of Township 20 North, Range 5 East, of the Arcadia and Omega U.S. Geological Survey (USGS) Quadrangles. Please refer to Appendix B: B-1 to B-10 for project location maps.

Existing Conditions:
East 281st St. is classified as a Major Collector roadway and consists of two 9 to 10-foot-wide travel lanes (one westbound and one eastbound), and 0 to 4-foot-wide gravel shoulders. Within the project area, East 281st St intersects SR 19, Ott Rd, Crooked Creek Ave/N Whistler Rd, North Startsman Rd, Rulon Rd, Hill Rd, Lacy Rd, and SR 213/ Walnut Grove Rd. In addition, East 281st St. crosses Cicero Creek and Weasel Creek. Generally, road runoff drains to adjacent farm fields as roadside ditches are minimal or nonexistent. Sidewalks are not present within the project area. Two bridges are located within the project area.Adjacent land use

consists of residential, wooded, and agricultural properties. Refer to attached project area photos (Appendix B: B-11 to B-28).

Preferred Alternative:
The preferred alternative involves milling and resurfacing the pavement of 281st St. with a hot mix asphalt (HMA) overlay and widening the travel lanes to 12-foot wide and 3-foot-wide paved shoulders in each direction. Additionally, several small drainage structures within the project limits will be replaced and roadside ditches will be constructed on both sides of the roadway, where applicable, to provide positive drainage away from the roadway and adjacent properties. The project will occur in two phases. Phase 1 will extend from SR 19 to Rulon Rd for an approximate length of 2.4 miles. Phase 2 will extend from Rulon Rd to SR 213 for an approximate length of 2 miles. Please refer to the below *Bridges and Small Structure*s section of this CE document for more information regarding the structures to be replaced.

Impact Summary:
This project will require 44.57 acres of permanent right-of-way and 7 acres of temporary right-of-way. The project will result in permanent and temporary impacts to wetlands and streams. Approximately 0.3 acre of permanent wetland disturbance and 125 linear feet of stream disturbance to UNT 1 to Cicero Creek are expected. See the *Water Resources* section of this CE document for further details. This project will result in up to 3.35 acres of tree clearing/trimming. Lastly, utility relocation may be necessary to construct the project as overhead utilities and a water line are located near 281st St. in some locations. Please note, this document covers the impacts for Phase 1 and Phase 2, but Phase 2 will be updated once design progresses.

Logical Termini/Independent Utility:
The termini for this project are logical as the project begins at the intersection of SR 19 and 281st St. and ends at the intersection of 281st St. and SR 213, which are major crossroads for vehicular traffic traveling between the towns of Millersburg and Omega. The project demonstrates independent utility as it is a stand-alone project that is not dependent upon any other projects to function.

Maintenance of Traffic:
The Maintenance of Traffic (MOT) plan for this project for Phase 1 (SR 19 to Rulon Rd) will occur in three segment phases to reduce impacts to motorists. Each segment will require closure to through traffic and detour routes utilizing Startsman Rd, 266th St., Whistler Ave, Rulon Rd and SR 19 (Appendix B: B-37 to B-40). Access to all properties will be provided during construction. A MOT plan will be required for Phase 2 of the project and will be forthcoming as the project design progresses. Please refer to the below *Maintenance of Traffic (MOT) During Construction* section of this CE document for more details.

The project will meet the purpose and need of the project by widening 281st St. to include 12-foot wide travel lanes and 3-foot wide paved shoulders to meet current INDOT design standards for a Major Collector roadway in a rural area with an AADT of greater than 1000 VPD and improve drainage for the roadway.

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
The "No-Build" alternative was considered for this project. This alternative would eliminate any environmental impacts by utilizing 281st St. facility with no expenditure of capital funds for improvement. This alternative would leave the existing roadway as is, and it would fail to accommodate the additional traffic volumes expected. Therefore, it would not meet the purpose and need of the project and was eliminated from further consideration.

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

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

ROADWAY CHARACTER:

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

Name of Roadway: 281st St.
Functional Classification: Rural Major Collector
Current ADT: 948 VPD (2026) Design Year ADT: 1157 VPD (2046)
Design Hour Volume (DHV): 115 Truck Percentage (%): 11
Designed Speed (mph): 50 Legal Speed (mph): 35-50

	Existing		Proposed	
Number of Lanes:	2		2	
Type of Lanes:	Travel		Travel	
Pavement Width:	20	ft.	24	ft.
Shoulder Width:	0-4	ft.	3	ft.
Median Width:	0	ft.	0	ft.
Sidewalk Width:	0	ft.	0	ft.

Setting:		Urban		Suburban	X	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): 2900064/ 2900058
Sufficiency Rating: 79.5, 09/23/2021 INDOT Bridge Inspection Report
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Prestressed concrete continuous bridge		Prestressed concrete continuous bridge	
Number of Spans:	3		3	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	N/A	ft.	N/A	ft.
Curb to Curb Width:	26.2	ft.	26.2	ft.
Outside to Outside Width:	28.5	ft.	28.5	ft.
Shoulder Width:	0	ft.	0	ft.

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Structure/NBI Number(s): 2900066/ 2900060 Sufficiency Rating: 99.9 09/14/2021 INDOT Bridge Inspection report.
(Rating, Source of Information)

	Existing		Proposed	
Bridge/Structure Type:	Wood		Wood	
Number of Spans:	3		3	
Weight Restrictions:	N/A	ton	N/A	ton
Height Restrictions:	32	ft.	32	ft.
Curb to Curb Width:	32	ft.	32	ft.
Outside to Outside Width:	33.3	ft.	33.3	ft.
Shoulder Width:	0.6	ft.	0.6	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.

There are two bridges, Structure No. 29-00064, over Cicero Creek (Big Cicero Creek Drain) and Structure No. 29-00066 over Weasel Creek (Henry Bright Legal Drain) that are located within the project limits but will not be impacted by this project. All small structures to be replaced were evaluated for any historical features such as stone or brick and were verified by INDOT Cultural Resources Office (CRO) office on March 19, 2024. It was determined that none of these structures exhibit any historical characteristics (Appendix D D-1 to D-10). Please refer to the below table for a list of all structures to be replaced as part of this project. Please note that none of the small structures have an assigned structure number due to their size. No bats or evidence of bats were seen or heard at any of the structures during the most recent bat inspection on August 8, 2023, by RQAW (Appendix C: C-58 to C-59).

Structure No. Per Plans	Stream/ Wetland Impacts	Existing Size/Type and Length	Proposed Structure Size/Type and Length	Work Type	Culvert Condition Rating	Plan Sheet Reference
100	N/A	18'' CMP (135 lft.)	21'' CMP (135 lft.)	Replacement	N/A	Appendix B: B-41
101	Wetland A	36'' CMP (36 lft.)	36'' X 48'' BOX (57 lft.)	Replacement	N/A	Appendix B: B-41
102	UNT 1 to Cicero Creek and Wetland B	60'' CMP (71 lft.)	84'' CMP (72 lft.)	Replacement	N/A	Appendix B: B-43
103	N/A	24'' CMP (30 lft.)	36'' X 72''BOX (57 lft.)	Replacement	N/A	Appendix B: B-45
104	N/A	15'' CMP (50 lft.)	18'' CMP (50 lft.)	Replacement	N/A	Appendix B: B-46
105	N/A	15" CMP (27 lft.)	18'' CMP (49 lft.)	Replacement	N/A	Appendix B: B-46

Additionally, all drive pipes within the limits of the project will need to be replaced. New drive pipes will be installed at several locations where they do not currently exist. Please refer to the below table for all drive pipes that will be replaced/installed as part of the project. No bats or evidence of bats were seen or heard at any of these existing structures.

Structure No. Per Plans	Stream/Wetland Impacts	Proposed Structure Size/Type and Length	Work Type	Plan Sheet Reference
201	N/A	15" CMP (43 lft.)	New	Appendix B: B-41
202	N/A	15" CMP (39 lft.)	Replacement	Appendix B: B-41
206	N/A	15'' CMP (56 lft.)	Replacement	Appendix B: B-42

208	N/A	15'' CMP (64 lft.)	Replacement	Appendix B: B-43
209	N/A	15'' CMP 37 (lft.)	Replacement	Appendix B: B-43
211	N/A	15'' CMP (31 lft.)	New	Appendix B: B-43
212	N/A	15'' CMP (31 lft.)	Replacement	Appendix B: B-43
213	N/A	15'' CMP (158 lft.)	New	Appendix B: B-44
214	N/A	15'' CMP (111 lft.)	New	Appendix B: B-44
215	N/A	15'' CMP (31 lft.)	New	Appendix B: B-44
216	N/A	18'' x 36'' BOX (39 lft.)	New	Appendix B: B-44
217	N/A	15'' CMP (29 lft.)	New	Appendix B: B-45
218	N/A	18'' x 72'' BOX (46 lft)	New	Appendix B: B-46
219	N/A	18'' CMP (19 lft.)	Replacement	Appendix B: B-46
222	N/A	15'' CMP (36 lft)	Replacement	Appendix B: B-47
223	N/A	15'' CMP (29 lft.)	Replacement	Appendix B: B-47
224	N/A	30'' CMP (64 lft.)	New	Appendix B: B-49
225	N/A	18'' CMP (43 lft.)	New	Appendix B: B-49
226	N/A	30'' CMP (63 lft.)	New	Appendix B: B-49
227	N/A	18'' CMP (57 lft.)	New	Appendix B: B-49
N/A	N/A	60'' CMP TBD	Replacement	Will be included in Phase 2 plans
N/A	N/A	36'' CMP TBD	Replacement	Will be included in Phase 2 plans
N/A	N/A	30'' CMP TBD	Replacement	Will be included in Phase 2 plans
N/A	N/A	24'' CMP TBD	Replacement	Will be included in Phase 2 plans
N/A	N/A	24'' CMP TBD	Replacement	Will be included in Phase 2 plans
N/A	N/A	24'' CMP TBD	Replacement	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans

N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans
N/A	N/A	15" CMP TBD	New	Will be included in Phase 2 plans

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).		

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.

The MOT has been proposed from State Road (SR) 19 to Rulon Road. The MOT will consist of phased construction with local detour routes. Each phase is estimated to last approximately 2 months. Detours along 281st street for project completion are estimated to last approximately 6 months in total.

- The first phase of the MOT plan will consist of closing 281st Street from SR 19 to Startsman Road. The detour route will consist of SR 19, 266th Street, and Startsman Road. The detour length will be approximately 4.31 miles and will add roughly 2.67 miles of added travel distance.
- The second phase of the MOT plan will consist of closing 281st Street from Whistler Avenue to Rulon Road. The detour route will consist of Whistler Road, 226th Street, and Rulon Road. The detour length will be approximately 3.72 miles and will add roughly 2.21 miles of added travel distance.
- The third phase of the MOT plan will consist of closing 281st Street from Startsman Road to Rulon Road. The detour route would consist of Startsman Road, 226th Street, and Rulon Road. The detour length will be approximately 3.75 miles and will add roughly 2.98 miles of added travel distance.

Please note that MOT has not currently been set for the remainder of the project from Rulon Road to SR 213 (Phase 2); however, the MOT will use phasing with local detour routes similar to what is discussed above. Access to all properties will be maintained throughout the duration of the project.

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

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: $ 1,277,364 (2026) Right-of-Way: $ 250,000 (2024) Construction: $ 6,199,000 (2026)

Anticipated Start Date of Construction: Fall 2027

RIGHT OF WAY:

	Amount (acres)	
Land Use Impacts	Permanent	Temporary
Residential	8	2
Commercial	0	0
Agricultural	32	5
Forest	4.2	0
Wetlands	0.3	0
Other: Omega Christian Church	0.07	0
Other:	0	0
TOTAL	44.57	7

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.

Right-of-way (ROW) required

The existing right of way extends 35 feet from the roadway centerline on the north and south of 281st St. The existing right of way consists of maintained roadside grass and is used primarily for maintenance of the existing roadway and utilities. New right of way is expected to extend 40 feet from the roadway centerline on the north and south side of 281st St. The project requires approximately 44.57 acres of permanent right-of-way (ROW), which consists of 8 acres of residential, 0.07 acres from the Omega Christian Church, 32 acres of agricultural, 4.2 acre of forests and 0.3 acre of wetlands. The project also requires approximately 7 acres of temporary ROW; 2 acres from residential and 5 acres from agricultural properties. The right of way is needed to expand the width of the road in both directions as well as update the drainage ditches along the road. Drainage ditches will be constructed on both sides of the roads to meet INDOT and Hamilton County hydraulic standards. Due to the topography of the area, substantial right of way may be necessary to construct the new drainage ditches.

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 September 27, 2023, and January 17, 2024, Appendix C: C-1 toC-4.

Agency	Date Sent	Date Response Received	Appendix
INDOT, Greenfield District	September 27, 2023	No Response Received	N/A

Federal Highway Administration (FHWA)	September 27, 2023	No Response Received	N/A
Natural Resources Conservation Service (NRCS)	September 27, 2023	October 26, 2023	Appendix C: C-28 to C-29
Indiana Geological and Water Survey (IGWS)	December 19, 2023	Downloaded December 19, 2023	Appendix C: C-5- C-6
Indiana Department of Natural Resources (IDNR-DFW) Division of Fish and Wildlife	September 27, 2023	October 27, 2023	Appendix C: C-24 to C-27
IDNR-Division of Oil and Gas	September 27, 2023	September 27, 2023	Appendix C: C-8
Indiana Department of Environmental Management (IDEM) Groundwater Section	July 20, 2023 (electronic coordination)	August 30, 2023	Appendix C: C-7
United States Army Corps of Engineers (USACE) Louisville District	September 27, 2023	No Response Received	N/A
United States Coast Guard (USCG), 8th District	September 27, 2023	September 28, 2023	Appendix C: C-9
United States Fish and Wildlife Service (USFWS) Bloomington Field Office	January 17, 2024	No Response Received	N/A
Local Floodplain Administrator-Building Commissioner	September 27, 2023	No Response Received	N/A
Local Floodplain Administer-Plan Commission Director	September 27, 2023	No Response Received	N/A
Indianapolis Metropolitan Planning Organization (MPO)	September 27, 2023	No Response Received	N/A
U.S. Department of Housing and Urban Development (USHUD)	September 27, 2023	No Response Received	N/A
National Park Service (NPS)	September 27, 2023	No Response Received	N/A
Citizens Energy Group (Citizens Water)	September 27, 2023	September 29, 2023	Appendix C: C-10
Hamilton County Surveyor's Office	September 27, 2023	October 3, 2023	Appendix C: C-12 to C-23
Hamilton County Plan Commission	September 27, 2023	No Response Received	N/A
Hamilton Heights School Corporation	September 27, 2023	No Response Received	N/A
Hamilton County Parks and Recreation	September 27, 2023	October 2, 2023	Appendix C: C-11
Hamilton County Board of Commissioners	September 27, 2023	No Response Received	N/A
Hamilton County Highway Department	September 27, 2023	No Response Received	N/A
Hamilton County Council	September 27, 2023	No Response Received	N/A
Hamilton County Engineer	September 27, 2023	No Response Received	N/A
Hamilton County MS4 Coordinator	September 27, 2023	No Response Received	N/A
Omega Christian Church	September 27, 2023	No Response Received	N/A

The Hamilton County Surveyor responded on October 3, 2023, that there are eight section corner monuments within the project limits. They also recommended continued coordination with their office regarding the section corners and stated they should be shown on the construction plans and noted in the bid documents (Appendix C: C-12 to C-23). This has been added as a firm commitment.

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

Total stream(s) in project area: 598 Linear feet Total impacted stream(s): 30 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)	Appendix
Cicero Creek	Perennial	271	0	Cicero Creek flows from north to south and is likely a Water of the U.S. Cicero Creek flows under Structure No. 29-00064. No impacts are expected to Cicero Creek.	Appendix F: F-21
UNT 1 to Cicero Creek	Intermittent	40	30	UNT 1 to Cicero Creek follows from north to south and is likely a Water of the U.S	Appendix F: F-21
Weasel Creek	Intermittent	287	0	Weasel Creek flows from north to south and is likely a Water of the US. Cicero Creek flows under Structure No. 29-00066 No impacts are expected to Weasel Creek.	Appendix F: F-34

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.

Based on the desktop review, the aerial maps of the project area (Appendix B: B-1 to B-10), and the RFI report (Appendix E: E-1 to E-11) there are 13 streams, rivers, watercourse or other jurisdictional features within the 0.5-mile search radius. There are three streams, Cicero Creek, UNT 1 to Cicero Creek and Weasel Creek within or adjacent to the project area. That number was confirmed by the site visit, on August 8, 2023, by RQAW. Impacts will only occur to UNT 1 to Cicero Creek due to the replacement of Structure 102. Permanent impacts to UNT 1 to Cicero Creek are anticipated to be 30 linear feet or 0.003 acre. This will be caused by the placement of the new structure and riprap for scour protection. Temporary impacts from dewatering activities equal 6 linear feet or 0.0004 acre. Cicero Creek and Weasel Creek will not be impacted as a part of this project.

A *Waters of the U.S. Determination / Wetland Delineation Report* was completed on November 30, 2023. Please refer to Appendix F: F-1 toF-167 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that Cicero Creek, UNT 1 to Cicero Creek, and Weasel Creek are likely Waters of the U.S. The U.S. Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

Early Coordination

The Hamilton County Surveyor responded on October 3, 2023, stating that Cicero Creek and Weasel Creek are regulated drains. Cicero Creek is under the jurisdiction of the Big Cicero Creek Joint Drainage Board and Weasel Creek is also known as the Henry Bright Drain. They also went on to state that Charles Caylor Drain has three tile portions that cross 281st St. east of Lacy Road. The main drain crosses 281st St. approximately 930 feet east of Lacy Road and Arm 3 crosses approximately 1,660 feet and 2,290 feet east of Lacy Road. They went on to state that that these three crossings of Charles Caylor Drain are agricultural drains that may need to be reconstructed in order to accommodate additional flow due to the increase in impervious (pavement) surface being added. Lastly, they stated that J.J. Billhymer Drain is located east and north of the Town of Omega but has a drainage shed that will be impacted by this project. They also stated that there are current plans to install inlets at each corner of the 281st St. and SR 213 intersection with future plans to extend drainage facilities to the west of the intersection. Detention will need to be provided, and close coordination will be needed with the Hamilton County Surveyors office for the drainage plans associated with aforementioned legal drains and/or drainage sheds (Appendix C: C-12 to C-23). Further coordination with the Hamilton County Surveyor will be

ongoing throughout the project.

The IDNR DFW responded on October 27, 2023, providing general comments and standard recommendations pertaining to stream impacts. Examples include implementing erosion and sediment control measures, stream bank stabilization measures, minimizing in-channel disturbance, time restrictions for working within the waterway, ensuring Best Management Practices (BMPs) are implemented to limit the migration of polycyclic aromatic hydrocarbons (PAHs) into waterways, incorporating wildlife crossing design, and proper use of / placement of riprap. Refer to the complete list of IDNR Division of Fish and Wildlife recommendations in Appendix C: C-24 to C-27. All applicable recommendations are included in the *Environmental Commitments* section of this CE document.

The USCG responded September 28, 2023, that there is no factual support for concluding that project location has current or historic navigation occurring on a waterway. Therefore, a Coast Guard bridge permit or exemption will not be required (Appendix C: C-9).

Open Water Feature(s)	**Presence**	**Impacts** Yes	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.

Based on the desktop review, the aerial maps of the project area (Appendix B, pages B-1 to B-10), and the RFI report (Appendix E: E-1 to E-11) there are four open water feature(s) within the 0.5-mile search radius. There are no open water feature(s) within or adjacent to the project area, which was confirmed by the site visit on August 8, 2023, by RQAW. Therefore, no impacts are expected.

	Presence	**Impacts** Yes	No
Wetlands	X	X	

Total wetland area: 0.75 Acre(s) Total wetland area impacted: 0.21 acre Acre(s)

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

Wetland	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)	Appendix
Wetland A	Palustrine Emergent	0.05	0.03	Wetland A is located on the south side of 281st St, the inlet of Str. No. 101. Wetland A is likely a Water of the U.S. Wetland A will be impacted by the placement of a new structure and grading.	Appendix F: F-19
Wetland B	Scrub Shrub	0.5	0.08	Wetland B is located on the north side of 281st St to the northeast of Cicero Creek. Wetland B is likely a Water of the U.S. Wetland B will be impacted by the widening of the road and grading.	Appendix F: F-22
Wetland C	Palustrine Forested	0.2	0.1	Wetland C is located on the south side of 281st St to the southeast of Cicero Creek. Wetland C is likely a Water of the U.S. Wetland C will be impacted by the widening of the road and grading.	Appendix F: F-22

Wetlands (*Mark all that apply*)	**Documentation**	**ESD Approval Dates**
Wetland Determination		
Wetland Delineation	X	N/A
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.

Based on the desktop review, the aerial maps of the project area (Appendix B: B-1 to B-10), and the RFI report (Appendix E: E-1 to E-11) there are 12 wetlands within the 0.5-mile search radius. There are two wetlands within or adjacent to the project area. That number was updated to three wetlands by the site visit on August 8, 2023, by RQAW.

A *Waters of the U.S. Determination / Wetland Delineation Report* was completed on November 30, 2023. Please refer to Appendix F: F-1 toF-167 for the *Waters of the U.S. Determination / Wetland Delineation Report*. It was determined that the three wetlands would be considered Likely Water of the U.S. The USACE makes all final determinations regarding jurisdiction.

Impacts

Wetland A

There will be direct / permanent impacts to Wetland A. Work within the wetland includes the replacement of Structure No. 101 and grading activities, which will permanently impact 0.03 acre of Wetland A. There will not be any indirect / temporary impacts to Wetland A since sediment and erosion control measures will be implemented during construction.

Wetland B

There will be direct / permanent impacts to Wetland B. Work within the wetland includes the replacement of Structure No. 102 and grading activities, which will permanently impact approximately 0.08 acre of Wetland B. There will not be any indirect / temporary impacts to Wetland B since sediment and erosion control measures will be implemented during construction.

Wetland C

There will be direct / permanent impacts to Wetland C. Work within the wetland includes grading activities for roadway widening, which will permanently impact approximately 0.1 acre of Wetland C. There will not be any indirect / temporary impacts to Wetland C since sediment and erosion control measures will be implemented during construction.

Cumulatively, the project will impact approximately 0.21 acre of wetlands. Because wetland impacts will exceed the 0.10-acre mitigation threshold, wetland mitigation will likely be required but will be determined during permitting. Waterway permits will be needed due to wetland impacts. Refer to the *Permits* section of this CE document for more details.

Avoidance of Wetlands A to C would not be practical because they are within the limits where work activities are required for replacement of structures, roadway widening, and to ensure proper roadside drainage. If Wetlands A to C are entirely avoided, the project would not be able to be properly constructed. Minimization measures were considered, including implementing sediment and erosion control measures during construction. In addition, the locations of Wetlands A to C and call-out boxes stating *Do Not Disturb Wetlands Outside Construction Limits* will be added to the final design plans.

No Early Coordination responses were received regarding wetland impacts.

	Presence	Impacts Yes	Impacts NO
Terrestrial Habitat	X	X	

Total terrestrial habitat in project area: 40 Acre(s) Total tree clearing: 3.35 Acre(s)

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

Based on a desktop review, site visit on August 8, 2023, by RQAW, the aerial maps of the project area (Appendix B: B-1 to B-10), there are agricultural fields and residential properties with maintained lawn/roadside grass within the project area. Total terrestrial habitat within the project area is approximately 40 acres and consists of 4.2 acre of forests, 33.5 acres of farmland, 0.3 acre of wetlands, and 2 acres of maintained lawn/roadside grass. Dominant vegetation within the project area consists of Green Ash *(Fraxinus pennsylvanica*) and Red Maple (*Acer rubrum*). Dominant herbaceous species within the project area consist of Reed Canary Grass (*Phalaris arundinacea*) and Red Fescue (*Festuca rubra).* Up to approximately 3.35 acres of tree clearing/trimming will occur with this project and will be completed during the inactive bat season (October 1 through March 31). Avoidance of the trees would not be practicable because the trees are within the limits where work activities are required to widen 281st St. and construct the roadside ditches. Habitat impacted will consist of maintained lawn/roadside grass, farmland, wetland, and trees. Mitigation for habitat impacts are anticipated from tree removal within the floodway, but will ultimately be determined during the permitting phase for this project.

Early Coordination:
In their early coordination response dated October 27, 2023, the IDNR Division of Fish and Wildlife recommended revegetating disturbed areas, minimizing tree clearing, tree clearing restrictions, and mitigating for impacts (Appendix C: C-24 to C-27).

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: E-1 to E-11) completed by RQAW on June 27, 2023, the IDNR Hamilton County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated October 27, 2023, (Appendix C: C-24 to C-27), the Natural Heritage Program's Database has been checked and to date, no plant or animal species listed as state or federally threatened, endangered or rare have been reported in the project vicinity. An INDOT 0.5-mile bat review occurred on May 15, 2023, and there are no documented sites within a half mile of the project area.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C: C-30 to C-42). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (NLEB) (*Myotis septentrionalis*). The official species list also identified the monarch butterfly

(*Danaus plexippus*) as a candidate species for listing, the tricolored bat (*Perimyotis subflavus*) as a proposed endangered species, and the whooping crane (*Grus americana*) as an experimental population. As candidate, proposed, and experimental species, the monarch butterfly, tricolored bat, and whooping crane are not given any statutory protection under the Endangered Species Act. Therefore, no further coordination is needed with the USFWS.

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. Bridge and structure inspections occurred on August 8, 2023, and no signs of bats or signs of birds were seen or heard during the inspection of the bridges/structures within the project area (Appendix C: C-58 to C-59). An effect determination key was completed on October 3, 2023, and based on the responses provided, the project was found to "Not Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C: C-43 to C-57). INDOT reviewed and verified the effect finding on October 3, 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) are included as firm commitments in the *Environmental Commitments* section of this CE document. AMMs pertain to lighting and tree removal restrictions, as well as workers' awareness of AMMs.

Bridge and structure inspections occurred on August 8, 2023, and no signs of bats were seen or heard on or at the bridges/structures during the inspection. USFWS Bridge/Structure Assessments are only valid for two years. If construction begins after August 8, 2025, an inspection of the structure by a qualified individual must be performed. Inspection of the structure should check for presence of bats/bat indicators and/or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. This firm commitment is included in the *Environmental Commitments* of this document.

Migratory Birds

Structure No. 29-00064, which carries 281st St. over Cicero Creek and Structure No 29-00066, which carries 281st Street over Weasel Creek and the project's surrounding habitat is conducive for use (i.e., nests) by a bird species protected under the Migratory Bird Treaty Act (MBTA). Prior to the start of nesting season (May 1) the structure must be inspected for birds or signs of birds. If birds or signs of birds are found during the inspection avoidance and minimization measures must be implemented prior to the start of and during the nesting season. Nests without eggs or young should be removed prior to construction during the non-nesting season (September 8 – April 30) and during the nesting season if no eggs or young are present. Nests with eggs or young cannot be removed or disturbed during the nesting season (May 1 – September 7). Nests with eggs or young should be screened or buffered from active construction. Details of the required procedures are outlined in the "Potential Migratory Bird on Structure" USP/RSP.

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: B-2), the RFI report (Appendix E: E-1 to E-11) there are no karst features identified within or adjacent to the project area. In the early coordination response dated December 19, 2023, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C: C-5 to C-6). However, the IGWS did indicate that within the project area there is a moderate liquefaction potential, 1% chance annual flood hazard, high potential for encountering bedrock resources, low potential for encountering sand and gravel resources, and the presence of active/ abandoned petroleum

exploration wells. The response from the IGWS has been communicated to the designer on December 19, 2023.

Early Coordination:
In their early coordination response dated September 27, 2023, the IDNR Division of Reclamation stated there were no known oil and gas related wells within the project area (Appendix C: C-8)

SECTION C – OTHER RESOURCES

Drinking Water Resources	Presence	Impacts Yes	Impacts No
Wellhead Protection Area(s)	X		X
Source Water Protection Area(s)	X		X
Water Well(s)	X		X
Urbanized Area Boundary	X		X
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 Hamilton County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA/INDOT Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water Area
The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (http://www.in.gov/idem/cleanwater/pages/wellhead/) was accessed on July 20, 2023, by RQAW. This project is located within a Wellhead Protection Area. Coordination with IDEM on August 30, 2023, stated that the project area is located within Citizens Water-Indianapolis' Source Water Assessment Area and require further coordination. In a response to an early coordination letter on September 27, 2023, Citizens Energy Group stated that they have concerns regarding the protection of Cicero Creek as it is a source of drinking water for Hamilton County. They ask that all construction workers are aware and are ready to take precautions to prevent releases into the creek including the water shed area and the tributaries. The construction company should also be prepared to mobilize an emergency response contractor if they need assistance to respond to a spill. The contactor should immediately report any release to IDEM. The full response can be found in Appendix C: C-10 and a firm commitment for the request can be found in *the Environmental Commitments* section of this document. No impacts to wellhead protection area or source water areas are anticipated as a result of this project.

Water Wells
The Indiana Department of Natural Resources Water Well Record Database website (https://www.in.gov/dnr/water/ground-water-wells/water-well-record-database/) was accessed on December 19, 2023, by RQAW. Twelve wells are located in or directly adjacent to the project area. The nearest mapped well is located within the project area. 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. No impacts to water wells are anticipated as a result of this project.

Urban Area Boundary
Based on a desktop review of IDEMS's MS4 boundary Map (https://www.in.gov/idem/cleanwater/ms4s-boundaries-map-for-indiana/) by RQAW on December 19, 2023, this project is located within an Urban Area Boundary (UAB). An early coordination letter was sent on September 27, 2023, to the MS4 coordinator for Hamilton County. The MS4 coordinator did not respond within the 30-day time frame. No impacts are expected as a result of this project.

Public Water System
Based on a desktop review, a site visit on August 8, 2023, by RQAW, the aerial maps of the project area (Appendix B: B-3 to B-10),and IDEM's Public Water Systems Search website https://myweb.in.gov/IDEM/DWW/, this project is located where there is public water systems. Public water systems identified within or adjacent to the project area are located at the western and eastern end of the project area near SR 19 and the town of Millersburg and SR 213 near the town of Omega. Although drainage is a part of the preferred alternative of this project, coordination with the project designer confirmed there will be no impacts to public water systems as a result of this project.

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			

If applicable, indicate the Floodplain Level?

Level 1 [ ] Level 2 [ ] Level 3 [X] 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 Indiana Department of Natural Resources Indiana Floodway Information Portal website (DNR Indiana Floodplain Information Portal 2.0) by RQAW on December 19, 2023, and the RFI report, two areas of this project are located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F: F-16 to F-17). An early coordination letter was sent on September 27, 2023, to the local floodplain administrators for the town of Arcadia and Hamilton County. Neither of the floodplain administrators respond within the 30-day time frame. This project qualifies as a Category 3 per the current INDOT CE Manual, which states:

- Category 3 – "The modifications to drainage structures included in this project will result in an insubstantial change in their capacity to carry flood water. This change could cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any substantial adverse impacts on the natural and beneficial floodplain values; they will not result in substantial change in flood risks or damage; and they do not have substantial potential for interruption or termination of emergency service or emergency routes; therefore, it has been determined that this encroachment is not substantial."

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

Total Points (from Section VII of CPA-106/AD-1006*) **135**
**If 160 or greater, see CE Manual for guidance.*

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

Based on a desktop review, a site visit on August 8, 2023, by RQAW, the aerial maps of the project area (Appendix B: B-3 to B-10), this project will convert 33.5 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on September 27, 2023, to the Natural Resources Conservation Service (NRCS). Coordination with NRCS resulted in a score of 135 on the NRCS CPA 106 Form (Appendix C: C-28 to C-29). The NRCS 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	B-1, B-3, B-9	March 19, 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			
Archaeological Phase Ia Survey Report	X	March 24, 2024	
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 19, 2024, the INDOT Cultural Resources Office (CRO) determined that this project falls within the guidelines of Category B, Types B-1, B-3 and B-9 under the Minor Projects Programmatic Agreement (Appendix D: D-1 to D-10).

Category B, Type 1 projects include 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 markings.

Category B, Type 3 projects include construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening.

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

Please refer to Appendix D: D-5 to D-7 to see how the above listed Category B types meet both Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources.

Phase1a Archaeological Report
An archaeological records check and Phase 1a field reconnaissance (Kelley 2024) was conducted by Cultural Resources Analysts (CRA) personnel who meet the Secretary of Interior's Professional Qualification Standards as per 36 CFR Part 61. The records check revealed that two archeological surveys had been previously conducted and no previously recorded archeology sites were identified. The archaeological survey found nine unrecorded sites, but they did not demonstrate the ability to provide important information to the history or prehistory of the area, and they were determined to be ineligible for inclusion on the National Register of Historic Places; therefore, no further archaeological work is recommended at the sites within the survey area. The report has been reviewed by INDOT CRO personnel who meet the Secretary of Interior's Professional Qualification Standards as per 36 CFR Part

61. INDOT CRO staff deemed the report to be acceptable and concurred with the evaluations and recommendations made in it (Appendix D: D-11 to D-14) Therefore, there are no archaeological concerns with this project as long as the project scope does not change.

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.

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: B-3 to B-10), and the RFI report (Appendix E: E-1 to E-11) there are two potential 4(f) resources located within the 0.5-mile search radius. According to additional research, and by the site visit on August 8, 2023, by RQAW, there is one potential Section 4(f) resource within the project area.

Potential Trail Segment
This potential trail segment is located along the east side of SR 19 and intersects the project area at the SR 19 and 281st St. intersection. This potential trail segment is known as the Cumberland Road, 234th St., SR 19 Trail and is managed by the Hamilton County Plan Commission. Construction of this segment is not currently funded, and this project would not hinder or prevent any future construction of this potential trail segment. Therefore, it is not considered a 4(f) resource. No impacts are expected to 4(f) resources as a result of this project. .

Early Coordination
An early coordination letter was sent to the Hamilton County Plan Commission on September 27, 2023 (Appendix C: C-1 to C-4). No response was received.

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.

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 eight properties in Hamilton County (Appendix I: I-1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project	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?	X	
Is the project exempt from conformity?	X	
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 STIP (Appendix H: H-2 to H-5)

Name of MPO (if applicable): Indianapolis Metropolitan Planning Organization

Location in TIP (if applicable): FY 2024-2027 (Appendix H: H-1)

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.

STIP

This project is included in the Fiscal Year (FY) 2024-2027 IMPO Transportation Improvement Plan (TIP); therefore, it is also incorporated into the 2024-2028 Statewide Transportation Improvement Program (STIP) by reference (Appendix H: H-1 to H-5).

Attainment Status

This project is located in Hamilton County, which is currently a maintenance area for Ozone, under the 1997 Ozone 8-hour standard according to the EPA Green Book website (Nonattainment Areas for Criteria Pollutants (Green Book) | US EPA).

This project has been identified as being exempt from air quality analysis in accordance with 40 CFR Part 93.126 and this project is not a project of air quality concern (40 CFR Part 93.123).

Mobile Source Air Toxics (MSAT)

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: _____

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

This project is a Type III project. In accordance with 23 CFR 772 and the 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.

This project seeks to widen the pavement of 281st St. to include 12-foot wide travel lanes and 3-foot wide shoulders to meet current INDOT design standards for a Rural Major Collector. As such, this project is not anticipated to result in substantial impacts to community cohesion because it will not change access to properties within the area or divide existing communities. The project is not expected to impact the surrounding community or cause long-term economic impacts to the surrounding area. Therefore, the project will have minimal or no negative impacts to the community or local economy. The Fairs and Festivals website (Find Art Shows, Craft Shows, and Festivals near you (https://www.fairsandfestivals.net/), accessed on February 5, 2024, by RQAW. There are currently no fairs or festivals scheduled within a 10-mile radius of zip codes 46030 and 460631 (project area) in the Spring of 2026, when construction is anticipated to begin. Any future fairs / festivals that may be planned, are unlikely to be impacted by the project since vehicles will be able to utilize local detour routes during construction. Hamilton County has an approved ADA transition plan and can be found at: Hamilton County ADA Transition Plan. No sidewalks are planned as a part of this project. No ADA facilities are currently located within the project area, nor are any ADA facilities proposed to be installed as part of this project. Therefore, this ADA transition plan is not applicable to this project.

Early Coordination

An early coordination letter was sent to Omega Christian Church on September 27, 2023. No response was received within the 30-day timeframe.

Public Facilities and Services

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

Based on a desktop review, the aerial map of the project area (Appendix B: B-3 to B-10), and the RFI report (Appendix E: E-1 to E-11) there is one public facility, Omega Christian Church, located within the 0.5 mile of the project and it is also adjacent to the project

on the eastern edge of the project. That number was confirmed by the site visit on August 8, 2023, by RQAW. There will be approximately 0.07 acre of permanent ROW needed from the Omega Christian Church. Please refer to the *Right-of-Way* section of this CE document for more details. Access to all properties will be maintained during construction.

In addition, both private and public utilities are known to exist within or adjacent to the project area. These include American Electric Power, Town of Atlanta Utilities (Sewer/Water), Buckeye Pipeline (Petroleum), CenterPoint Energy (Gas), Endeavor (Communications), Comcast (Cable), Duke Energy (Electric), and Frontier (Telephone). It is anticipated that there will be utility impacts due to the scope of the project. Any utility relocations required are anticipated to occur within the proposed right-of-way. Utility coordination will be ongoing as this project progresses.

Early Coordination

An early coordination letter was sent to Omega Christian Church on September 27, 2023. No response was received within the 30-day timeframe.

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.

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. There will be no relocations as a result of this project, but approximately 44.57 acres of permanent ROW will be required. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority or 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 Hamilton County. The community that overlaps the project area is called the affected community (AC). In this project there are two ACs and they are Census Tracts 1102.01 (AC-1) and 1101 (AC-2). 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's (ACS) 5-year survey 2016-2020 for low income and 2017-2021 for minority data was obtained from the US Census Bureau's webpage at: https://data.census.gov/ on October 3, 2023, by RQAW. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (ACS 5-Year Estimates 2016-2020 for Low Income and 2017-2021 for Minority Data)

	COC-Hamilton County Indiana	AC-1 Census Tract 1102.01 Hamilton County, Indiana	AC-2 Census Tract 1101 Hamilton County, Indiana
Percent Minority	17.8%	9%	8%
125% of COC	22.3%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		**No**	**No**
Percent Low-Income	4.4%	8.5%	6.5%
125% of COC	5.5%	AC > 125% COC	AC > 125% COC
EJ Population of Concern		**Yes**	**Yes**

AC-1, Census Tract 1102.01 has a percent minority of 9% which is below 50% and is below the 125% COC threshold. AC-2, Census Tract 1101 has a percent minority of 8% which is below 50% and is below the 125% COC threshold. Therefore, there is no EJ concern for AC-1 or AC-2 as it pertains to minority populations.

AC-1, Census Tract 1102.01 has a percent low-income of 8.5% which is below 50% and is above the 125% COC threshold. AC-2, Census Tract 1101 has a percent low income of 6.5% which is below 50% and above the 125% COC threshold. Therefore, AC-1 and AC-2 have low-income populations of EJ concern.

The preliminary maintenance of traffic (MOT) has been proposed from State Road (SR) 19 to Rulon Road. The MOT will consist of phased construction with local detour routes.

- The first phase of the MOT plan will consist of closing 281st Street from SR 19 to Startsman Road. The detour route will consist of SR 19, 226th Street, and Startsman Road. The detour length will be approximately 4.31 miles and will add roughly 2.67 miles of added travel distance.
- The second phase of the MOT plan will consist of closing 281st Street from Whistler Avenue to Rulon Road. The detour route will consist of Whistler Avenue, 226th Street, and Rulon Road. The detour length will be approximately 3.72 miles and will add roughly 2.21 miles of added travel distance.
- The third phase of the MOT plan will consist of closing 281st Street from Startsman Road to Rulon Road. The detour route would consist of Startsman Road, 226th Street, and Rulon Road. The detour length will be approximately 3.75 miles and will add roughly 2.98 miles of added travel distance.

Please note that MOT has not been set for the remainder of the project from Rulon Road to SR 213; however, the MOT will use phasing with local detour routes similar to what is discussed above. Access to all properties will be maintained throughout the duration of the project. As access will be maintained to all properties and local detours with the least amount of added travel distance will be utilized, the MOT plan is not anticipated to result in any disproportionately high or adverse impact to EJ populations when compared to non-EJ populations.

Although right-of-way will be acquired, it will consist mainly of strip right-of-way and it will not alter or change the use for any affected property owners. There will be no impacts to community cohesion and this project will not directly or indirectly create a physical barrier that would divide the community. Impacts from the project to the low-income EJ population would likely prove to be beneficial as this roadway project would improve connectivity across this portion of Hamilton County, accommodate the expected increases in traffic volume, and improve roadway drainage. Therefore, it has been determined that this project will not result in a disproportionality high or adverse impact to EJ populations when compared to non-EJ populations.

INDOT Environmental Services Division stated on December 6, 2023, that they would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. (Appendix I: I-11 to I-16). Therefore, no further EJ Analysis is required.

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: 0 Businesses: 0 Farms: 0 Other: 0

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): June 27, 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.

Based on a review of Geographic Information System (GIS) and available public records, the RFI was completed on June 27, 2023, by RQAW, and INDOT SAM provided their concurrence on June 27, 2023 (Appendix E: E-1 to E-11). No sites with hazardous material concerns (hazmat sites) or sites involved with regulated substances were identified within 0.5 mile of the project area. Further investigation for hazardous material concerns or regulated substances is not required at this time.

IDEM 303d Listed Streams (Impaired)
Cicero Creek and Weasel Creek are listed as impaired for E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate personal protection equipment (PPE), observe proper hygiene procedures, including regular hand washing and limit personal exposure. A firm commitment to this effect has been added to the *Environmental Commitments* section of this CE document.

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	X
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."

This project will require an IDEM Construction Stormwater General Permit (formerly known as Rule 5) as soil disturbance will exceed one acre.

There are five regulated Hamilton County legal drains in the project area. If it's determined that impacts to any of the Hamilton County legal drains will occur, then a legal drain permit will likely be required.

A Nationwide Permit (NWP) and 401 Water Quality Certification (WQC) will be necessary due to wetland and stream impacts associated with this project.

A Construction in a Floodway (CIF) permit is anticipated due to the replacement of the CMP structure which conveys UNT 1 to Cicero Creek.

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 Greenfield 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) Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
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) Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
6) Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS and IDNR Division of Fish and Wildlife)
7) Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)
8) Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)
9) All construction workers should be made aware Cicero Creek is a source drinking water area for Hamilton County. The construction workers should all be made aware of the emergency response plan in the event of a spill or leak of any kind and to contact IDEM. (Citizens Energy Group)
10) In the event of a fuel or chemical spill relating to any construction activities done near Cicero Creek, in the water shed of Cicero Creek or any of the tributaries to Cicero Creek and emergency response plan must be in place and IDEM needs to be notified immediately. The contractor should be prepared to describe the nature of the contamination (quantity and type of material), location and time of release. (Citizens Energy Group)
11) USFWS Bridge / Structure Assessments are only valid for two years. If construction will begin after August 8, 2025, an

inspection of all structures within the project area by a qualified individual must be performed. Inspection of the structure should check for presence of bats / bat indicators and / or presence of birds. The results of the inspection must indicate no signs of bats or birds. If signs of bats or birds are documented during this inspection, the INDOT District Environmental Manager must be contacted immediately. (INDOT ESD)

12) The project designer is responsible for continued coordination with the Hamilton County Surveyors office regarding the section corners and will ensure they are shown on the construction plans and noted in the bid documents. (Hamilton County Surveyor)
13) The project designer is responsible for continued coordination with the Hamilton County Surveyors office regarding current and future drainage plans in the area. These include the current county plans to install inlets at each corner of the 281st St. and SR 213 intersection and future county plans to extend drainage facilities to the west of the 281st St. and SR 213. (Hamilton County Surveyor, INDOT ESD)
14) Cicero Creek and Weasel Creek are listed as impaired for E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate personal protection equipment (PPE), observe proper hygiene procedures, including regular. hand washing and limit personal exposure. (INDOT SAM)
15) The locations of Wetlands A to C and call-out boxes stating *Do Not Disturb Wetlands Outside Construction Limits* will be added to the final design plans. (INDOT ESD)

For Further Consideration:

1. The Division of Fish & 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 flood problems from one section of a basin to another section. 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.). (IDNR Division of Fish and Wildlife)
2. Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees). (IDNR Division of Fish and Wildlife)
3. Any modifications to existing drainage structures or any new drainage 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. (IDNR Division of Fish and Wildlife)
4. The DFW recommends avoiding removing trees to the greatest extent possible and replacing trees that must be removed. (IDNR Division of Fish and Wildlife)
5. The new, replacement, or rehabbed structure should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. (IDNR Division of Fish and Wildlife)
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR Division of Fish and Wildlife)
7. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR Division of Fish and Wildlife)
8. Plant five trees, 1 inch to 2 inches in diameter-at-breast height, for each tree which is removed that is 10 inches or greater in diameter-at-breast-height. (IDNR Division of Fish and Wildlife)

Designation (Des.) Number 2003031

281st Street Rehabilitation & Widening Project – Hamilton County, Indiana

Appendix H: Other Information

Appendix I: Additional Studies

Categorical Exclusion

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.

Categorical Exclusion

Appendix B

Graphics

General Location Map
East 281st Street Between SR 19 and SR 213
Roadway Project
Hamilton County, Indiana
Des. No. 2003031

TIPTON

HAMILTON

Atlanta

Arcadia

Millersburg

Omega

Phase 1

Phase 1

Phase 2

Phase 2

Legend

- Project Area
- County Boundary
- Incorporated Area

Project Area

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

RQAW

DCCM

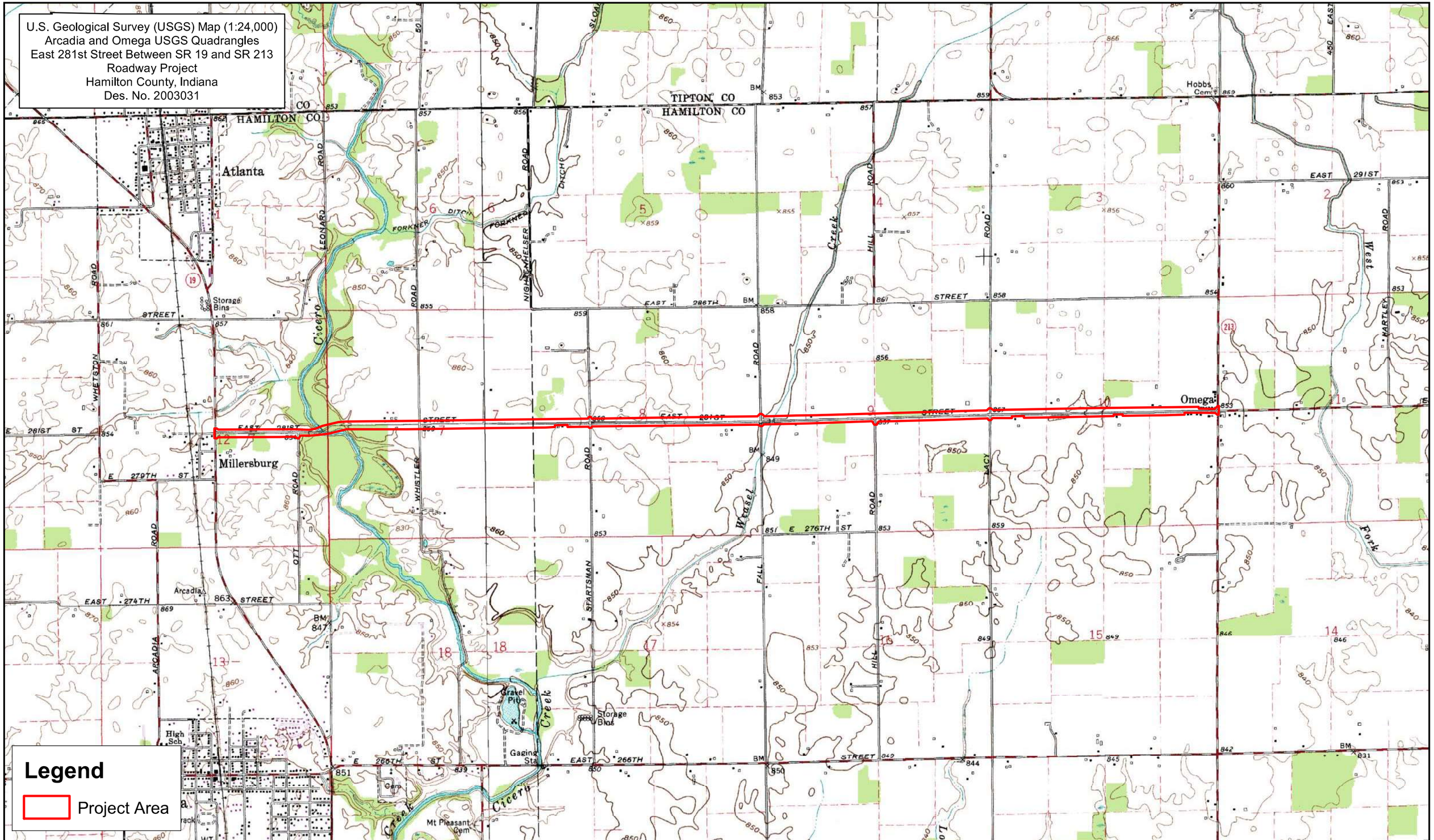
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Map Datum: NAD 83
Map Projection: UTM Zone 16 North

0 0.25 0.5 1 Miles

N

U.S. Geological Survey (USGS) Map (1:24,000)
Arcadia and Omega USGS Quadrangles
East 281st Street Between SR 19 and SR 213
Roadway Project
Hamilton County, Indiana
Des. No. 2003031



Legend

Project Area

RQAW
DCCM

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

Topographic Quadrangle obtained from USGS

Map Datum: NAD 83
Map Projection: UTM Zone 16 North

0 0.25 0.5 1 Miles

N

RQAW

DCCM

Photo Location Map

Indiana Geographic Information Office (IGIO) Orthoimagery

Coordinate System: GCS WGS 1984

Location: 281st Street
County: Hamilton
Des. No.: 2003031
Date: 3/27/2024

Page 1 of 8

N

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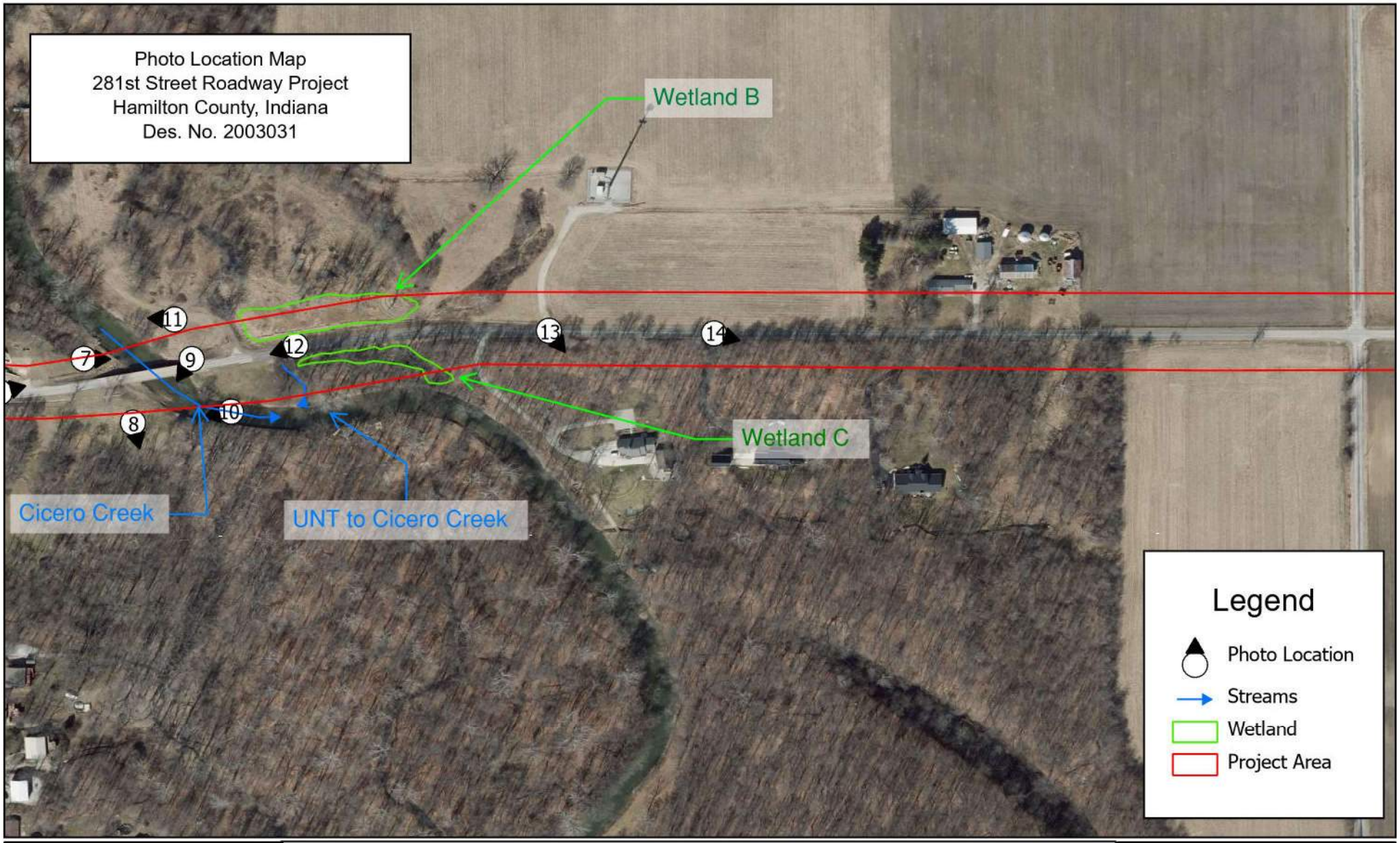
0 225 450 US Feet



RQAW

DCCM

Photo Location Map

Indiana Geographic Information Office (IGIO) Orthoimagery

Coordinate System: GCS WGS 1984

Location: 281st Street
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Page 2 of 8

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RQAW

DCCM

Photo Location Map

Indiana Geographic Information Office (IGIO) Orthoimagery

Location: 281st Street
County: Hamilton
Des. No.: 2003031
Date: 3/27/2024

Coordinate System: GCS WGS 1984

Page 3 of 8

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RQAW

DCCM

Photo Location Map

Indiana Geographic Information Office (IGIO) Orthoimagery

Location: 281st Street
County: Hamilton
Des. No.: 2003031
Date: 3/27/2024

Coordinate System: GCS WGS 1984

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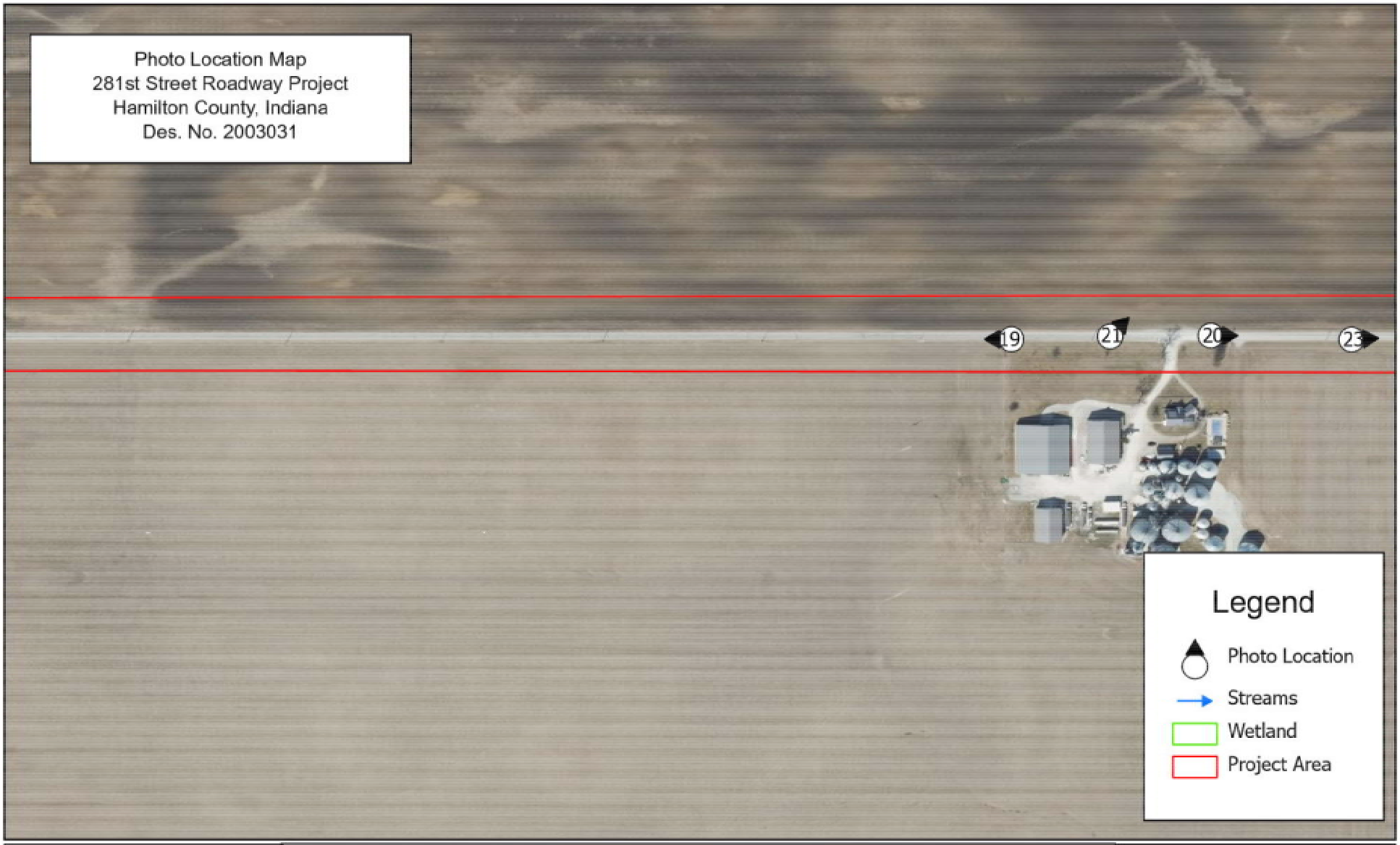

RQAW

DCCM

Photo Location Map

Indiana Geographic Information Office (IGIO) Orthoimagery

Location: 281st Street
County: Hamilton
Des. No.: 2003031
Date: 3/27/2024

Coordinate System: GCS WGS 1984

Page 5 of 8

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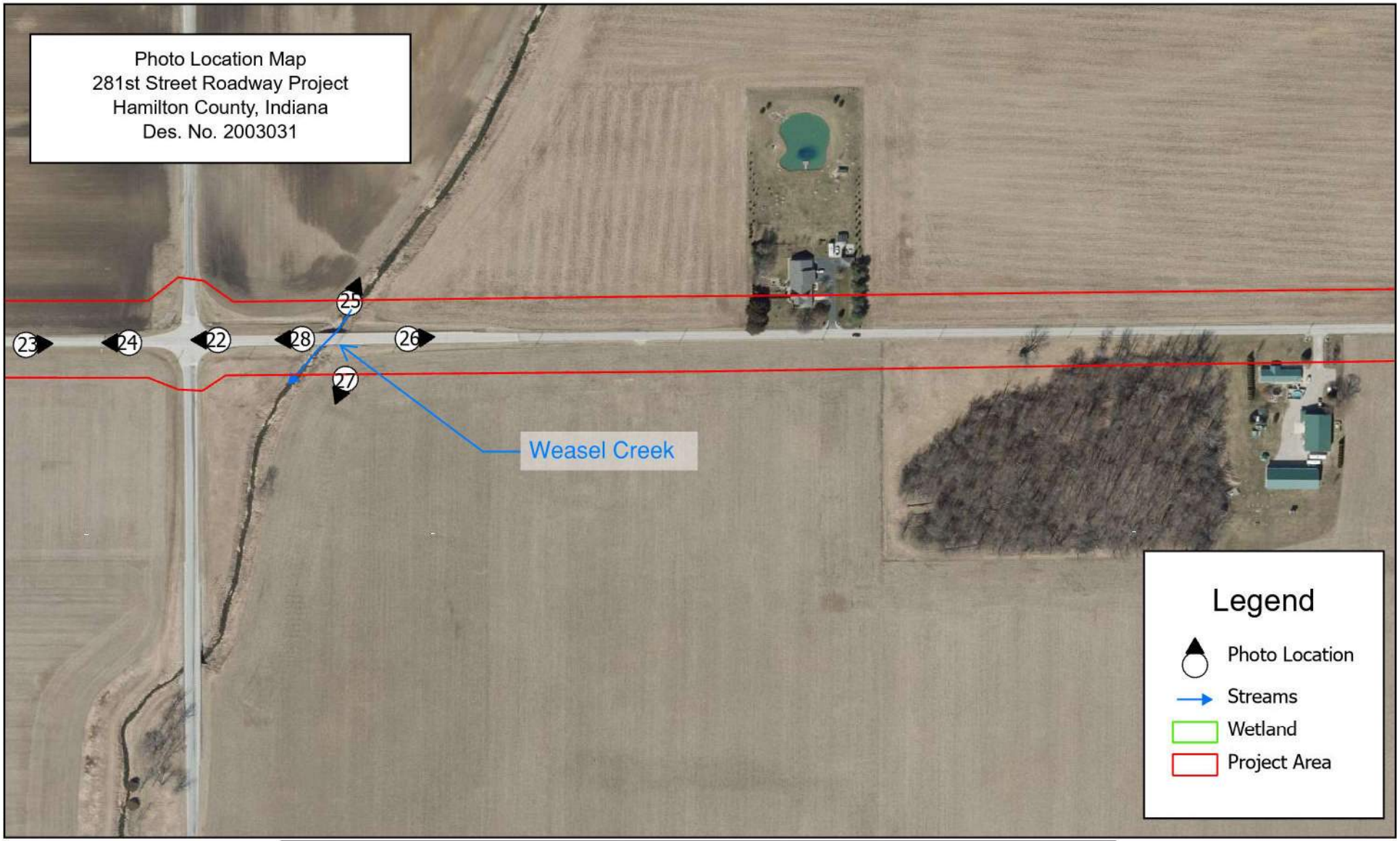

RQAW

DCCM

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Coordinate System: GCS WGS 1984

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N

0 0.04 0.09 Mi

0 225 450 US Feet

RQAW

DCCM

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County: Hamilton
Des. No.: 2003031
Date: 3/27/2024

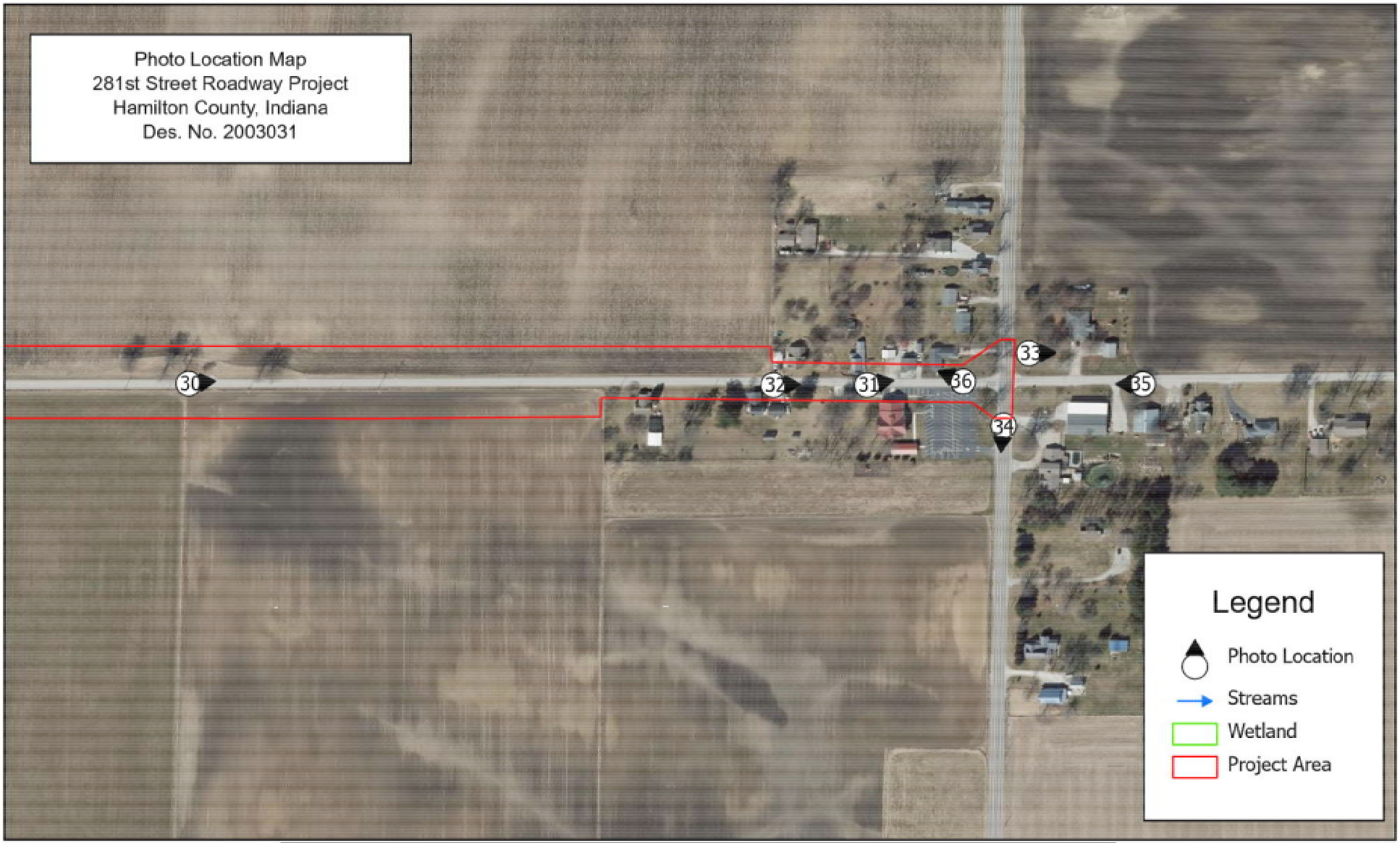
Coordinate System: GCS WGS 1984

Page 7 of 8

N

0 0.04 0.09 Mi

0 225 450 US Feet



RQAW

DCCM

Photo Location Map

Indiana Geographic Information Office (IGIO) Orthoimagery

Location: 281st Street
County: Hamilton
Des. No.: 2003031
Date: 3/27/2024

Coordinate System: GCS WGS 1984

Page 8 of 8

N

0 0.04 0.09 Mi

0 225 450 US Feet

1. Looking northwest (NW) at the East 281st Street / SR 19 Intersection (western terminus).

2. Looking west (W) from the East 281st Street / SR 19 Intersection (away from western terminus).

3. Looking W at maintained roadside on the south side of East 281st Street.

4. Looking south (S) from the East 281st Street / Ott Road Intersection.

5. Looking east (E) along the south side of East 281st Street.

6. Looking northeast (NE) along the south side of East 281st Street.

7. Looking E along the bridge that spans Cicero Creek.

8. Looking southeast (SE) from the bridge that spans Cicero Creek.

9. Looking southwest (SW) from the bridge that spans Cicero Creek.

10. Looking SW from the bridge that spans Cicero Creek.

11. Looking W from the bridge that spans Cicero Creek.

12. Looking SW towards the bridge that spans Cicero Creek.

13. Looking southeast (SE) at adjacent forested landscape.

14. Looking SE at adjacent forested landscape.

15. Looking NW from East 281st Street at roadway.

16. Looking E from East 281st Street at roadway.

17. Looking W from East 281st Street at roadway.

18. Looking NE from East 281st Street at roadway.

19. Looking W from East 281st Street at roadway.

20. Looking E from East 281st Street at roadway.

21. Looking NE from East 281st Street at adjacent farmland.

22. Looking W from the East 281st Street / Rulon Road Intersection.

23. Looking E at East 281st Street / Rulon Road Intersection.

24. Looking W from the East 281st Street / Rulon Road Intersection.

25. Looking NE from the bridge that spans Weasel Creek.

26. Looking E from the bridge that spans Weasel Creek.

27. Looking SW from bridge that spans Weasel Creek.

28. Looking W from bridge that spans Weasel Creek.

29. Looking E from the East 281st Street / Hill Road Intersection.

30. Looking E from East 281st Street at roadway.

31. Looking NE at the East 281st Street / SR 213 Intersection (eastern terminus).

32. Looking E at the East 281st Street / SR 213 Intersection (eastern terminus).

33. Looking E away from the eastern terminus.

34. Looking S away from the eastern terminus.

35. Looking W at the eastern terminus.

36. Looking NW from East 281st Street at roadway (eastern terminus).

PROJECT	DESIGNATION
2003031	2003031
CONTRACT	BRIDGE FILE
R-43619	N/A

INDIANA DEPARTMENT OF TRANSPORTATION

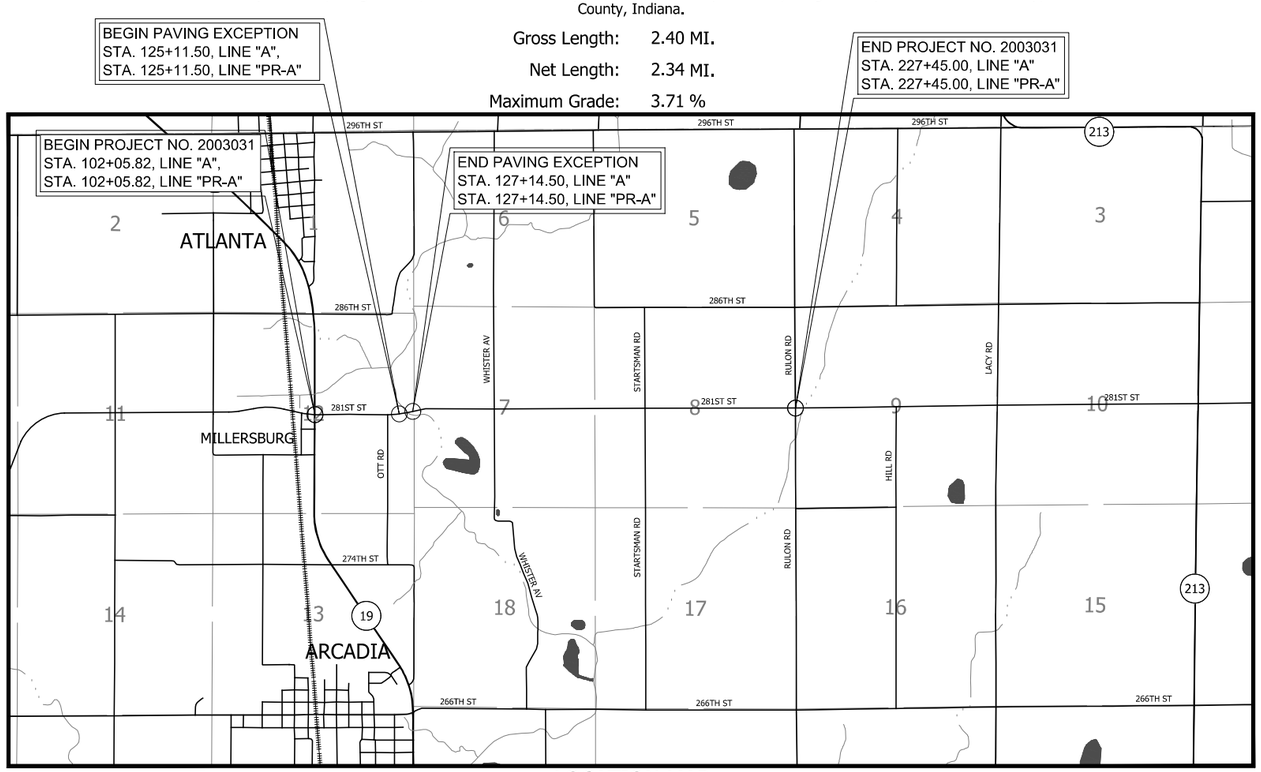
ROAD PLANS

281ST STREET REHABILITATION

PROJECT NO. 2003031 P.E.
PROJECT NO. 2003031 R/W
PROJECT NO. 2003031 CONST.

Rehabilitation along 281st Street, Begininng at State Rd 19 East to Rulon Rd 2 miles West of State Rd 213, in Section 12 Township 20 North, Range 4 East, Section 7 Township 20 North, Range 5 East, All in Jackson Township, Section 8, Township 20 North, Range 5 East, in White River Township, in Hamilton County, Indiana.

Gross Length: 2.40 MI.
Net Length: 2.34 MI.
Maximum Grade: 3.71 %



LOCATION MAP
HAMILTON COUNTY, INDIANA

SCALE: 1" = 2,000'

TRAFFIC DATA		281st Street
A.A.D.T.	(2026)	948 V.P.D.
A.A.D.T.	(2046)	1157 V.P.D.
D.H.V	(2046)	115 V.P.H.
DIRECTIONAL DISTRIBUTION		50 %
TRUCKS		11 % A.A.D.T.
		6 % D.H.V.

DESIGN DATA	
DESIGN SPEED	50 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

PROJECT LOCATION SHOWN BY

BEGIN:	LATITUDE: 40° 11' 51" N	LONGITUDE: 86° 01' 21" W
END:	LATITUDE: 40° 11' 53" N	LONGITUDE: 85° 58' 37" W
HUC:	051202010606	

STAGE 2
JANUARY XX, 2024

HAMILTON COUNTY BOARD OF COMMISSIONERS

ATTEST _____ DATE

RECOMMENDED FOR APPROVAL _____ DATE

JOEL THURMAN P.E., E.R.C. (EMPLOYEE OF RESPONSIBLE CHARGE)

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

RQAW
DCCM
8770 NORTH ST., STE 110
FISHERS, IN 46038
P: 317.588.1798
F: 317.588.1799
WWW.RQAW.COM

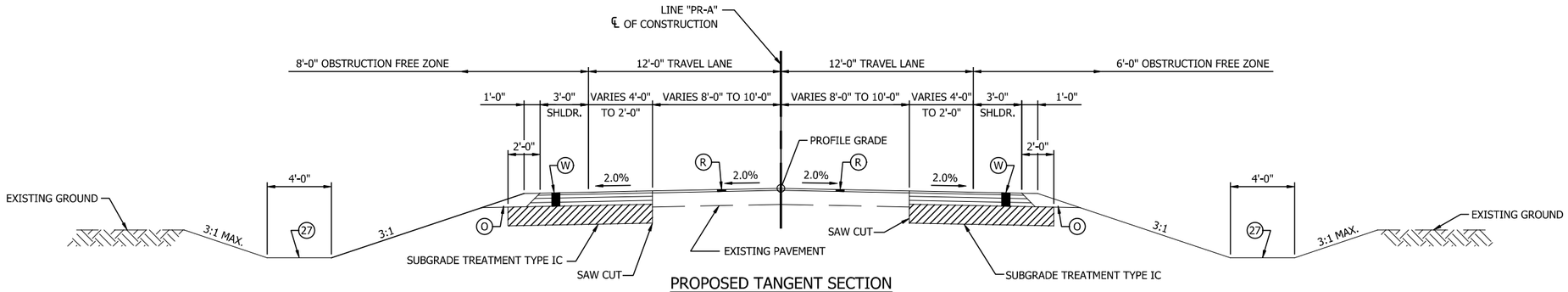
PLANS PREPARED BY: RQAW Corporation 317-588-1798 PHONE NUMBER

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

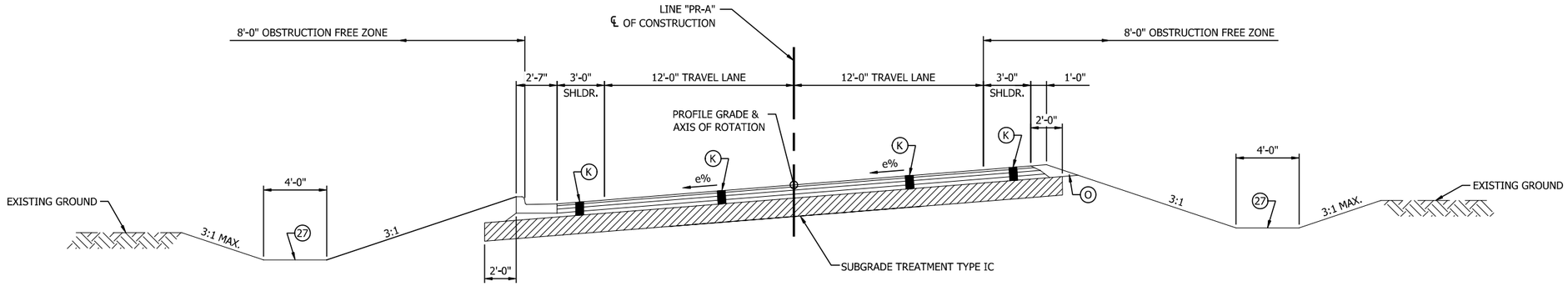
DESIGNATION	2003031
SURVEY BOOK	SHEET 1 of 177
CONTRACT	R-43619
PROJECT	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 8:16 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\01 TITLE\RD-SHT-TITLE-281ST ST REHAB.DWG



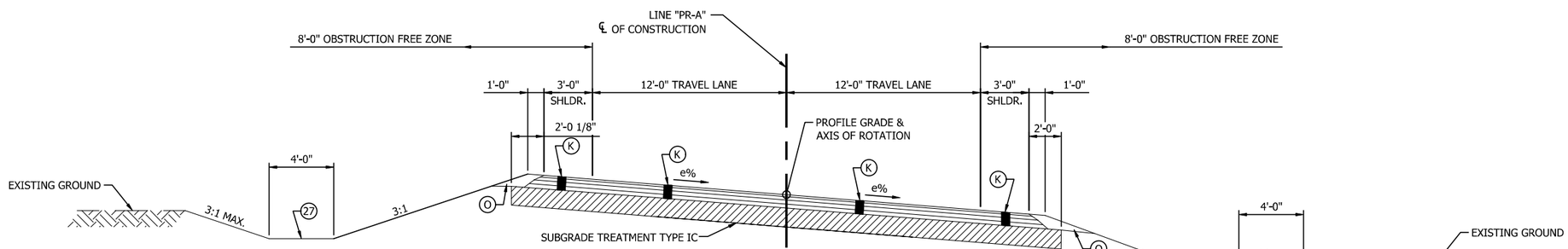
PROPOSED TANGENT SECTION

STA. 102+95.00 TO STA. 109+99.00 "PR-A"
STA. 110+21.00 TO STA. 120+30.00 "PR-A"
STA. 136+20.00 TO STA. 143+68.00 "PR-A"
STA. 143+90.00 TO STA. 146+60.00 "PR-A"
STA. 151+55.00 TO STA. 164+10.00 "PR-A"
STA. 168+00.00 TO STA. 188+20.00 "PR-A"
STA. 190+30.00 TO STA. 227+95.00 "PR-A"



PROPOSED SUPERELEVATED SECTION - CURBED

STA. 121+28.80 TO STA. 123+59.16 "PR-A"

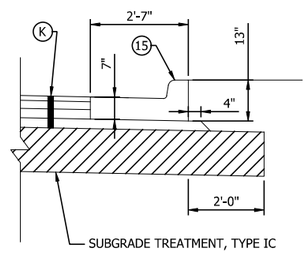


PROPOSED SUPERELEVATED SECTION

(CURVES TO THE RIGHT, REVERSE FOR CURVES TO THE LEFT)
STA. 120+30.00 TO STA. 121+28.80 "PR-A"
STA. 123+59.16 TO STA. 124+20.00 "PR-A"
STA. 128+09.45 TO STA. 134+52.00 "PR-A"

LEGEND

- (K) Full Depth HMA Consisting of:
  165 LB/SYD QC/QA HMA, 2, 58S, Surface, 9.5 mm, on
  275 LB/SYD QC/QA HMA, 2, 58S, Intermediate, 19.0 mm, on
  330 LB/SYD QC/QA HMA, 2, 58S, Base, 19.0 mm, (for constructability with curbs) on
  330 LB/SYD QC/QA HMA, 2, 58S, Base, 19.0 mm, (minimum, or thickness necessary to match adjacent pavement) on
  Subgrade Treatment, Type IC
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:,
  Milling, Profile
  165 LB/SYD QC/QA HMA, 2, 58S, Surface, 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of:
  165 LB/SYD QC/QA HMA, 2, 58S, Surface, 9.5 mm, on
  Widening with HMA, Type B Consisting of:
  275 LB/SYD HMA Intermediate, Type B, on
  330 LB/SYD HMA Base, Type B, on
  330 LB/SYD HMA Base, Type B, (minimum, or thickness necessary to match adjacent pavement) on
  Subgrade Treatment, Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:,
  Seed Mixture, R
  Fertilizer
  Mulching Material



CONCRETE CURB AND GUTTER DETAIL
SCALE: 1/2" = 1'-0"

NOTE TO REVIEWER:
PAVEMENT DESIGN IS ASSUMED. PAVEMENT DESIGN WILL BE UPDATED FOR FUTURE SUBMITTALS.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

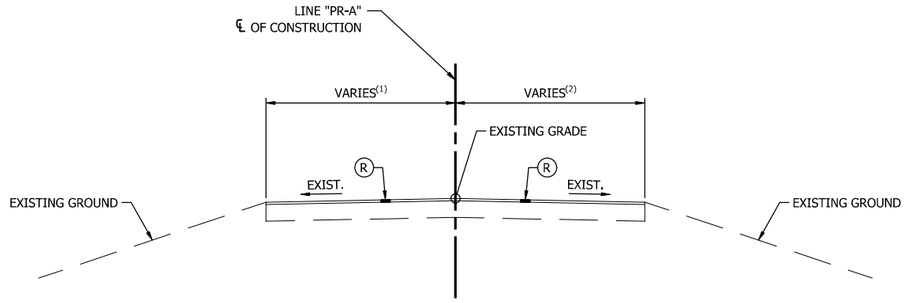
DESIGNED: MJR 7/15/2024 | DRAWN: MJR 7/15/2024
CHECKED: YZ 7/15/2024 | CHECKED: YZ 7/15/2024

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 4'	
VERTICAL SCALE	DESIGNATION
NONE	2003031
SURVEY BOOK	SHEET
	3 of 177
CONTRACT	PROJECT
R-43619	2003031

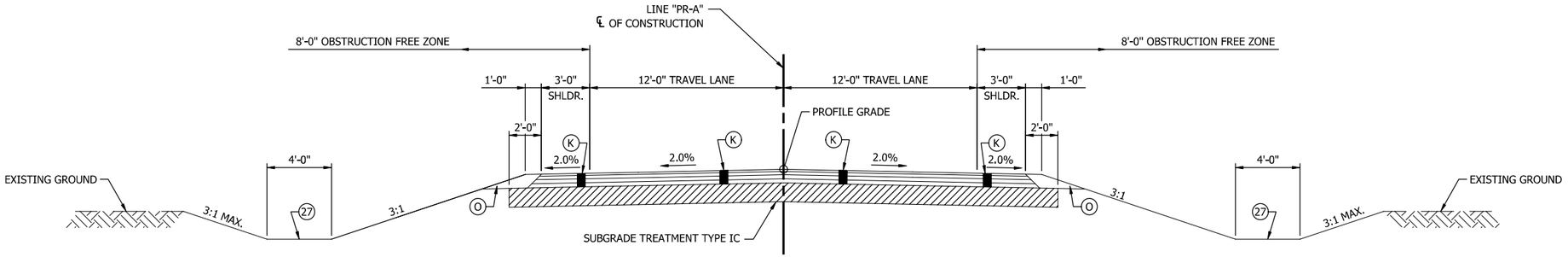
PRINT DATE: 7/15/24
PLOT SCALE: 1:1 EDIT DATE: 7/15/24 - 3:48 PM EDITED BY: CKANPHUAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\200 DESIGN\CK\RD-SHT-TYPICAL_281ST ST REHAB.DWG



(1) VARIES - 9'-6" STA. 124+20.00 "PR-A" TO 9'-11" STA. 124+52.49 "PR-A"
VARIES - 9'-9" STA. 128+09.85 "PR-A" TO 10'-4" STA. 127+37.06 "PR-A"
(2) VARIES - 10'-2" STA. 124+52.53 "PR-A" TO 10'-6" STA. 125+05.60 "PR-A"
VARIES - 9'-10" STA. 127+37.43 "PR-A" TO 10'-5" STA. 128+09.02 "PR-A"

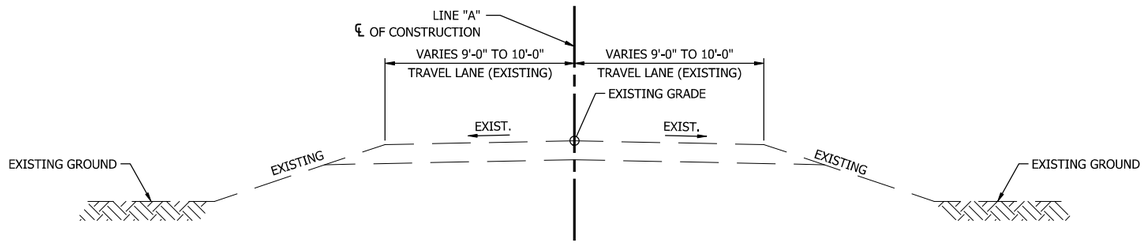
PROPOSED TANGENT SECTION - INCIDENTAL

STA. 124+20.00 TO STA. 125+11.50 "PR-A"
STA. 127+14.50 TO STA. 128+09.45 "PR-A"

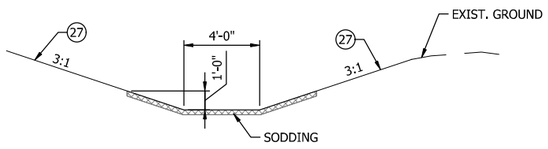


PROPOSED TANGENT SECTION

STA. 102+05.82 TO STA. 102+95.00 "PR-A"
STA. 109+99.00 TO STA. 110+21.00 "PR-A"
STA. 134+52.00 TO STA. 136+20.00 "PR-A"
STA. 143+68.00 TO STA. 143+90.00 "PR-A"
STA. 146+60.00 TO STA. 151+55.00 "PR-A"
STA. 164+10.00 TO STA. 168+00.00 "PR-A"
STA. 188+20.00 TO STA. 190+30.00 "PR-A"

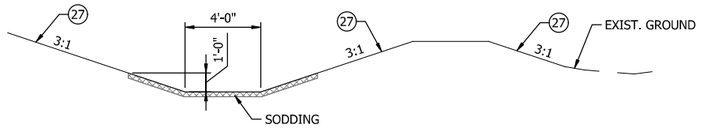


EXISTING SECTION



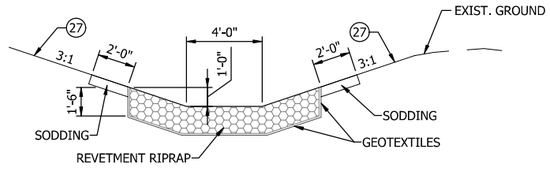
DITCH SODDING DETAIL

SCALE: 1/4" = 1'-0"



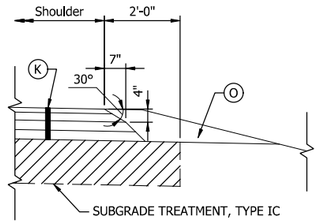
DITCH WITH BERM SODDING DETAIL

SCALE: 1/4" = 1'-0"



RIPRAP DITCH DETAIL

SCALE: 1/4" = 1'-0"



SAFETY EDGE DETAIL - REQUIRED FOR HMA PAVEMENT

1" = 2'

NOTE: Safety Edge not required at locations of Guardrail

LEGEND

- (K) Full Depth HMA Consisting of:
  165 LB/SYD QC/QA HMA, 2, 58S, Surface, 9.5 mm, on
  275 LB/SYD QC/QA HMA, 2, 58S, Intermediate, 19.0 mm, on
  330 LB/SYD QC/QA HMA, 2, 58S, Base, 19.0 mm, (for constructability with curbs) on
  330 LB/SYD QC/QA HMA, 2, 58S, Base, 19.0 mm, (minimum, or thickness necessary to match adjacent pavement) on
  Subgrade Treatment, Type IC
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:,
  Milling, Profile
  165 LB/SYD QC/QA HMA, 2, 58S, Surface, 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of:
  165 LB/SYD QC/QA HMA, 2, 58S, Surface, 9.5 mm, on
  Widening with HMA, Type B Consisting of:
  275 LB/SYD HMA Intermediate, Type B, on
  330 LB/SYD HMA Base, Type B, on
  330 LB/SYD HMA Base, Type B, (minimum, or thickness necessary to match adjacent pavement) on
  Subgrade Treatment, Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:,
  Seed Mixture, R
  Fertilizer
  Mulching Material

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — DATE

DESIGNED:	MJR 7/17/2024	DRAWN:	MJR 7/17/2024
CHECKED:	YZ 7/19/2024	CHECKED:	YZ 7/19/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 4'	
VERTICAL SCALE	DESIGNATION
NONE	2003031
SURVEY BOOK	SHEET
	4 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 7/19/2024
PLOT SCALE: 1:1 EDIT DATE: 7/17/24 - 10:20 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 29ST ST REHAB\S ACAD\200 DESIGN\CK\RD-SHT-TYPICAL-28 1ST ST REHAB.DWG

100+00 105+00 110+00 115+00 120+00 125+00

¼ SECTION LINE

SEC. 12, T20N, R4E
JACKSON TWP.
HAMILTON CO.

Waltz - Ena Farms LLC

APP. EXIST. R/W & P.L.

APP. EXIST. R/W & P.L.

CURVE DATA
P.I. 101+69.57 Line "A"
Δ = 0°00'28"
(No Curve Run)

P.I. 101+69.57 "A" =
P.I. 101+69.57 "PR-A"

40' R/W

¼ SECTION LINE

LINE "PR-A"
S89°45'41"E

LINE "A"
S89°45'13"E

APP. EXIST. R/W & P.L.

APP. EXIST. R/W & P.L.

40' R/W

BEGIN CONSTRUCTION
P.O.T. 102+05.82 "A"=
P.O.T. 102+05.82 "PR-A"

APP. P.L.

Elisa D. Garcia

LINE "PR-A"
S89°45'13"E

APP. P.L.

TEMP R/W
FOR GRADING

40' R/W

TEMP R/W
FOR GRADING

APP. P.L.

APP. P.L.

1

APP. P.L.

Eric Littrell

P.T. 124+86.14 "A" =
P.T. 124+86.14 "PR-A"

CICERO CREEK

APP. EXIST. R/W & P.L.

LINE "A" LINE "PR-A"
N77°26'04"E N77°26'04"E

¼ SECTION LINE

40' R/W

P.I. 123+58.56 "A" =
P.I. 123+58.56 "PR-A"

P.C. 122+29.90 "A" =
P.C. 122+29.90 "PR-A"

Bryon L. &
Teena L. Windows

APP. P.L.

CURVE DATA
P.I. 123+58.56 Line "PR-A"
Δ = 12°48'42"
R = 1145.92'
T = 128.65'
L = 256.24'
E = 7.20'
Se = -2.94% LT
4.92% RT

MATCH LINE STA 127+00.00 LINE "PR-A"

¼ SECTION LINE

Caorlyn Jean Endicott
Rev. Trust

APP. P.L.

Caorlyn Jean Endicott
Rev. Trust

NOTE TO REVIEWER:
PROPOSED RW IS PRELIMINARY AND IS SHOWN HERE FOR INFORMATION ONLY. PROPOSED RW WILL BE FINALIZED FOR FUTURE SUBMITTALS.

OWNER

1 TODD B. ELLIS & BARBARA B. ELLIS

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:24 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\04 PLAT 1\RD-SHT-PLAT 1.DWG

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: ESB 12/14/2023 DRAWN: ESB 12/14/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	5 of 177
CONTRACT	PROJECT
R-43619	2003031

MATCH LINE STA 127+00.00 LINE "PR-A"

MATCH LINE STA 157+00.00 LINE "PR-A"

130+00 | 135+00 | 140+00 | 145+00 | 150+00 | 155+00

SECTION LINE | ¼ SECTION LINE

SEC. 7, T20N, R5E
JACKSON TWP.
HAMILTON CO.

CURVE DATA
P.I. 131+26.32 Line "PR-A"
Δ = 13°15'54"
R = 1145.92'
T = 133.25'
L = 265.30'
E = 7.72'
Se = 7.20% LT
-7.20% RT

CURVE DATA
P.I. 140+22.82 Line "PR-A"
Δ = 0°35'53"
R = 9581.80'
T = 50.00'
L = 100.00'
E = 0.13'

CURVE DATA
P.I. 149+41.65 Line "PR-A"
Δ = 0°21'49" LT.
(No Curve Run)

CURVE DATA
P.I. 149+41.65 Line "A"
Δ = 0°21'49" LT.
(No Curve Run)

Waltz - Ena arms LLC

Leroy W. Waltz & Esther J. Waltz

Michael K. Henderson Farms, LLC

P.I. 131+26.32 "A" = P.I. 131+26.32 "PR-A"

P.T. 132+58.37 "A" = P.T. 132+58.37 "PR-A"

P.C. 139+72.82 "PR-A"

P.I. 140+22.82 "A" = P.I. 140+22.82 "PR-A"

P.T. 140+72.82 "PR-A"

P.I. 149+41.65 "A" = P.I. 149+41.65 "PR-A"

50' R/W

40' R/W

APP. EXIST. R/W & P.L.

LINE "A" N77°26'04"E

LINE "PR-A" N77°26'04"E

LINE "PR-A" S89°18'02"E

LINE "A" S89°18'02"E

LINE "A" S89°53'54"E

LINE "PR-A" S89°53'54"E

LINE "A" N89°44'16"E

LINE "PR-A" N89°44'16"E

¼ SECTION LINE

P.C. 129+93.07 "A" = P.C. 129+93.07 "PR-A"

TEMP R/W FOR GRADING AND DRIVES

APP. P.L.

Louis Weihe & Stacey Anne Weihe

Susan Holly Roy

Alexander P. Gordon & Keely Gordon

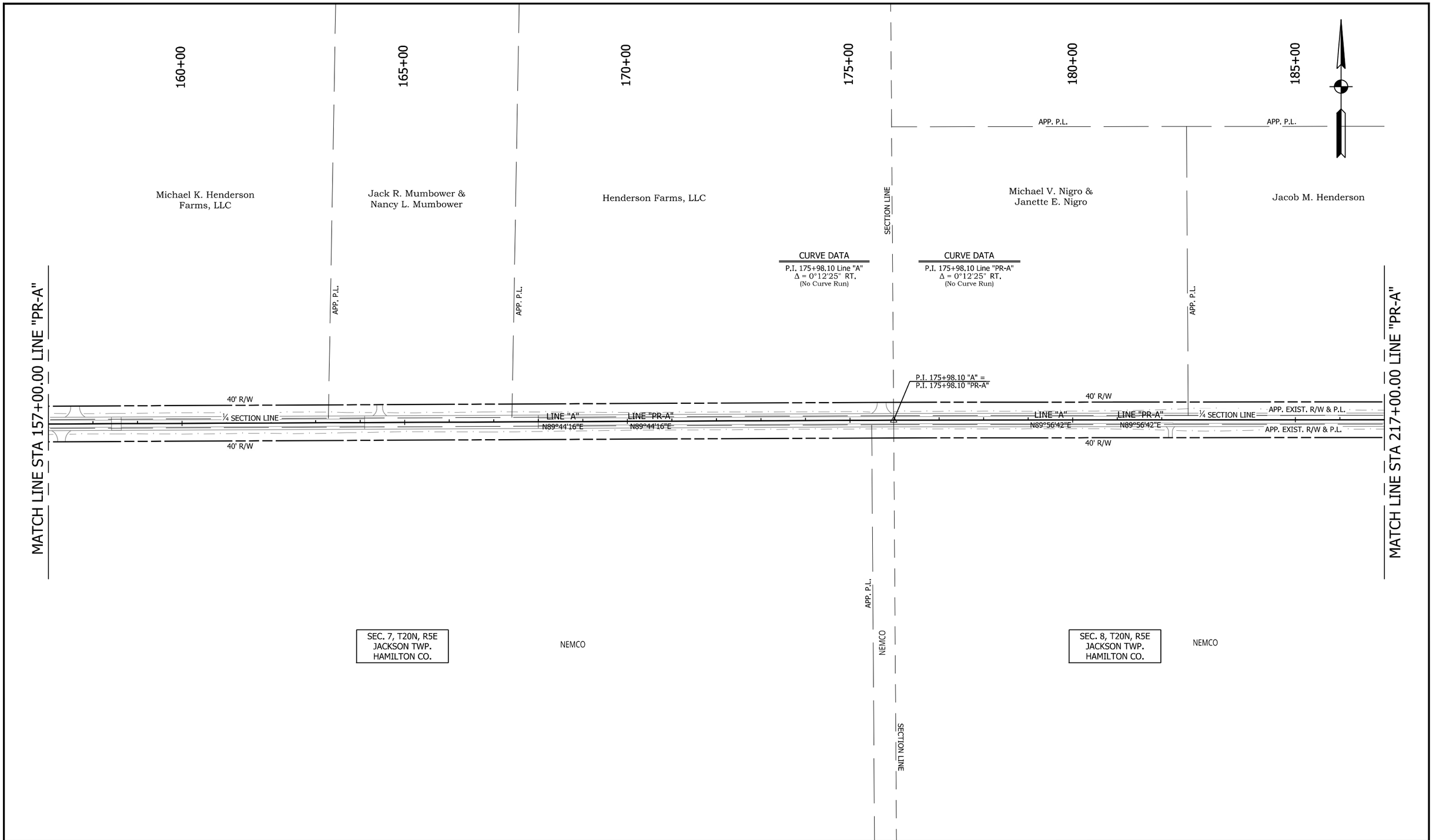
NEMCO

NEMCO

NEMCO

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE		INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: 1" = 100' / BRIDGE FILE:
			VERTICAL SCALE: N/A / DESIGNATION: 2003031
DESIGNED: ESB 12/14/2023	DRAWN: ESB 12/14/2023	PLAT NO 1	SURVEY BOOK: / SHEET: 6 of 177
CHECKED: NDH 1/8/2024	CHECKED: NDH 1/8/2024		CONTRACT: R-43619 / PROJECT: 2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:24 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\04 PLAT 1\RD-SHT-PLAT 1.DWG



PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:24 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\5 ACAD\04 PLAT 1\RD-SHT-PLAT 1.DWG

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: ESB 12/14/2023
DRAWN: ESB 12/14/2023
CHECKED: NDH 1/8/2024
CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	7 of 177
CONTRACT	PROJECT
R-43619	2003031

190+00 195+00 200+00 205+00 210+00 215+00

APP. P.L.

Jacob M. Henderson

Beverly S. Carter

¼ SECTION LINE

Beverly S. Carter

APP. P.L.

Alvin E. Crail & Linda K. Crail

APP. P.L.

TEMP R/W FOR GRADING AND DRIVES

40' R/W 40' R/W 40' R/W 40' R/W

APP. EXIST. R/W & P.L. APP. EXIST. R/W & P.L. ¼ SECTION LINE LINE "A" N89°56'42"E LINE "PR-A" N89°56'42"E ¼ SECTION LINE APP. EXIST. R/W & P.L.

APP. EXIST. R/W & P.L. APP. EXIST. R/W & P.L. APP. EXIST. R/W & P.L.

40' R/W 40' R/W 60' R/W

MATCH LINE STA 187+00.00 LINE "PR-A"

MATCH LINE STA 217+00.00 LINE "PR-A"

APP. P.L.

APP. P.L.

NEMCO

Gene Rulon

¼ SECTION LINE

SEC. 8, T20N, R5E
JACKSON TWP.
HAMILTON CO.

J & C Rulon
Farms LLC

APP. P.L.

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:24 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\5 ACAD\04 PLAT 1\RD-SHT-PLAT 1.DWG

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: ESB 12/14/2023 DRAWN: ESB 12/14/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	8 of 177
CONTRACT	PROJECT
R-43619	2003031

220+00

225+00

230+00

SEC. 8, T20N, R5E
JACKSON TWP.
HAMILTON CO.

Beverly S. Carter

SECTION LINE

SEC. 9, T20N, R5E
JACKSON TWP.
HAMILTON CO.

MATCH LINE STA 217+00.00 LINE "PR-A"

CURVE DATA
P.I. 228+93.27 Line "A"
Δ = 0°42'29"
(No Curve Run)

P.I. 228+93.27 "A" =
P.I. 228+93.27 "PR-A"

TEMP R/W FOR
GRADING AND DRIVES

40' R/W

40' R/W

¼ SECTION LINE

LINE "A"
N89°56'42"E

LINE "PR-A"
N89°56'42"E

APP. EXIST. R/W & P.L.

APP. EXIST. R/W & P.L.

60' R/W

LINE "PR-A"
N89°14'13"E

APP. EXIST. R/W & P.L.

APP. EXIST. R/W & P.L.

¼ SECTION LINE

END INCIDENTAL CONSTRUCTION
P.O.T. 227+95.00 "A"=
P.O.T. 227+95.00 "PR-A"

END CONSTRUCTION
P.O.T. 227+45.00 "A"=
P.O.T. 227+45.00 "PR-A"

APP. P.L.

J & C Rulon
Farms LLC

Rulon Enterprises LLC

SECTION LINE

J & C Rulon
Farms LLC

APP. P.L.

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:24 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\04 PLAT 1\RD-SHT-PLAT 1.DWG

RECOMMENDED
FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: ESB 12/14/2023
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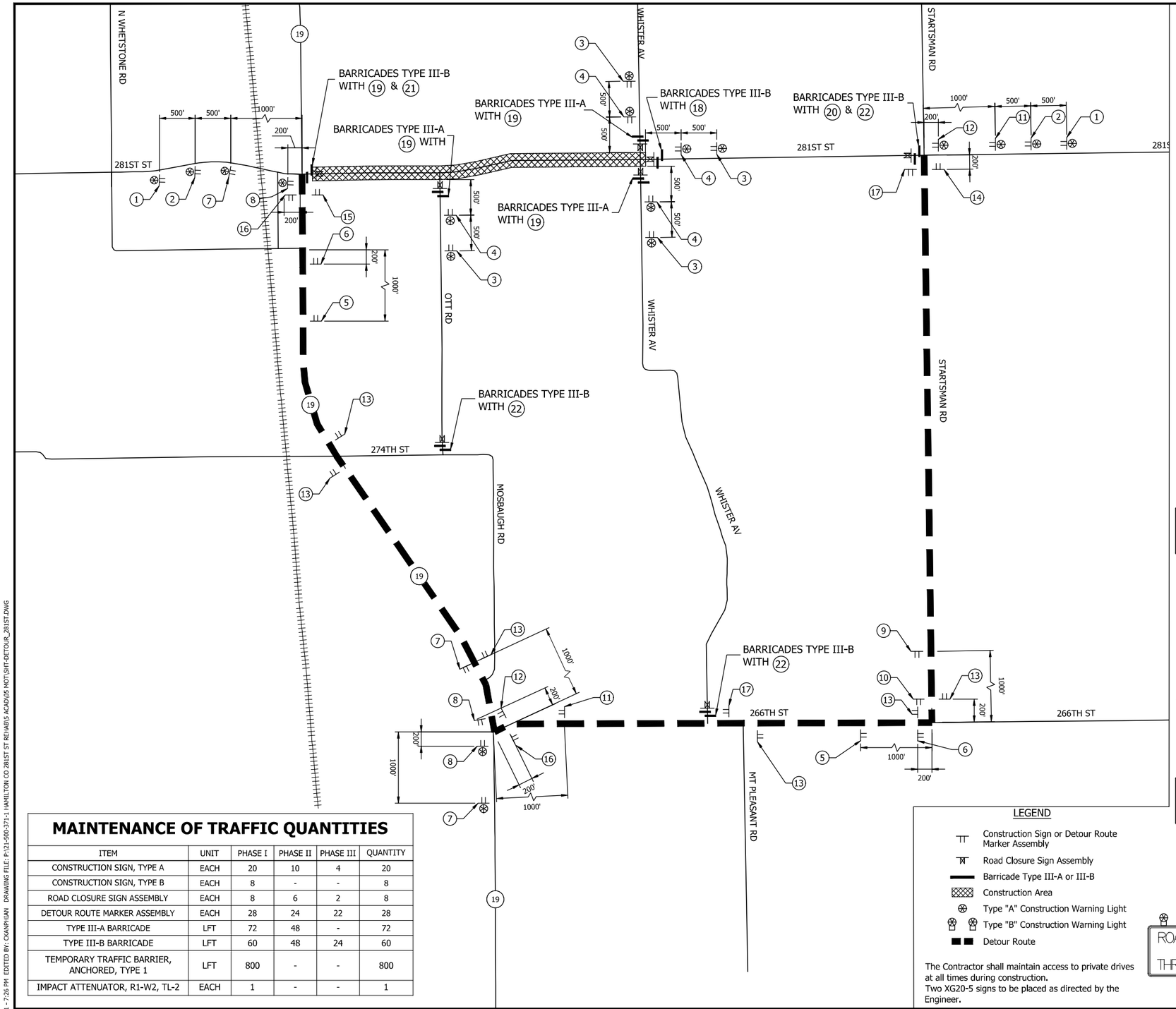
CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	9 of 177
CONTRACT	PROJECT
R-43619	2003031



MAINTENANCE OF TRAFFIC QUANTITIES

ITEM	UNIT	PHASE I	PHASE II	PHASE III	QUANTITY
CONSTRUCTION SIGN, TYPE A	EACH	20	10	4	20
CONSTRUCTION SIGN, TYPE B	EACH	8	-	-	8
ROAD CLOSURE SIGN ASSEMBLY	EACH	8	6	2	8
DETOUR ROUTE MARKER ASSEMBLY	EACH	28	24	22	28
TYPE III-A BARRICADE	LFT	72	48	-	72
TYPE III-B BARRICADE	LFT	60	48	24	60
TEMPORARY TRAFFIC BARRIER, ANCHORED, TYPE 1	LFT	800	-	-	800
IMPACT ATTENUATOR, R1-W2, TL-2	EACH	1	-	-	1

LEGEND

- Construction Sign or Detour Route Marker Assembly
- Road Closure Sign Assembly
- Barricade Type III-A or III-B
- Construction Area
- Type "A" Construction Warning Light
- Type "B" Construction Warning Light
- Detour Route

The Contractor shall maintain access to private drives at all times during construction.
Two XG20-5 signs to be placed as directed by the Engineer.

(1) ROAD CLOSED AHEAD — XW20-3 (36"x36")
(2) DETOUR AHEAD — XW20-2 (36"x36")
(3) ROAD CLOSED 1000 FEET — XW20-3-A (36"x36")
(4) ROAD CLOSED 500 FEET — XW20-3-A (36"x36")

(5) RMA-1: DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M5-1(L) (21"x15")
(6) RMA-2: DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M6-1(L) (21"x15")
(7) RMA-3: DETOUR XM4-8 (24"x12"); EAST M3-2 (24"x12"); 28I ST STREET M1-6-1; M5-1(R) (21"x15")
(8) RMA-4: DETOUR XM4-8 (24"x12"); EAST M3-2 (24"x12"); 28I ST STREET M1-6-1; M6-1(R) (21"x15")
(9) RMA-5: DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M5-1(R) (21"x15")
(10) RMA-6: DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M6-1(R) (21"x15")
(11) RMA-7: DETOUR XM4-8 (24"x12"); WEST M3-4 (24"x12"); 28I ST STREET M1-6-1; M5-1(R) (21"x15")
(12) RMA-8: DETOUR XM4-8 (24"x12"); WEST M3-4 (24"x12"); 28I ST STREET M1-6-1; M6-1(R) (21"x15")
(13) RMA-9: DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M6-3 (21"x15")
(14) RMA-10A: END XM4-6 (24"x12"); DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M5-1(R) (21"x15")
(15) RMA-10B: END XM4-6 (24"x12"); DETOUR XM4-8 (24"x12"); 28I ST STREET M1-6-1; M5-1(L) (21"x15")
(16) RMA-11: DETOUR XM4-8 (24"x12"); EAST M3-2 (24"x12"); 28I ST STREET M1-6-1; M6-3 (21"x15")
(17) RMA-12: DETOUR XM4-8 (24"x12"); WEST M3-4 (24"x12"); 28I ST STREET M1-6-1; M6-3 (21"x15")
(18) ROAD CLOSED TO THRU TRAFFIC — R11-4 (60"x30")
(19) ROAD CLOSED — R11-2 (48"x30")
(20) DETOUR — XM4-10(L) (48"x18")
(21) DETOUR — XM4-10(R) (48"x18")
(22) ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY — R11-3 (60"x30")

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: YZ 1/8/2024 CHECKED: YZ 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC MAINTENANCE DETAILS
281st STREET - PHASE I

HORIZONTAL SCALE	BRIDGE FILE
1" = 750'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	10 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 7/12/11 - 7:26 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\05 INDOT\SHT-DETOUR_281ST.DWG

281ST STREET

LINE "PR-A"

LINE "PR-A2"

LINE "B-D"

END CONSTRUCTION
XG20-2
(60"x24")

ROAD CONSTRUCTION AHEAD
XW20-1
(36"x36")

Edge of Existing Shoulder
Edge of Existing Travel Lane
S.R. 19
45+00

500'
+54 B-D
+55 B-D
A

Concrete Barrier

40+00

Impact Attenuator
Edge of Temporary Shoulder
Edge of Existing Shoulder
16:1

RIGHT SHOULDER CLOSED
(36"x36")
XW21-5R

XW21-5R
RIGHT SHOULDER CLOSED
(36"x36")
AHEAD
W16-9P
(24"x12")

Speeding
Max $1000
Reckless Driving
Max 6 Yrs

XW2-6-A
(60"x36")

500' 500' 1000' 500' 500'

35+00
S.R. 19
Edge of Existing Travel Lane

XW20-1
(36"x36")

R2-1
SPEED LIMIT 45
(24"x30")
WORK ZONE
XG20-5aP
(24"x18")

Edge of Existing Shoulder
Edge of Existing Travel Lane

XW2-6-A
Speeding
Max $1000
Reckless Driving
Max 6 Yrs
(60"x36")

500' 500' 1000' 500' 500'
100'

XW21-5R
XW21-5R

LEFT SHOULDER CLOSED
(36"x36")
AHEAD
W16-9P
(24"x12")

LEFT SHOULDER CLOSED
(36"x36")

NW Corner NE 1/4
Sec. 12, T. 20 N., R. 4 E.
(Harrison Monument - Flush)

Edge of Existing Shoulder
495'
165' Taper
Edge of Existing Travel Lane

500'
XG20-2
END CONSTRUCTION
(60"x24")

R2-1
SPEED LIMIT 45
(24"x30")
WORK ZONE
XG20-5aP
(24"x18")

XW20-1
ROAD CONSTRUCTION AHEAD
(36"x36")

4'-0" Shoulder
12' Travel Lane
12' Travel Lane
Area of Construction
LINE "B-D"
4'
2'
Existing Pavement
Edge of Existing Shoulder
Temporary Traffic Barrier, Anchored, Type 1

SECTION A-A
STA. 38+55 TO STA. 41+06 "B-D"

LEGEND

- Construction Sign or Detour Route Marker Assembly
- Road Closure Sign Assembly
- Barricade Type III-A or III-B
- Construction Area
- Type "A" Construction Warning Light
- Type "B" Construction Warning Light
- Detour Route
- Barrels

The Contractor shall maintain access to private drives at all times during construction.
Two XG20-5 signs to be placed as directed by the Engineer.

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 7/12/11 - 7:26 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\05 MOT\SHT-DETOUR_281ST.DWG

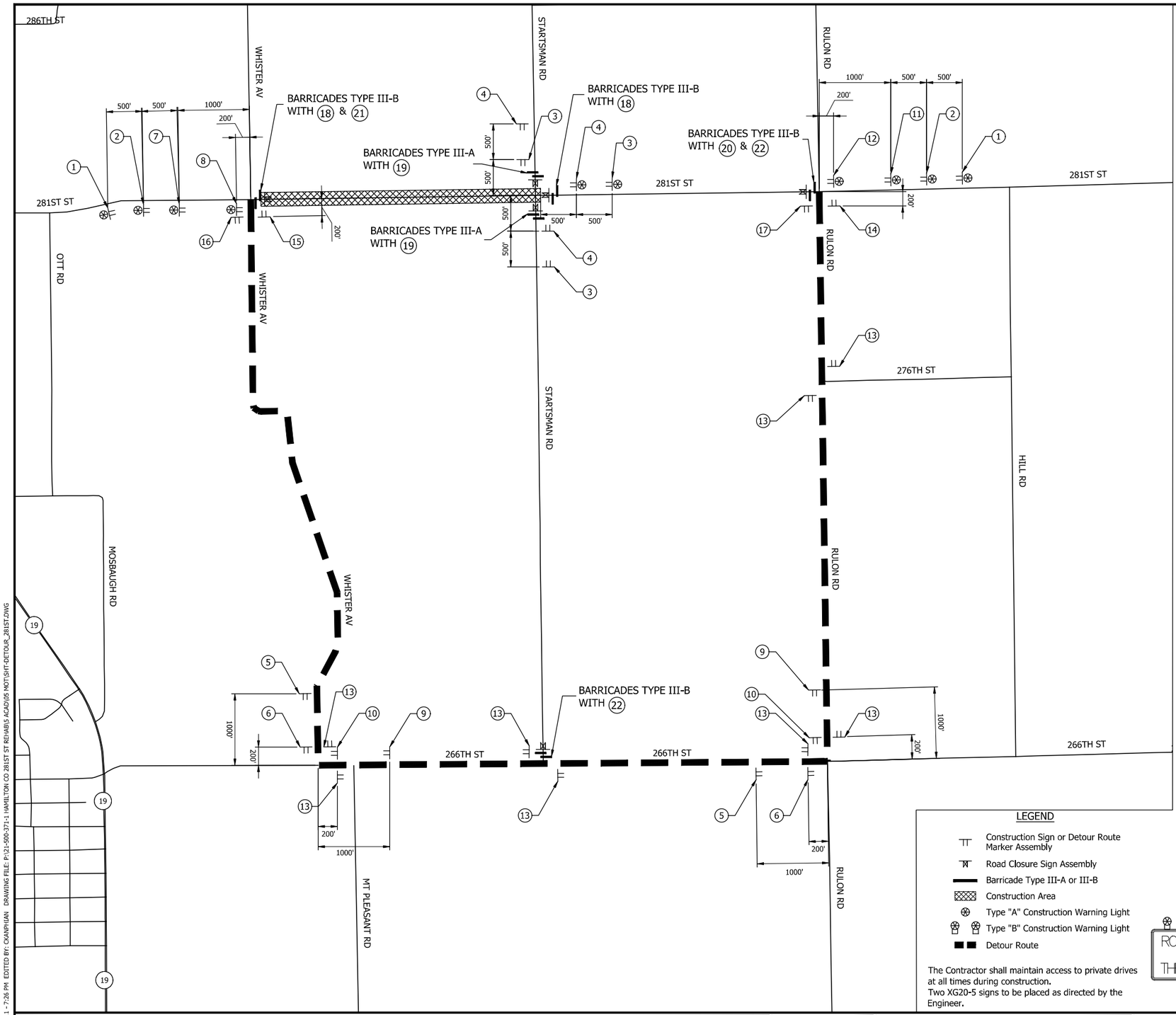
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

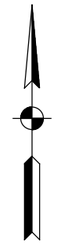
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

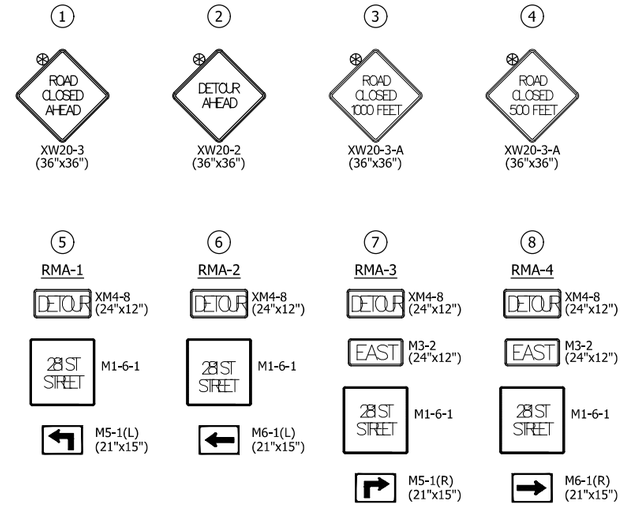
INDIANA
DEPARTMENT OF TRANSPORTATION

TRAFFIC MAINTENANCE DETAILS
281st STREET - PHASE I

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	11 of 177
CONTRACT	PROJECT
R-43619	2003031







LEGEND

- Construction Sign or Detour Route Marker Assembly
- Road Closure Sign Assembly
- Barricade Type III-A or III-B
- Construction Area
- Type "A" Construction Warning Light
- Type "B" Construction Warning Light
- Detour Route

The Contractor shall maintain access to private drives at all times during construction.
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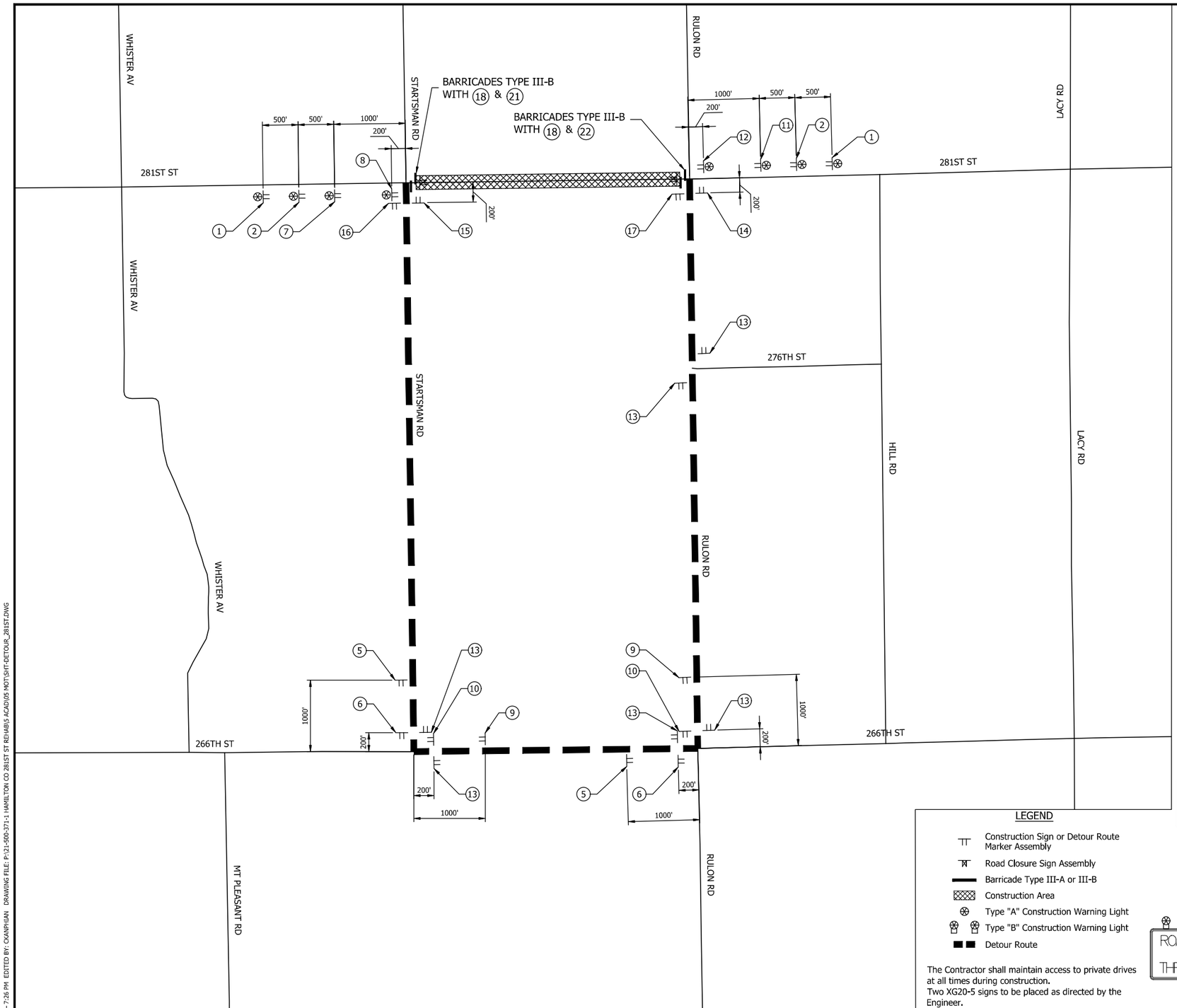
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

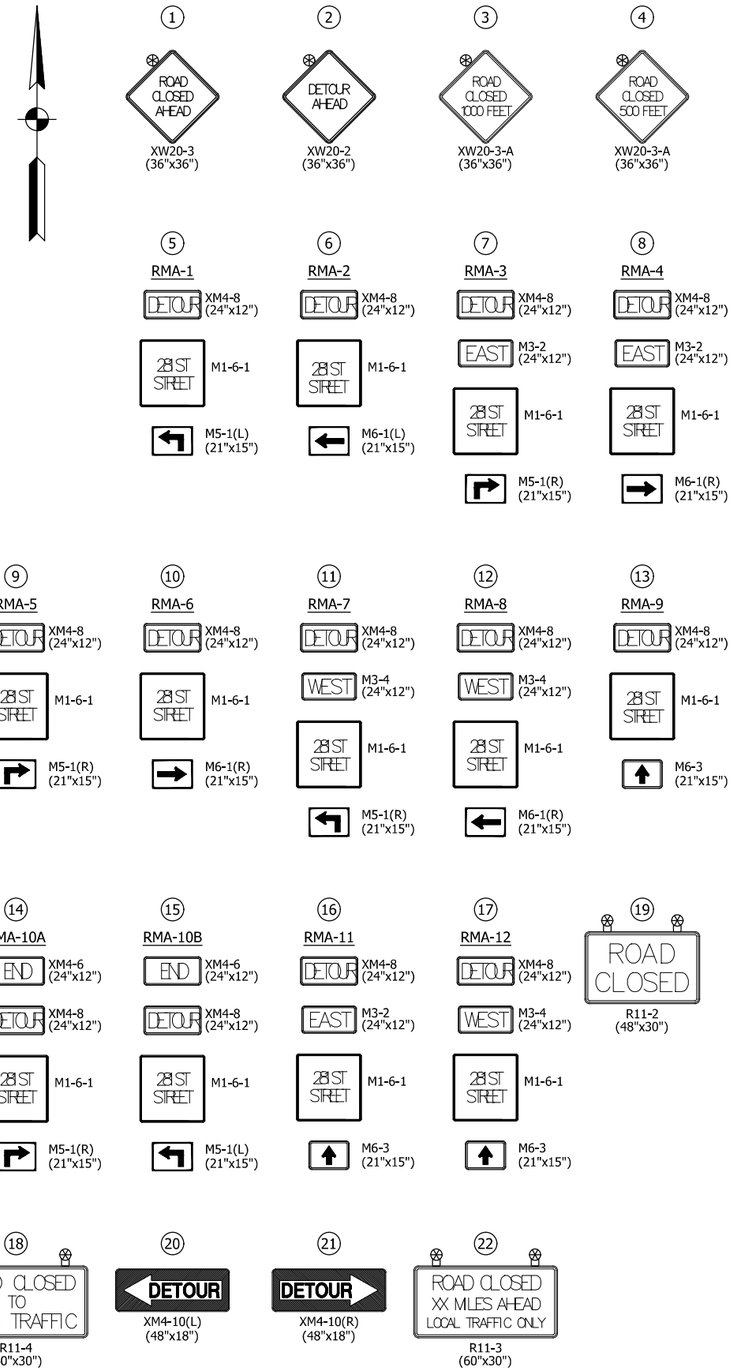
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: YZ 1/8/2024 CHECKED: YZ 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC MAINTENANCE DETAILS
281st STREET - PHASE II

HORIZONTAL SCALE	BRIDGE FILE
1" = 750'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	12 of 177
CONTRACT	PROJECT
R-43619	2003031





LEGEND

- Construction Sign or Detour Route Marker Assembly
- Road Closure Sign Assembly
- Barricade Type III-A or III-B
- Construction Area
- Type "A" Construction Warning Light
- Type "B" Construction Warning Light
- Detour Route

The Contractor shall maintain access to private drives at all times during construction.
Two XG20-5 signs to be placed as directed by the Engineer.

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

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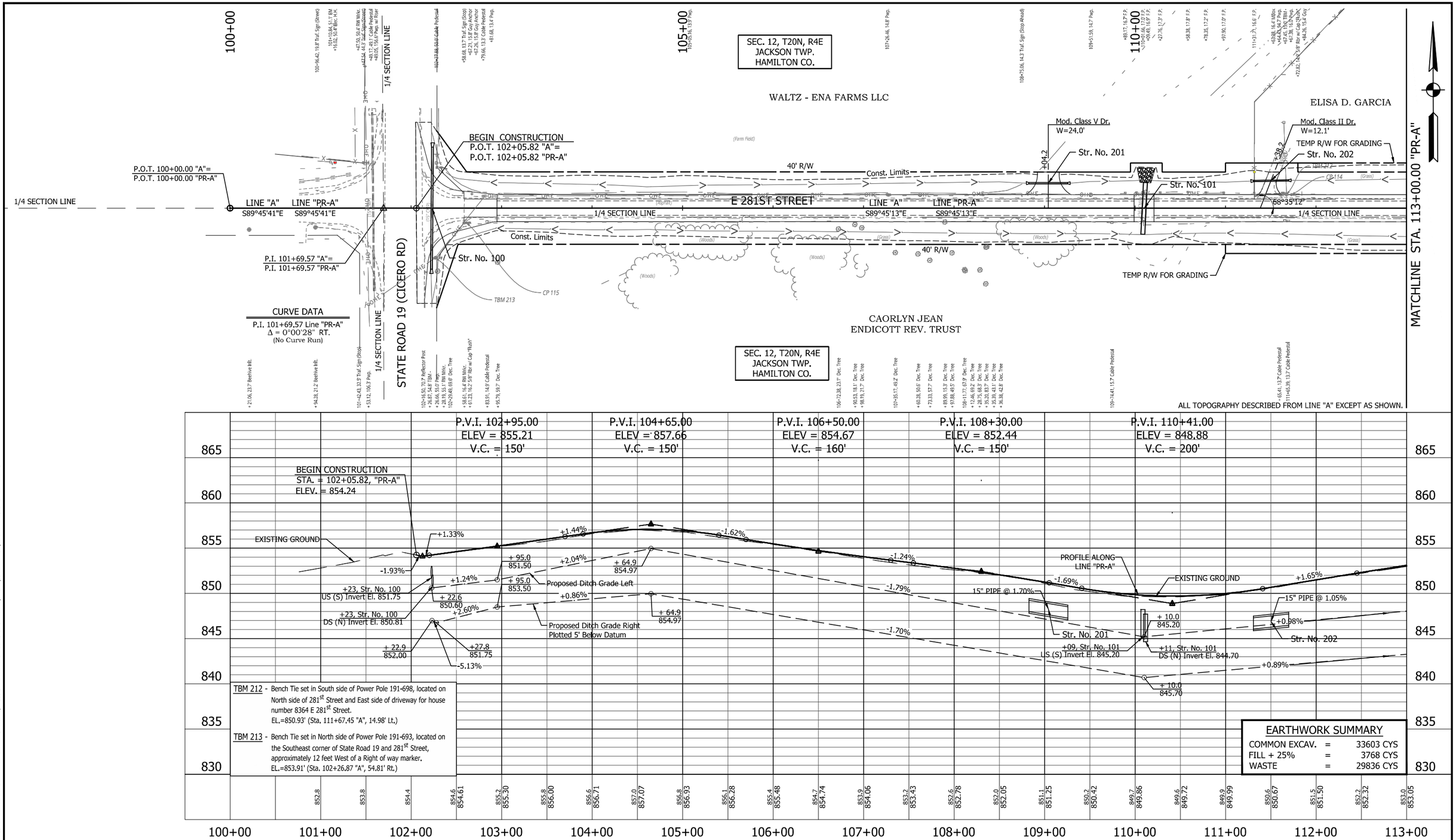
CHECKED: YZ 1/8/2024 CHECKED: YZ 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC MAINTENANCE DETAILS
281st STREET - PHASE III

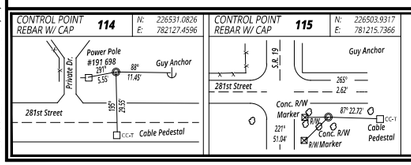
HORIZONTAL SCALE	BRIDGE FILE
1"= 750'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	13 of 177
CONTRACT	PROJECT
R-43619	2003031



TBM 212 - Bench Tie set in South side of Power Pole 191-698, located on North side of 281st Street and East side of driveway for house number 8364 E 281st Street.
EL.=850.93' (Sta. 111+67.45 "A", 14.98' Lt.)

TBM 213 - Bench Tie set in North side of Power Pole 191-693, located on the Southeast corner of State Road 19 and 281st Street, approximately 12 feet West of a Right of way marker.
EL.=853.91' (Sta. 102+26.87 "A", 54.81' Rt.)

EARTHWORK SUMMARY		
COMMON EXCAV.	=	33603 CYS
FILL + 25%	=	3768 CYS
WASTE	=	29836 CYS



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

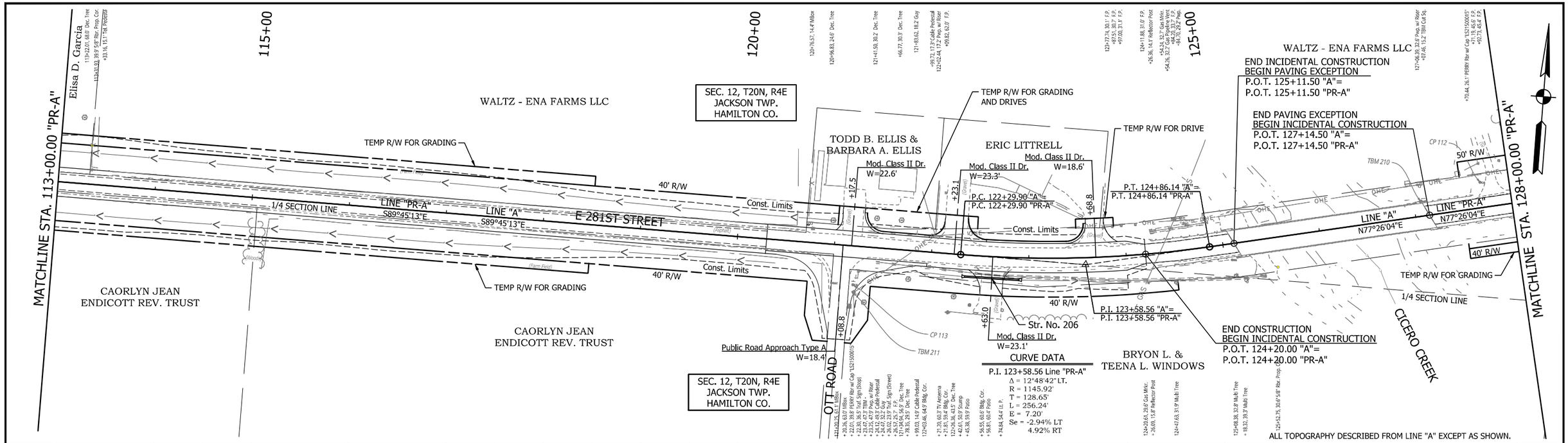
DESIGNED: YZ 12/22/2023	DRAWN: YZ 12/22/2023
CHECKED: RDS 1/8/2024	CHECKED: MRM 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 100+00.00 TO 113+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	14 of 177
CONTRACT	PROJECT
R-43619	2003031

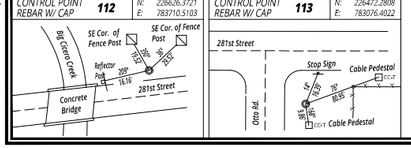
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\06 PLAN PROF\RD-SHT-PP-281ST ST REHAB.DWG



TBM 210 - Cut Square set on top of concrete wall on the North side of bridge structure at the North end of the East abutment of bridge structure over Cicero Creek.
EL.=842.74' (Sta. 127+07.46 "A", 15.16' Lt.)

TBM 211 - Bench Tie set in Northwest side of Power Pole 073-312, located at the Southeast corner of Ott Road and 281st Street.
EL.=854.38' (Sta. 121+23.47 "A", 47.26' Rt.)

CONTROL POINT	REBAR W/ CAP	112	N: 226626.3721 E: 783710.5103
CONTROL POINT	REBAR W/ CAP	113	N: 226472.2808 E: 783076.4022



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CHECKED: RDS 1/8/2024 CHECKED: MRM 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 113+00.00 TO 128+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	15 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
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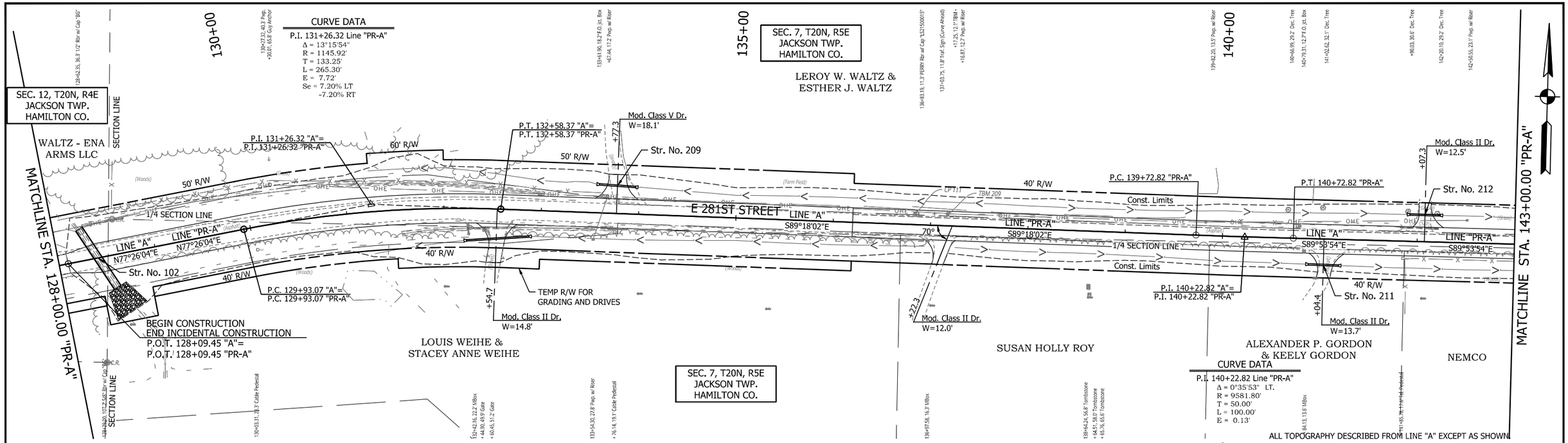
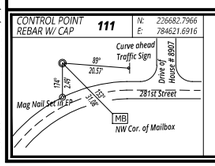


CONTROL POINT REBAR W/ CAP 111 N: 226682.7966 E: 784621.6916



RECOMMENDED FOR APPROVAL	DESIGN ENGINEER DATE
DESIGNED: YZ 12/22/2023	DRAWN: YZ 12/22/2023
CHECKED: RDS 1/8/2024	CHECKED: MRM 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 128+00.00 TO 143+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	16 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
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MATCHLINE STA. 143+00.00 "PR-A"

MATCHLINE STA. 158+00.00 "PR-A"

LEROY W. WALTZ & ESTHER J. WALTZ

MICHAEL K. HENDERSON FARMS, LLC

NEMCO

NEMCO

NEMCO

SEC. 7, T20N, R5E JACKSON TWP. HAMILTON CO.

SEC. 7, T20N, R5E JACKSON TWP. HAMILTON CO.

N WHISTLER RD

CROOKED CREEK RD

1/4 SECTION LINE

1/4 SECTION LINE

E 281ST STREET

Public Road Approach Type A W=20.0'

Public Road Approach Type A W=20.0'

Mod. Class V Dr. W=20.0'

Mod. Class V Dr. W=17.3'

+40.7

+42.0

+60.1

+29.3

Str. No. 103

Str. No. 213

Str. No. 214

Str. No. 215

Str. No. 216

TBM 208

CP 109

CP 110

40' R/W

Const. Limits

LINE "PR-A" S89°53'54"E

LINE "A" S89°53'54"E

LINE "A" N89°44'16"E

LINE "PR-A" N89°44'16"E

P.I. 149+41.65 "A"= P.I. 149+41.65 "PR-A"

CURVE DATA

P.I. 149+41.65 Line "PR-A"
Δ = 0°21'49" LT.
(No Curve Run)

ALL TOPOGRAPHY DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.

P.V.I. 143+67.00 ELEV = 852.81 V.C. = 170'

P.V.I. 145+42.00 ELEV = 854.90 V.C. = 150'

P.V.I. 148+30.00 ELEV = 857.05 V.C. = 250'

P.V.I. 151+10.00 ELEV = 863.35 V.C. = 150'

P.V.I. 152+80.00 ELEV = 859.09 V.C. = 160'

P.V.I. 154+90.00 ELEV = 855.42 V.C. = 160'

870 865 860 855 850 845 840 835

+1.20% +0.75% +2.25% -2.50% -1.77% -1.75% -0.65% -0.88% -0.30% -0.90% -0.30%

-1.26% -0.67% +3.00% +0.80% +1.78% -1.77%

+2.79% +0.80% +1.78%

+0.00% +0.30% +0.29%

PROFILE ALONG LINE "PR-A"

EXISTING GROUND

15" PIPE @ 1.04%

15" PIPE @ 1.78%

36" PIPE @ 0.31%

15" PIPE @ 0.32%

Proposed Ditch Grade Left

Proposed Ditch Grade Right Plotted 5' Below Datum

Proposed Ditch Grade Right Plotted 5' Below Datum

+79, Str. No. 103 DS (S) Invert El. 848.55

+78, Str. No. 103 US (S) Invert El. 848.75

+ 50.0 850.00 | + 80.0 850.00 | + 50.0 850.21 | + 50.0 853.00 | + 00.0 855.00 | + 10.0 860.53 | + 00.0 853.62 | + 00.0 851.86 | + 00.0 851.82 | + 50.0 853.00 | + 80.0 849.80 | + 50.0 850.00

853.8 854.00 | 853.3 853.50 | 853.3 853.44 | 853.7 853.80 | 854.2 854.38 | 854.7 854.89 | 855.2 855.33 | 855.6 855.71 | 856.0 856.08 | 856.4 856.51 | 857.0 857.09 | 857.7 857.83 | 858.7 858.71 | 860.0 859.75 | 860.9 860.87 | 861.8 861.96 | 862.5 862.45 | 862.1 862.15 | 860.8 861.09 | 859.7 859.90 | 858.8 858.83 | 857.7 857.87 | 856.9 856.99 | 856.1 856.17 | 855.4 855.52 | 855.0 855.04 | 854.6 854.70 | 854.3 854.37 | 854.0 854.04 | 853.5 853.71 | 853.4 853.45

143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00

TBM 208 - Bench Tie set in South side of Power Pole 073-324, located on the North side of 281st Street, approximately 315 feet West of Crooked Creek Road (Whistler Road) and due North of Control Point 110.
EL.=855.35' (Sta. 146+08.00 "A", 14.76' Lt.)

CONTROL POINT 109 REBAR W/ CAP N: 226679.4636 E: 786020.6586

CONTROL POINT 110 REBAR W/ CAP N: 226653.3039 E: 785546.3882

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: YZ 12/22/2023 DRAWN: YZ 12/22/2023

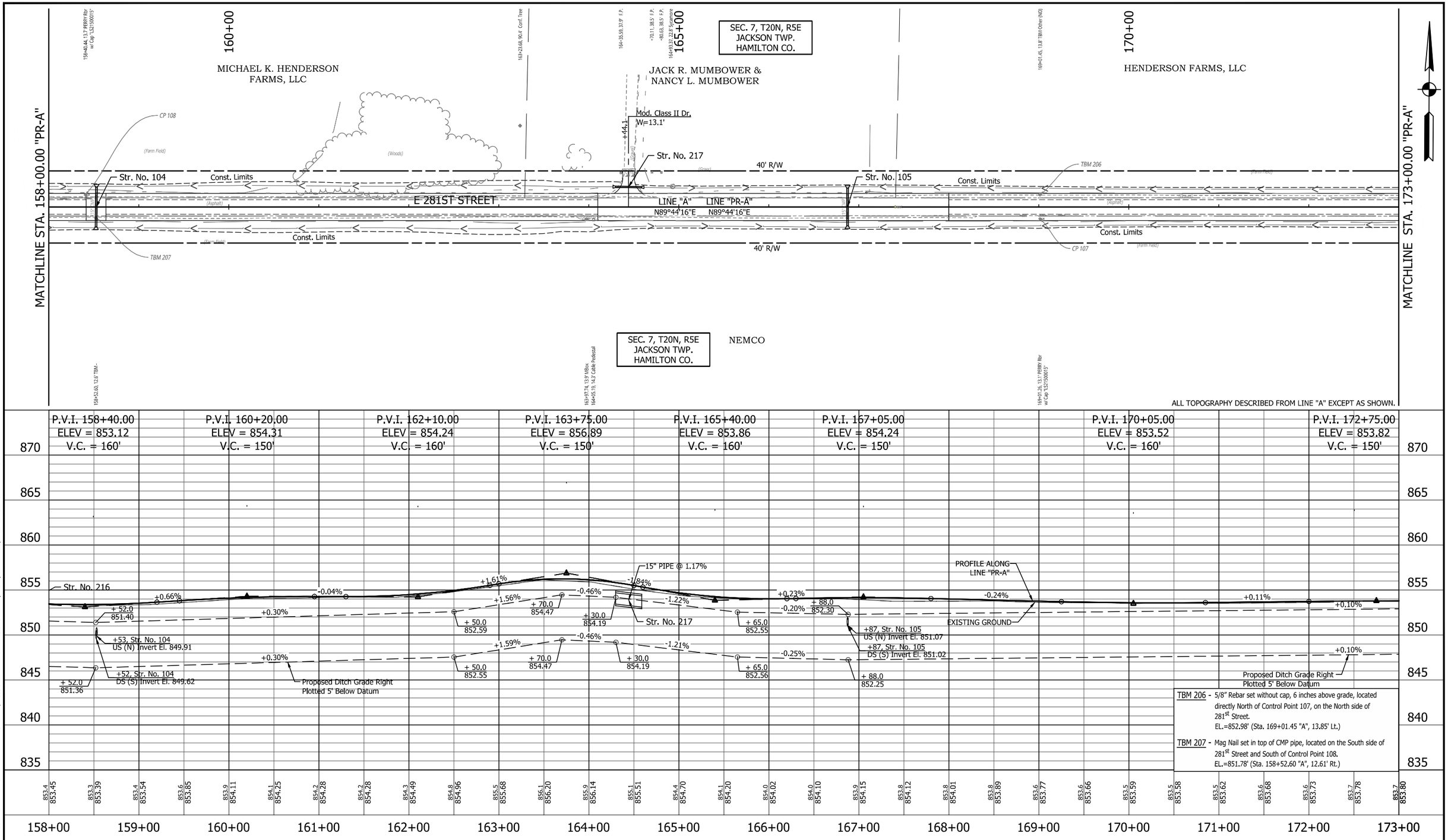
CHECKED: RDS 1/8/2024 CHECKED: MRM 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE STA. 143+00.00 TO 158+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	17 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\S ACAD\06 PLAN PROF\RD-SHT-PP-281ST ST REHAB.DWG

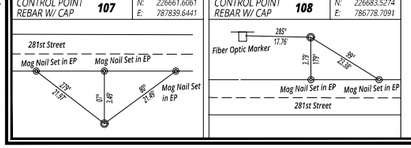


TBM 206 - 5/8" Rebar set without cap, 6 inches above grade, located directly North of Control Point 107, on the North side of 281st Street.
EL.=852.98' (Sta. 169+01.45 "A", 13.85' Lt.)

TBM 207 - Mag Nail set in top of CMP pipe, located on the South side of 281st Street and South of Control Point 108.
EL.=851.78' (Sta. 158+52.60 "A", 12.61' Rt.)

CONTROL POINT 107 REBAR W/ CAP — N: 226661.6061 E: 787839.6441

CONTROL POINT 108 REBAR W/ CAP — N: 226683.5274 E: 786778.7091



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: YZ 12/22/2023 DRAWN: YZ 12/22/2023

CHECKED: RDS 1/8/2024 CHECKED: MRM 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 158+00.00 TO 173+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	18 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANRHAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\5 ACAD\06 PLAN PROF\RD-SHT-PP-281ST ST REHAB.DWG

MATCHLINE STA. 173+00.00 "PR-A"

MATCHLINE STA. 188+00.00 "PR-A"

SEC. 7, T20N, R5E
JACKSON TWP.
HAMILTON CO.

HENDERSON FARMS, LLC

175+00

SECTION LINE & APP. P.L.

CURVE DATA
P.I. 175+98.10 Line "PR-A"
Δ = 0°12'25" RT.
(No Curve Run)

179+92.16, 12.7' PERSRV Rbr w/ Cap "LS21500015"

MICHAEL V. NIGRO &
JANETTE E. NIGRO

180+00

SEC. 8, T20N, R5E
WHITE RIVER TWP.
HAMILTON CO.

182+34.96, 15.7' Guy

182+56.27, 44.6' SW Pedestal
+59.38, 14.3° Pwp.

JACOB M. HENDERSON

184+98.12, 14.8' Pwp.
185+00

187+31.96, 13.7° Pwp.
+32.31, 16.6' Guy Anchor

Mod. Class V Dr.
W=20.0'

+71.2

P.I. 175+98.10 "A"=
P.I. 175+98.10 "PR-A"

Str. No. 218

CP 106

(Farm Field)

40' R/W

Const. Limits

LINE "A"

LINE "PR-A"

E 281ST STREET

1/4 SECTION LINE

N89°44'16"E

N89°56'42"E

(Asphalt)

TBM 205

Str. No. 219

+19.3

Mod. Class II Dr.
W=8.4'

NEMCO

SEC. 7, T20N, R5E
JACKSON TWP.
HAMILTON CO.

SECTION LINE & APP. P.L.

173+94.49, 15.7' Cable Pedestal

178+93.66, 13.4' TBM Other (NO)

SEC. 8, T20N, R5E
WHITE RIVER TWP.
HAMILTON CO.

182+39.83, 14.5' MBox
+ 53.94, 15.6' Cable Pedestal
+ 63.91, 64.4' EM

184+41.86, 19.4' Dec. Tree
+ 52.96, 14.9' Dec. Tree

186+14.75, 18.3' Multi Tree
23.75, 17.6' Multi Tree

ALL TOPOGRAPHY DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.

P.V.I. 174+40.00	P.V.I. 176+20.00	P.V.I. 178+05.00	P.V.I. 181+27.00	P.V.I. 183+00.00	P.V.I. 184+60.00	P.V.I. 187+70.00
ELEV = 853.78	ELEV = 854.08	ELEV = 854.31	ELEV = 856.14	ELEV = 859.79	ELEV = 858.94	ELEV = 859.01
V.C. = 160'	V.C. = 150'	V.C. = 160'	V.C. = 160'	V.C. = 150'	V.C. = 160'	V.C. = 160'

-0.02%

+0.16%

15" PIPE @ 0.11%

PROFILE ALONG
LINE "PR-A"

+0.13%

Str. No. 218

EXISTING GROUND

+0.57%

+0.53%

+ 00.0
853.41

+ 00.0
853.36

Proposed Ditch Grade Right
Plotted 5' Below Datum

+0.55%

+ 00.0
855.00

+2.11%

+0.77%

18" PIPE @ 0.79%

+0.77%

Str. No. 219

+ 00.0
855.00

-0.53%

+ 50.0
856.94

+ 50.0
856.94

+0.02%

+0.20%

+0.20%

Proposed Ditch Grade Right
Plotted 5' Below Datum

870
865
860
855
850
845
840
835

853.7 853.80 | 853.7 853.80 | 853.7 853.80 | 853.7 853.83 | 853.7 853.89 | 853.9 853.96 | 854.0 854.04 | 853.9 854.11 | 854.0 854.18 | 854.2 854.25 | 854.2 854.38 | 854.4 854.58 | 854.8 854.85 | 855.0 855.14 | 855.3 855.42 | 855.6 855.70 | 855.9 856.12 | 856.5 856.78 | 857.4 857.68 | 858.4 858.68 | 859.1 859.30 | 859.4 859.47 | 859.1 859.27 | 858.9 859.08 | 858.8 858.98 | 858.9 858.96 | 858.9 858.97 | 858.9 858.98 | 858.9 859.00 | 859.0 859.12 | 859.3 859.41

173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00

TBM 205 - 5/8" Rebar set without cap, 6 inches above grade, located directly South of Control Point 106, on the South side of 281ST Street.
EL.=854.26' (Sta. 178+93.66 "A", 13.43' Rt.)

CONTROL POINT
REBAR W/ CAP
106
N: 226690.8980
E: 788830.4572

Mag Nail Set in EP | 281st Street | Mag Nail Set in EP
Mod Nail

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

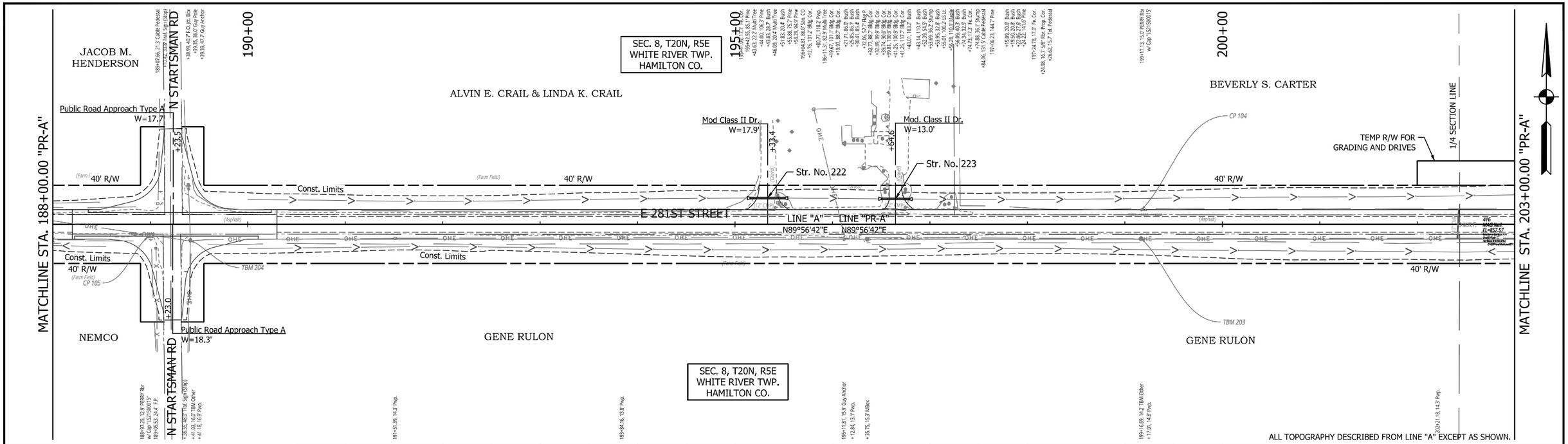
DESIGNED: YZ 12/22/2023
DRAWN: YZ 12/22/2023
CHECKED: RDS 1/8/2024
CHECKED: MRM 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 173+00.00 TO 188+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	19 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANIHAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\S ACAD\06 PLAN PROF\RD-SHT-PP-281ST ST REHAB.DWG



TBM 203 - Bench Tie set in North face of Power Pole HA 729, located at the South side of 281st Street and approximately 1,220 feet W. of TBM 202, and located directly South of Control Point 104. EL.=857.54' (Sta. 199+16.69 "A", 14.17' Rt.)

TBM 204 - Bench Tie set in North face of Power Pole HA-723, located at the Southeast corner of 281st Street and Startsman Road. EL.=860.36' (Sta. 189+41.03 "A", 19.96' Rt.)

P.V.I. 189+27.00
ELEV = 860.67
V.C. = 150'

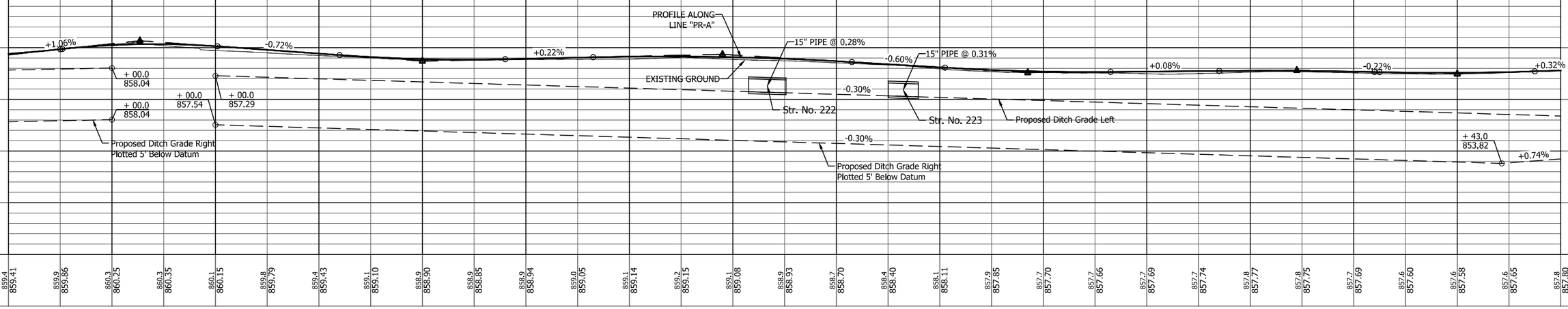
P.V.I. 192+00.00
ELEV = 858.72
V.C. = 160'

P.V.I. 194+90.00
ELEV = 859.36
V.C. = 250'

P.V.I. 197+85.00
ELEV = 857.60
V.C. = 160'

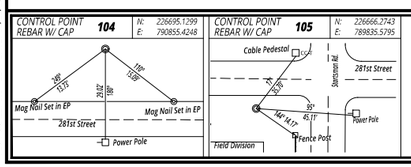
P.V.I. 200+45.00
ELEV = 857.81
V.C. = 150'

P.V.I. 202+00.00
ELEV = 857.47
V.C. = 150'



859.4 859.41 | 859.9 859.86 | 860.3 860.25 | 860.3 860.35 | 860.1 860.15 | 859.8 859.79 | 859.4 859.43 | 859.1 859.10 | 858.9 858.90 | 858.9 858.85 | 858.9 858.94 | 859.0 859.05 | 859.1 859.14 | 859.2 859.15 | 859.1 859.08 | 858.9 858.93 | 858.7 858.70 | 858.4 858.40 | 858.1 858.11 | 857.9 857.85 | 857.7 857.70 | 857.7 857.66 | 857.7 857.69 | 857.7 857.74 | 857.8 857.77 | 857.8 857.75 | 857.7 857.69 | 857.6 857.60 | 857.6 857.58 | 857.6 857.65 | 857.8 857.80

188+00 | 189+00 | 190+00 | 191+00 | 192+00 | 193+00 | 194+00 | 195+00 | 196+00 | 197+00 | 198+00 | 199+00 | 200+00 | 201+00 | 202+00 | 203+00



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: YZ 12/22/2023 | DRAWN: YZ 12/22/2023

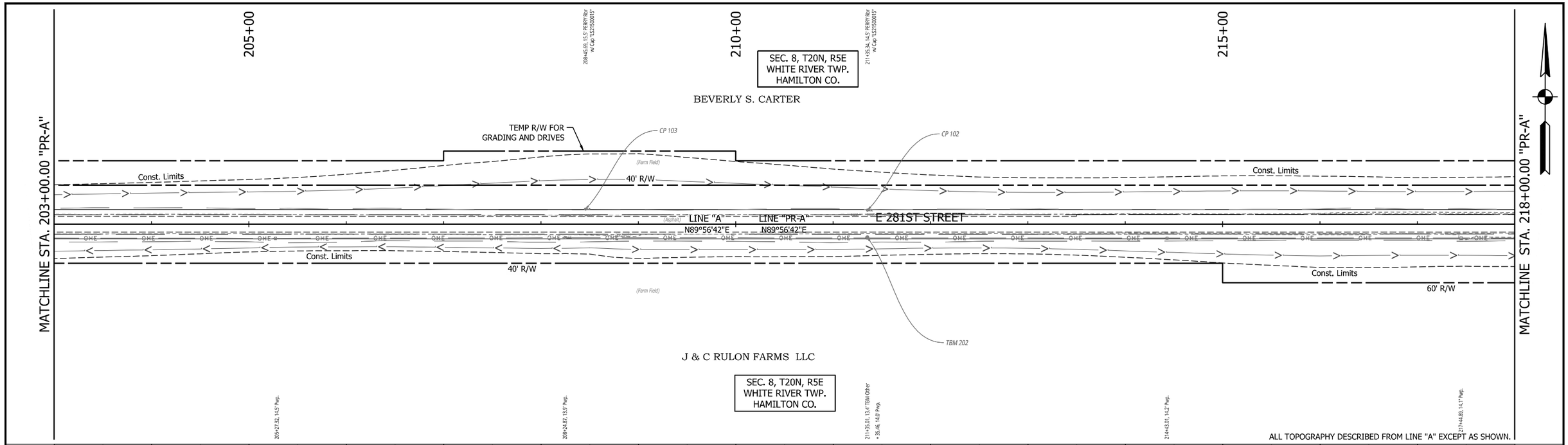
CHECKED: RDS 1/8/2024 | CHECKED: MRM 1/8/2024

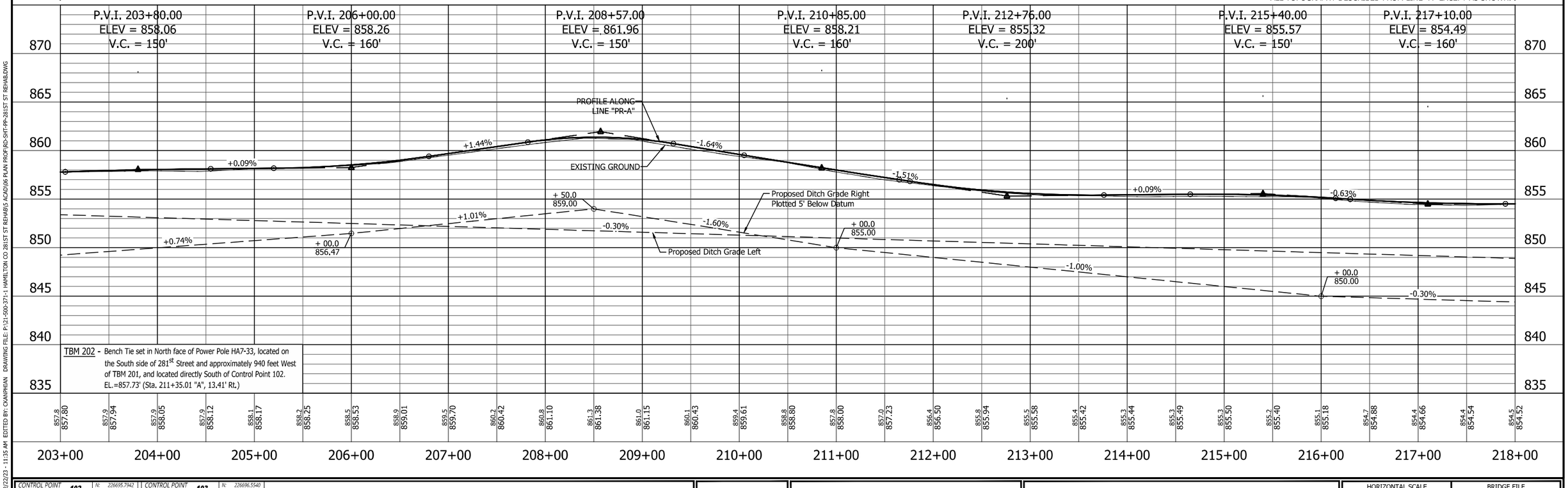
INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 188+00.00 TO 203+00.00 LINE "PR-A"

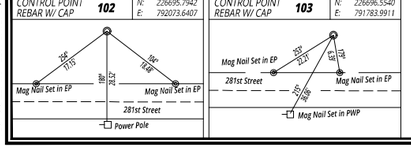
HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	20 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANRHAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\5 ACAD\06 PLAN PROF\RD-SHT-PP-281ST ST REHAB.DWG





TBM 202 - Bench Tie set in North face of Power Pole HA7-33, located on the South side of 281st Street and approximately 940 feet West of TBM 201, and located directly South of Control Point 102. EL.=857.73' (Sta. 211+35.01 "A", 13.41' Rt.)



RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: YZ 12/22/2023
DRAWN: YZ 12/22/2023
CHECKED: RDS 1/8/2024
CHECKED: MRM 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 203+00.00 TO 218+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	21 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-37\-1 HAMILTON CO 281ST ST REHAB\S ACAD\06 PLAN PROF\RD-SHT-PP-281ST ST REHAB.DWG

MATCHLINE STA. 218+00.00 "PR-A"

220+00 | 225+00 | 230+00

SEC. 8, T20N, R5E
WHITE RIVER TWP.
HAMILTON CO.

BEVERLY S. CARTER

J & C RULON FARMS LLC

RULON ENTERPRISES LLC

E 281ST STREET

LINE "A" N89°56'42"E

LINE "A" N89°14'13"E

LINE "PR-A" N89°14'13"E

END CONSTRUCTION
P.O.T. 227+45.00 "A"=
P.O.T. 227+45.00 "PR-A"

END INCIDENTAL CONSTRUCTION
P.O.T. 227+95.00 "A"=
P.O.T. 227+95.00 "PR-A"

P.O.T. 230+00.00 "A"=
P.O.T. 230+00.00 "PR-A"

P.I. 228+93.27 "A"=
P.I. 228+93.27 "PR-A"

CURVE DATA
P.I. 228+93.27 Line "PR-A"
Δ = 0°42'29" LT.
(No Curve Run)

Mod. Class V Dr. W=20.0' +85.1
Str. No. 224
Mod. Class V Dr. W=20.0' +65.4
Str. No. 226
TEMP R/W FOR GRADING AND DRIVES
Const. Limits
40' R/W
50' R/W
40' R/W
Const. Limits
60' R/W
Mod. Class II Dr. W=22.8' +30.6
Str. No. 225
Str. No. 227 +59.0
Mod. Class V Dr. W=20.0'
TEMP R/W FOR GRADING AND DRIVES
40' R/W
CUT SQUARE
CP 100
CP 101
TBM 200
TBM 201
SECTION LINE
SECTION LINE

ALL TOPOGRAPHY DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.

TBM 200 - Bench Tie set in North face of Power Pole HA7-62 at the Southwest Corner of Rulon Road and State Road 19.
EL.=850.31' (Sta. 227+70.28 "A", 24.39' Rt.)

TBM 201 - Bench Tie set in North face of Power Pole HA7-36 F40 on the South side of 281st Street and approximately 695 feet West of TBM 200, and located directly South of Control Point 101.
EL.=855.01' (Sta. 220+75.72 "A", 14.30' Rt.)

P.V.I. 220+30.00
ELEV = 854.60
V.C. = 160'

P.V.I. 221+97.00
ELEV = 855.60
V.C. = 150'

P.V.I. 223+99.38
ELEV = 853.98
V.C. = 200'

END CONSTRUCTION
STA. = 227+45.00, "PR-A"
ELEV. = 850.31

END INCIDENTAL CONSTRUCTION
STA. = 227+95.00, "PR-A"
ELEV. = 849.85

PROFILE ALONG LINE "PR-A"

EXISTING GROUND

+0.03% +0.60% -0.80% -1.06%

30" PIPE @ 0.30%
30" PIPE @ 0.30%
Proposed Ditch Grade Left
-0.30%
Str. No. 224
Str. No. 226
18" PIPE @ 0.32%
+ 45.0
846.06
-0.30%
18" PIPE @ 0.44%
Str. No. 225
Str. No. 227
Proposed Ditch Grade Right
Plotted 5' Below Datum
+ 45.0
846.56

865 860 855 850 845 840 835 830

854.5 854.52 | 854.4 854.54 | 854.4 854.55 | 854.5 854.57 | 854.6 854.63 | 854.7 854.78 | 854.8 855.02 | 855.2 855.28 | 855.3 855.33 | 855.0 855.15 | 854.7 854.77 | 854.2 854.36 | 853.7 853.91 | 853.1 853.43 | 852.5 852.91 | 851.9 852.38 | 851.4 851.85 | 851.2 851.32 | 850.8 850.79 | 850.3 | 849.8 | 849.7 | 846.6 | 849.6

218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00

CONTROL POINT 100 REBAR W/ CAP
N: 226709.8670
E: 793789.6324
Cut Square in SW cor. of Culvert
Stop Sign
Rulon Rd
359° 26.55'
275 18ft
90° 26.01'
Mag Nail Set in EP
281st Street

CONTROL POINT 101 REBAR W/ CAP
N: 226697.4167
E: 793013.5699
90° 17.09'
180° 33.98'
180° 33.98'
Mag Nail Set in EP
Mag Nail Set in EP
281st Street
Power Pole

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

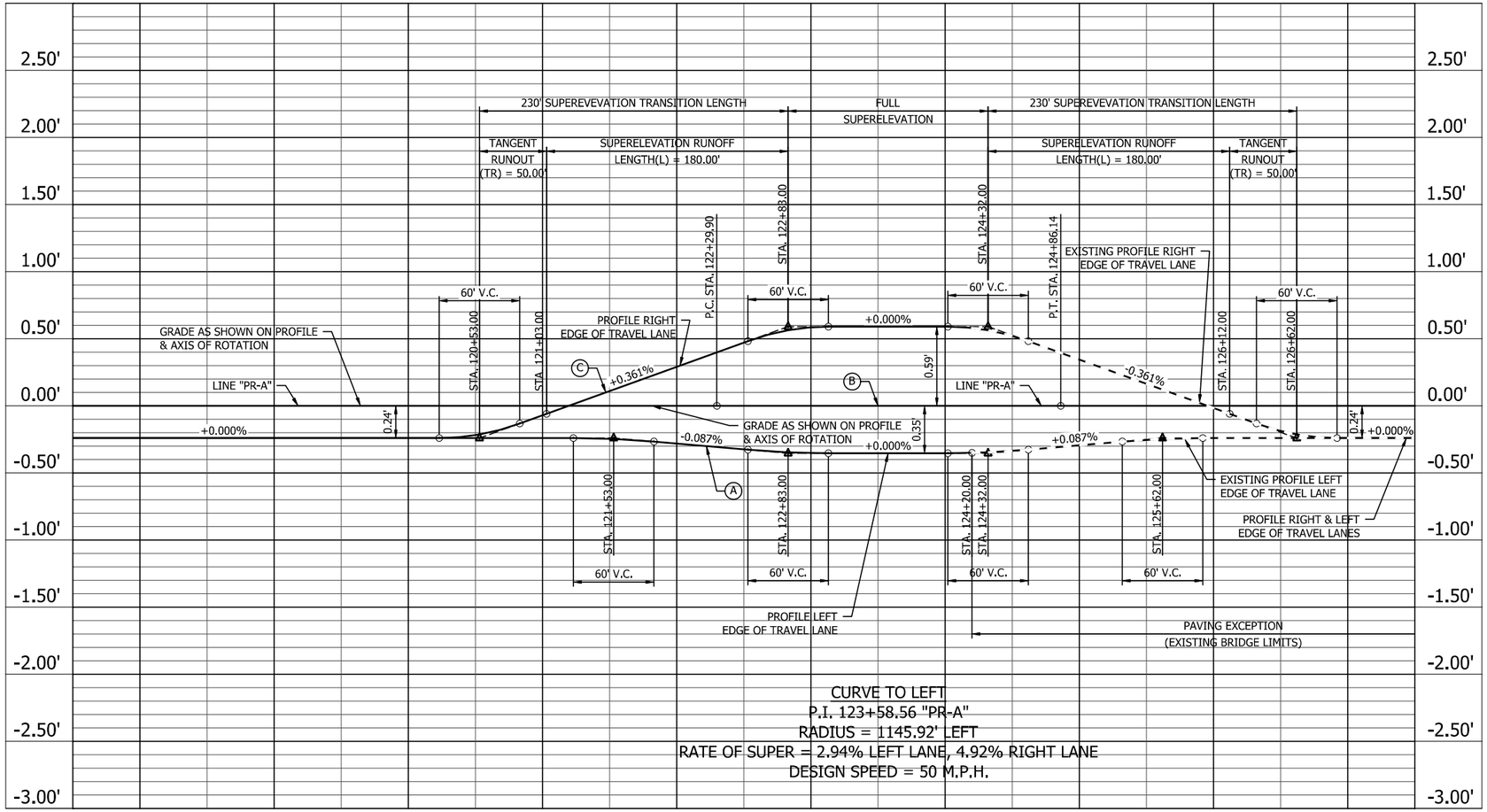
DESIGNED: YZ 12/22/2023
DRAWN: YZ 12/22/2023
CHECKED: RDS 1/8/2024
CHECKED: MRM 1/8/2024

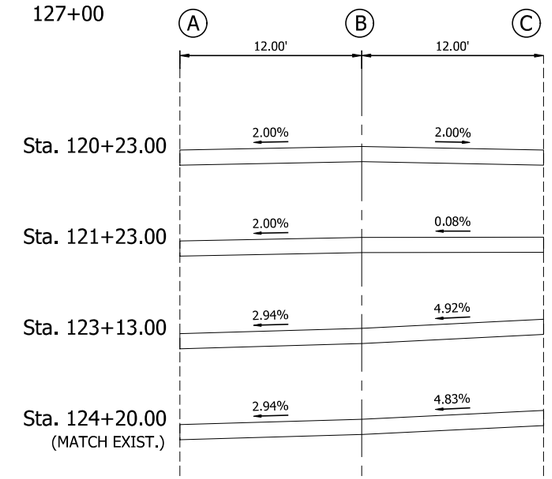
INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
STA. 218+00.00 TO 230+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	
VERTICAL SCALE	DESIGNATION
1" = 5'	2003031
SURVEY BOOK	SHEET
	22 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-37\1-1 HAMILTON CO 281ST ST REHAB\5 ACAD\06 PLAN PROF\RD-SHT-PR-281ST ST REHAB.DWG





PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:31 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\SHT_SE HAMILTON CO 281ST.DWG

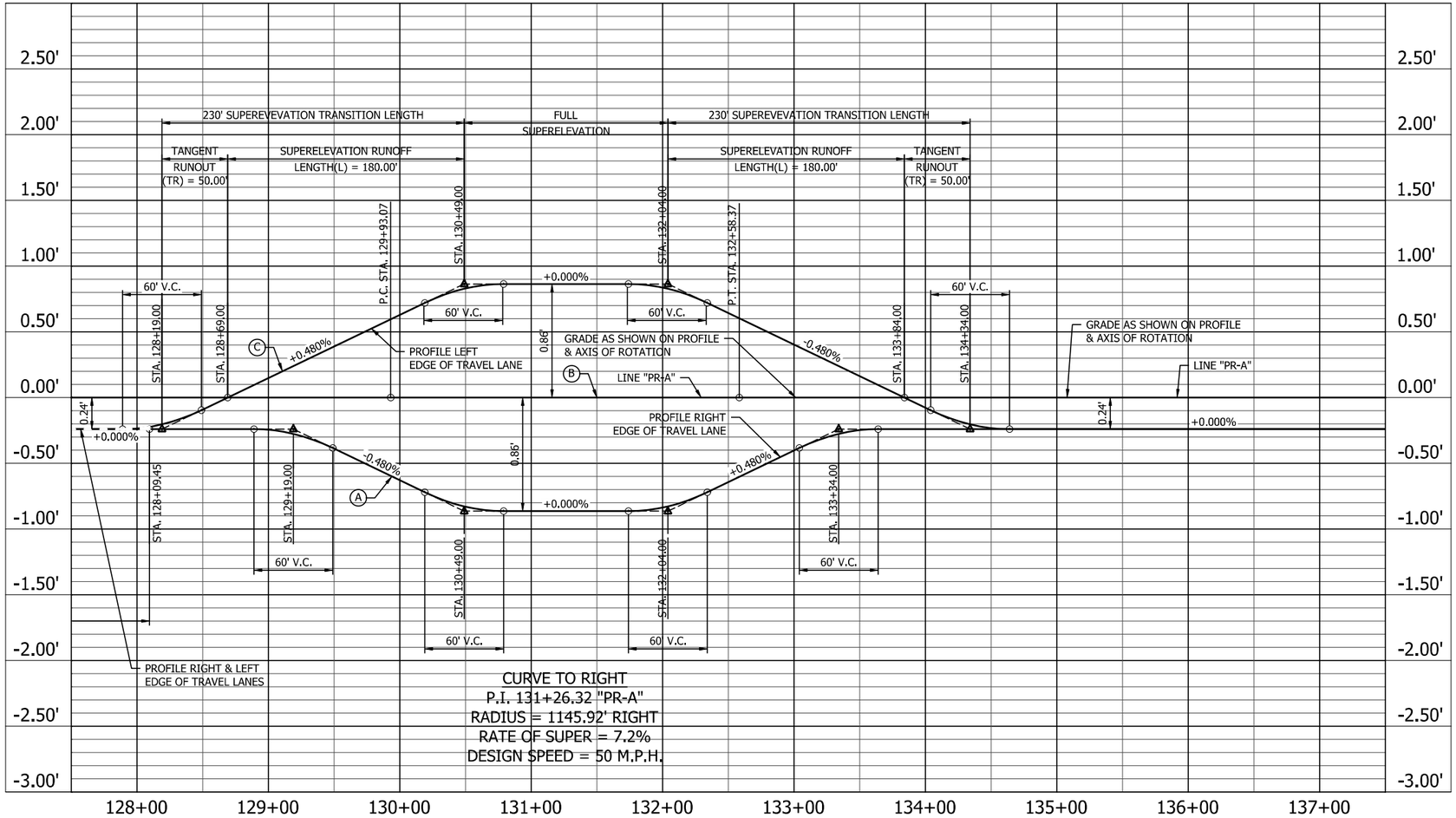
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: YZ 12/14/2023 DRAWN: MRM 12/14/2023
CHECKED: RDS 1/8/2024 CHECKED: YZ 1/8/2024

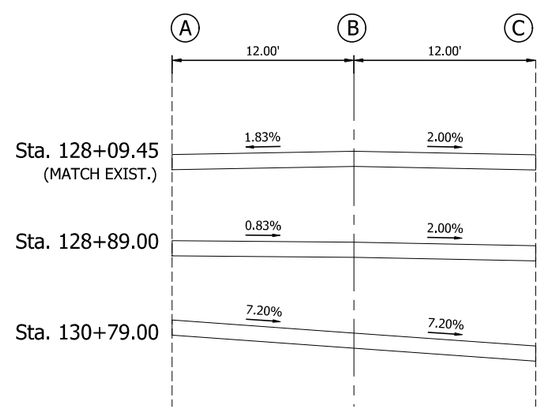
INDIANA
DEPARTMENT OF TRANSPORTATION

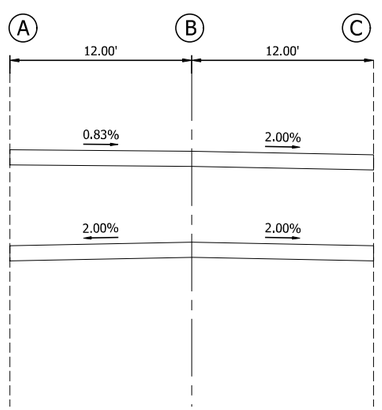
SUPERELEVATIONS
P.I. 123+58.56 "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
	2003031
SURVEY BOOK	SHEET
	23 of 177
CONTRACT	PROJECT
R-43619	2003031



CURVE TO RIGHT
P.I. 131+26.32 "PR-A"
RADIUS = 1145.92' RIGHT
RATE OF SUPER = 7.2%
DESIGN SPEED = 50 M.P.H.





		RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE:	BRIDGE FILE:
				VERTICAL SCALE:	DESIGNATION: 2003031
		DESIGNED: YZ 12/14/2023	DRAWN: MRM 12/14/2023	SURVEY BOOK:	SHEET: 24 of 177
		CHECKED: RDS 1/8/2024	CHECKED: YZ 1/8/2024	CONTRACT: R-43619	PROJECT: 2003031
			SUPERELEVATIONS P.I. 131+26.32 "PR-A"		

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:31 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\SHT_SE HAMILTON CO 281ST.DWG

100+00

105+00

BEGIN CONSTRUCTION
P.O.T. 102+05.82 "A"=
P.O.T. 102+05.82 "PR-A"

¼ SECTION LINE

NW Corner NE 1/4
Sec. 12, T. 20 N., R. 4 E.
(Harrison Monument - Flush)

APP. EXIST. R/W & P.L.

P.O.T. 100+00.00 "A"=
P.O.T. 100+00.00 "PR-A"

LINE "A" S89°45'41"E

LINE "PR-A" S89°45'41"E

STATE ROAD 19 (CICERO RD)

2.00'

+29
85'

+61
40'

R40'

Pipe, Remove

Sign, Remove

40' R/W

Const. Limits

+95.0

7.00'

E 281ST STREET

8.00'

APP. EXIST. R/W & P.L.

200.00'

+52
40'

+23.1 Str. No. 100
135 Lft. of 21" Pipe
with 2 End Sections
Req'd.

CP 115

TBM 213

Sign, Remove

+28
110'

8.00'

P.I. 101+69.57 "A"=
P.I. 101+69.57 "PR-A"

CURVE DATA
P.I. 101+69.57 Line "PR-A"
Δ = 0°00'28" RT.
(No Curve Run)

(Farm Field)

(Woods)

MATCHLINE STA. 105+60.00 "PR-A"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

411 N: 226520.4915 E: 781124.1510

NW COR. SE 1/4
12-20N-04E
Harrison Monument Flush

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

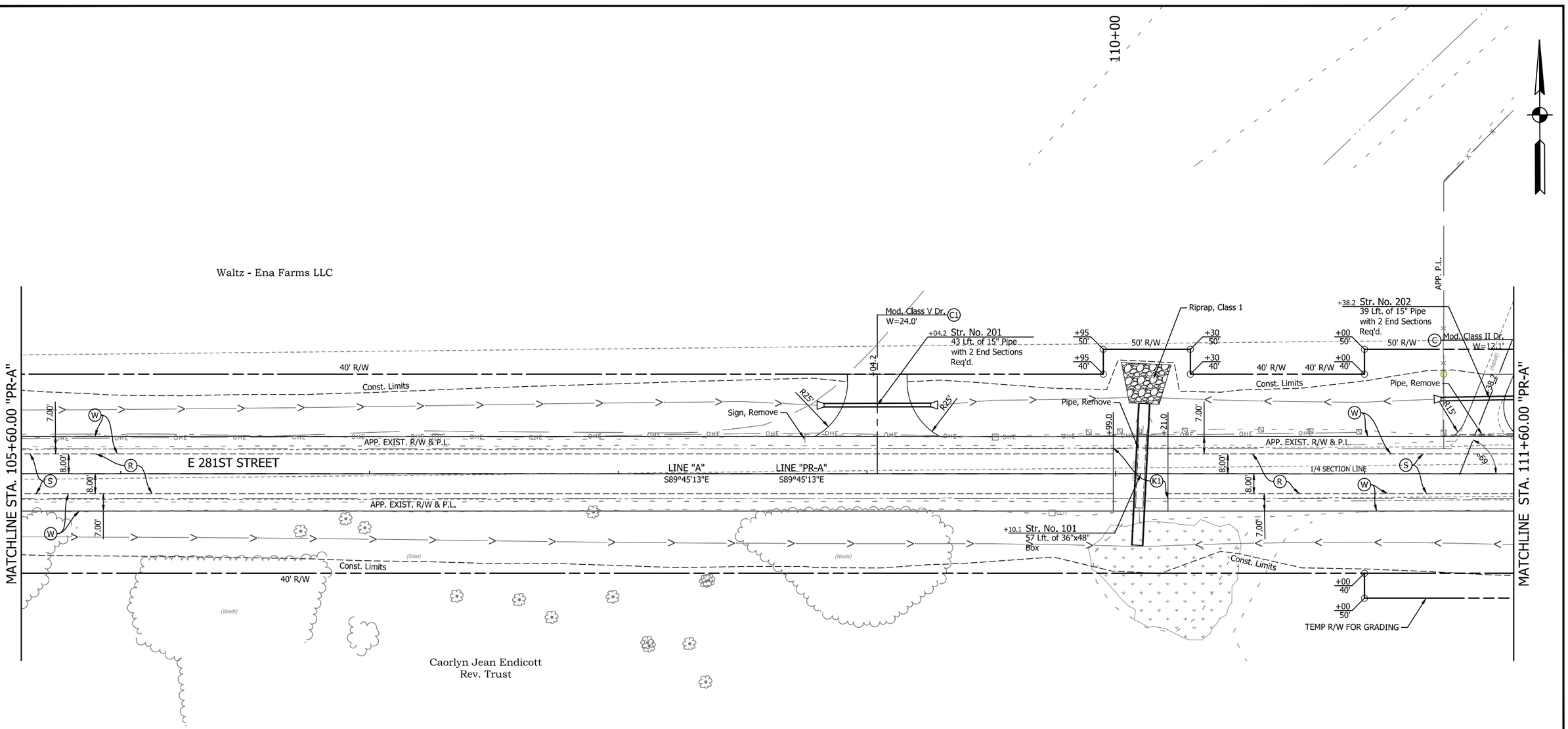
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 100+00.00 TO 105+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	25 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

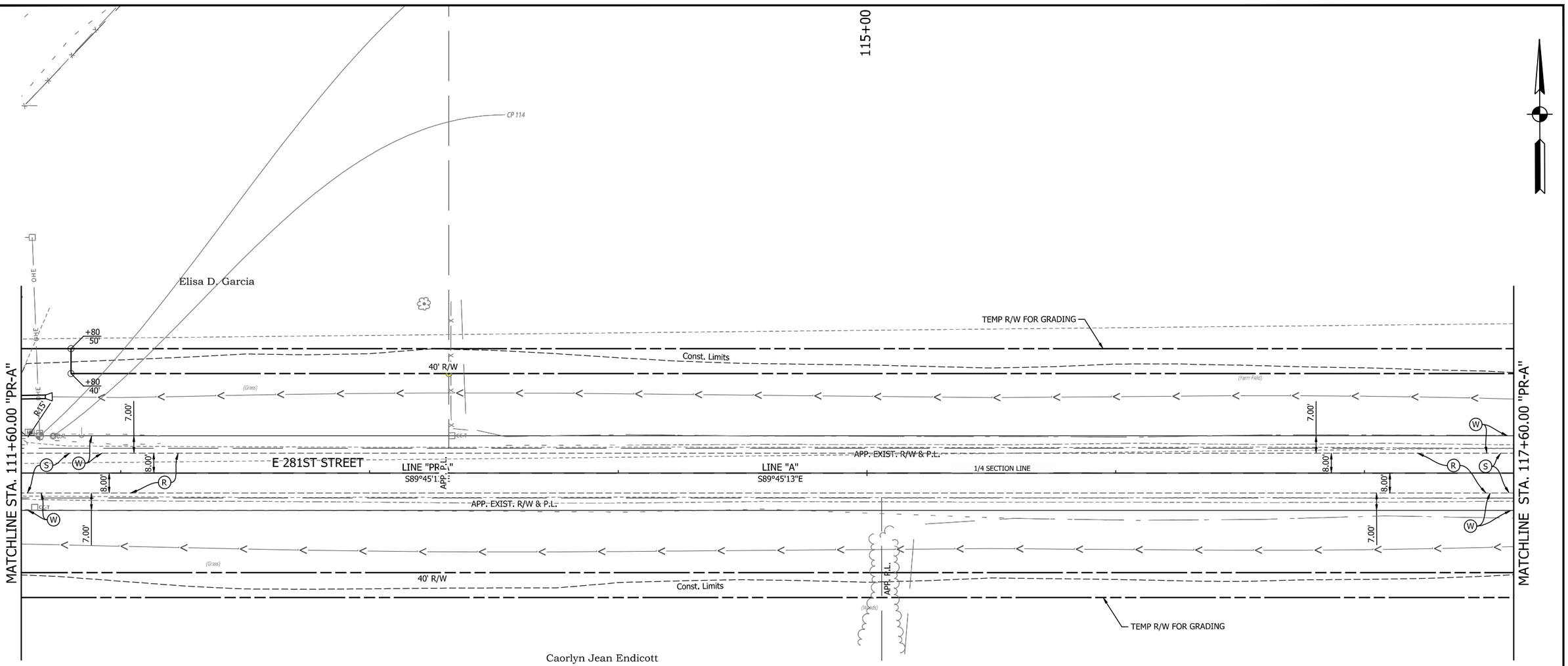
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 105+60.00 TO 111+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	26 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

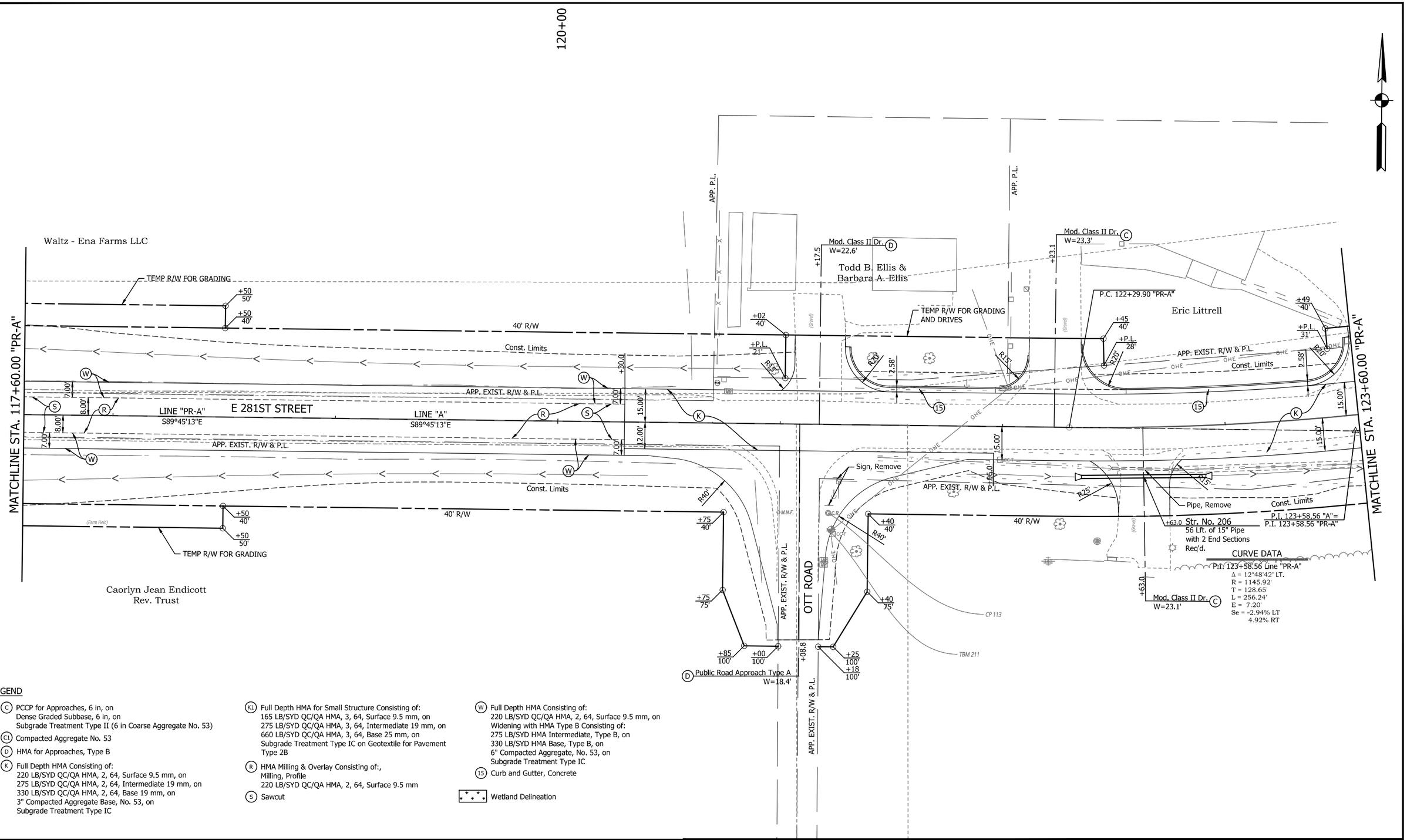
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 111+60.00 TO 117+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	27 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 117+60.00 TO 123+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
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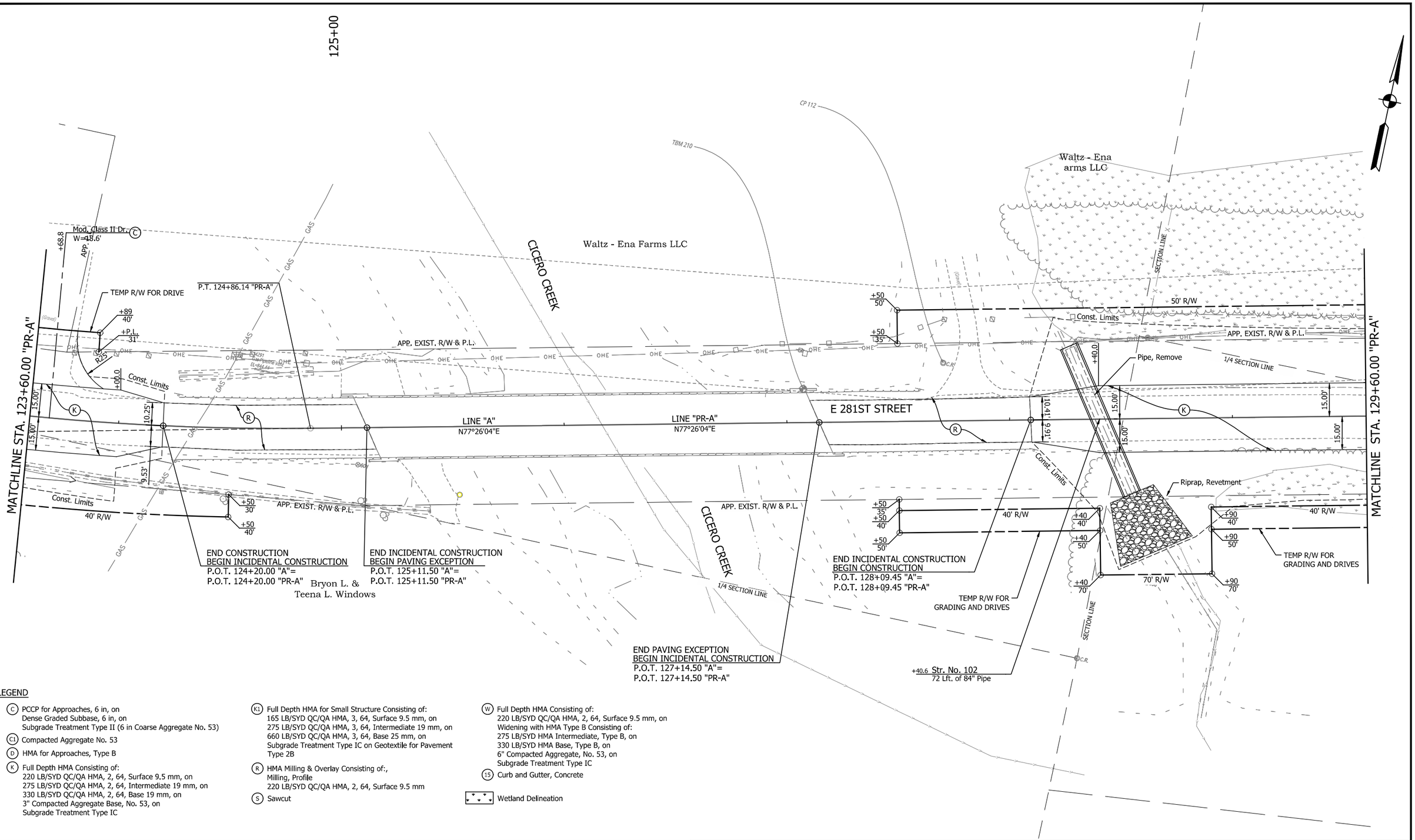
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 123+60.00 TO 129+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	29 of 177
CONTRACT	PROJECT
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PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG

130+00

135+00

CURVE DATA
P.I. 131+26.32 Line "PR-A"
Δ = 13°15'54" RT.
R = 1145.92'
T = 133.25'
L = 265.30'
E = 7.72'
Se = 7.20% LT
Sc = 7.20% RT

P.I. 131+26.32 "A"=
P.I. 131+26.32 "PR-A"

+25 60'
+25 50'
+00 60'
+00 50'

60' R/W
50' R/W
40' R/W

Const. Limits
APP. EXIST. R/W & P.L.
P.T. 132+58.37 "PR-A"
LINE "PR-A"
S89°18'02"E
LINE "A"
S89°18'02"E
E 281ST STREET
1/4 SECTION LINE
Pipe, Remove
R25
15.00'

Mod. Class V Dr. (C1)
W=18.1'
+77.3
+77.3 Str. No. 209
37 Lft. of 15" Pipe
with 2 End Sections
Req'd.

MATCHLINE STA. 129+60.00 "PR-A"
P.C. 129+93.07 "PR-A"
MATCHLINE STA. 135+60.00 "PR-A"

+50 50'
+50 60'
TEMP R/W FOR
GRADING AND DRIVES

+54.7
+54.7 Str. No. 208
64 Lft. of 15" Pipe
with 2 End Sections
Req'd.
+00 50'
+00 60'
Mod. Class II Dr. (C)
W=14.8'

Louis Weihe &
Stacey Anne Weihe

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

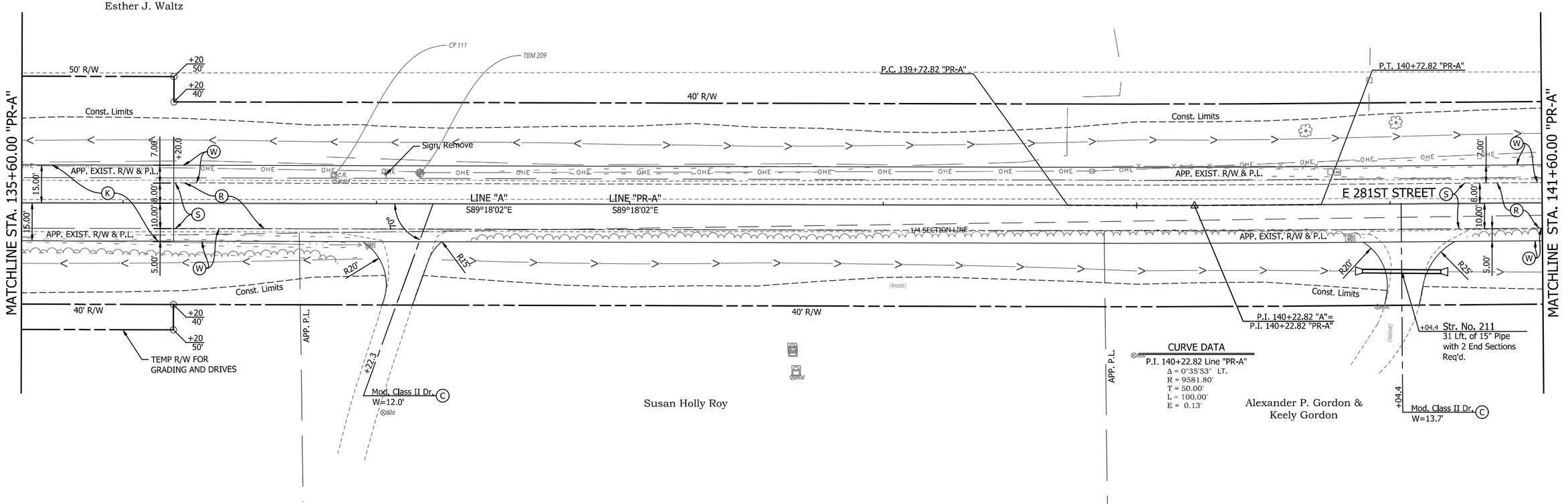
DESIGNED: MJR 12/22/2023
DRAWN: MJR 12/22/2023
CHECKED: NDH 1/8/2024
CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 129+60.00 TO 135+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	30 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

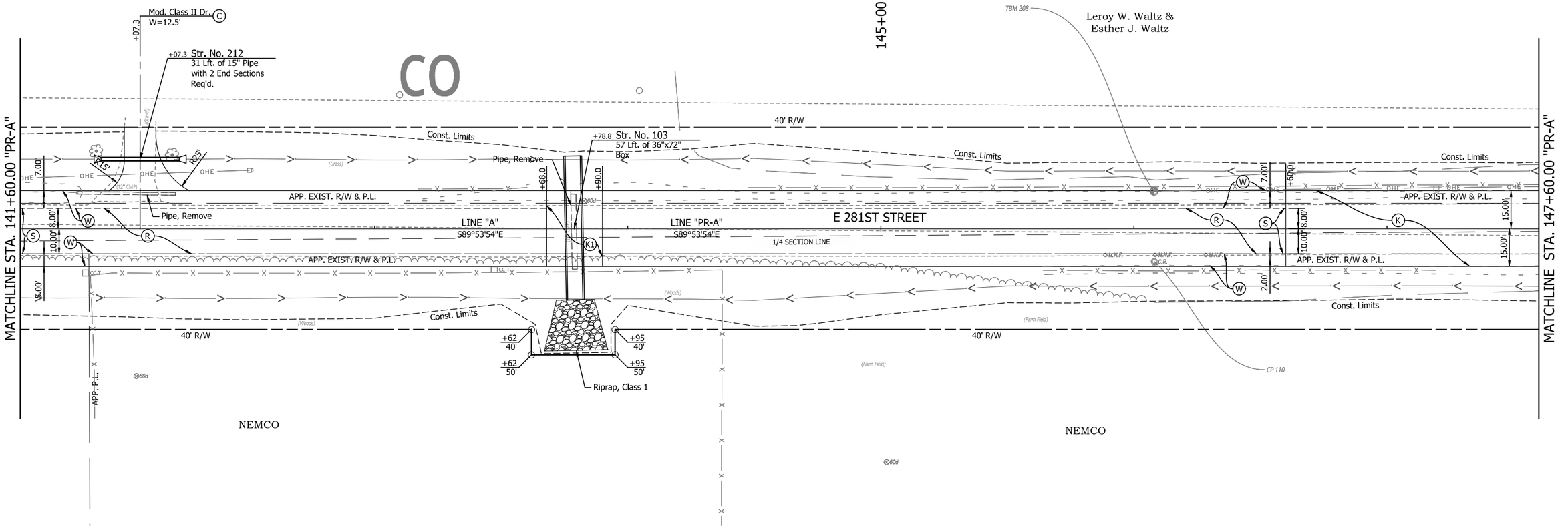
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 135+60.00 TO 141+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	31 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

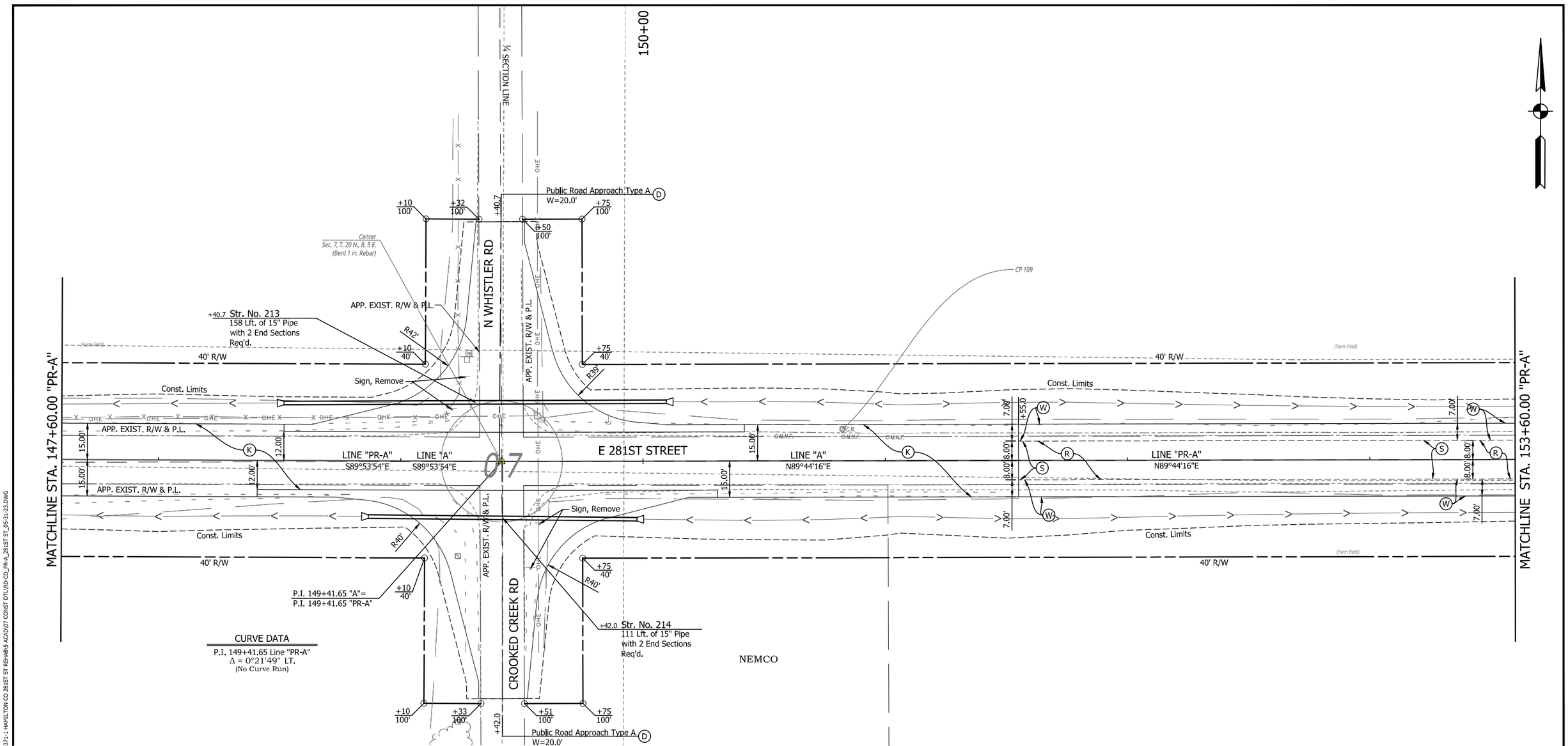
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 141+60.00 TO 147+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	32 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



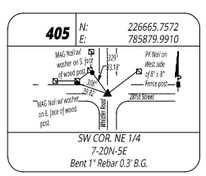
CURVE DATA

P.I. 149+41.65 Line "PR-A"
Δ = 0°21'49" LT.
(No Curve Run)

NEMCO

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 147+60.00 TO 153+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	33 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHABS\ACAD\07 CONST DT\RD-CD_PR-A_281ST ST_05-31-23.DWG

155+00

Michael K. Henderson
Farms, LLC

MATCHLINE STA. 153+60.00 "PR-A"

MATCHLINE STA. 159+60.00 "PR-A"

40' R/W

Const. Limits

7.00'

8.00'

8.00'

7.00'

LINE "PR-A"
N89°44'16"E

1/4 SECTION LINE

E 281ST STREET

LINE "A"
N89°44'16"E

C1 Mod. Class V Dr.
W=20.0'

+60.1

+60.1 Str. No. 216
39 Lft. of 18"x36"
Box

+52.8 Str. No. 104
44 Lft. of 18" Pipe
with 2 End Sections
Req'd.

(Farm Field)

CP 108

R25'

R25'

R25'

R25'

K1

Pipe, Remove

Const. Limits

Const. Limits

40' R/W

(Gravel)

+29.3 Str. No. 215
31 Lft. of 15" Pipe
with 2 End Sections
Req'd.

TBM 207

+29.3

Mod. Class V Dr.
W=17.3' C1

NEMCO

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: MJR 12/22/2023
DRAWN: MJR 12/22/2023
CHECKED: NDH 1/8/2024
CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 153+60.00 TO 159+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
R-43619	2003031

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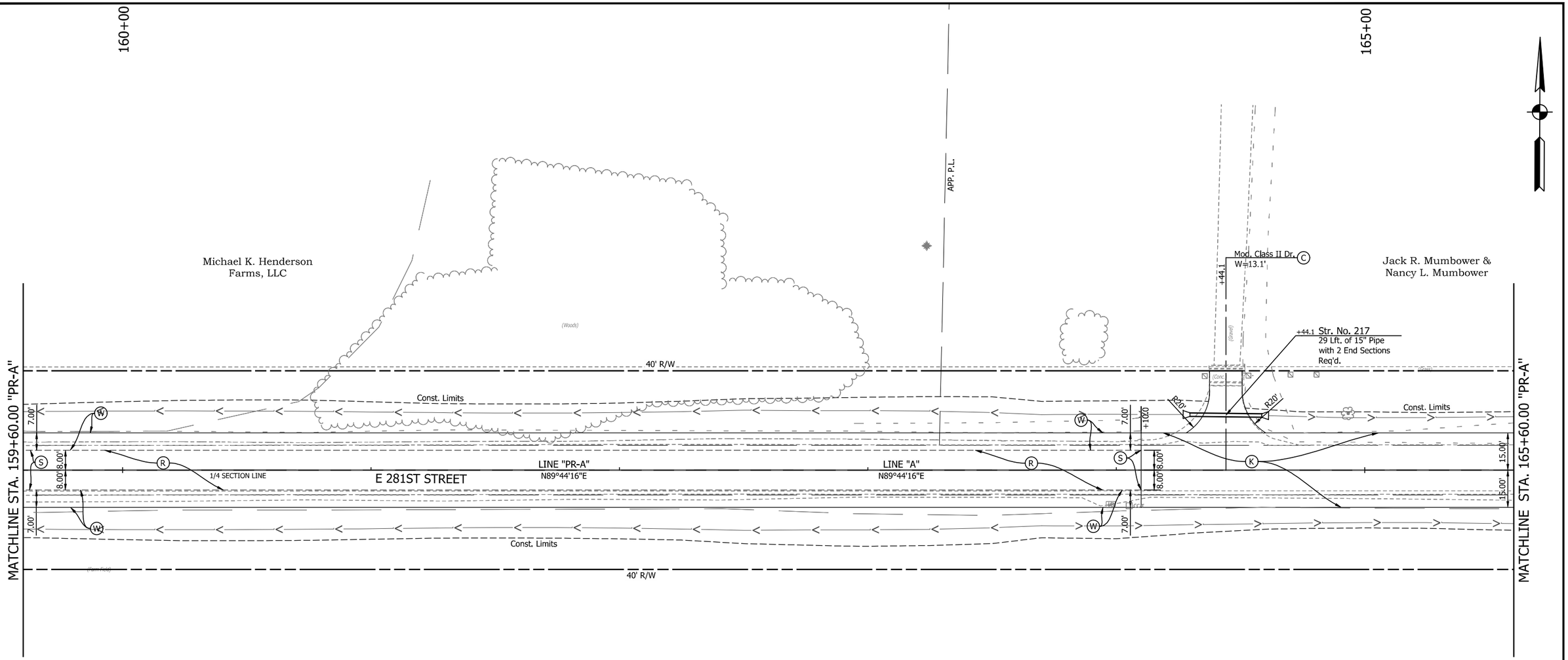

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE

DESIGNED: MJR 12/22/2023 | DRAWN: MJR 12/22/2023

CHECKED: NDH 1/8/2024 | CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 159+60.00 TO 165+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
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PRINT DATE: 1/8/24
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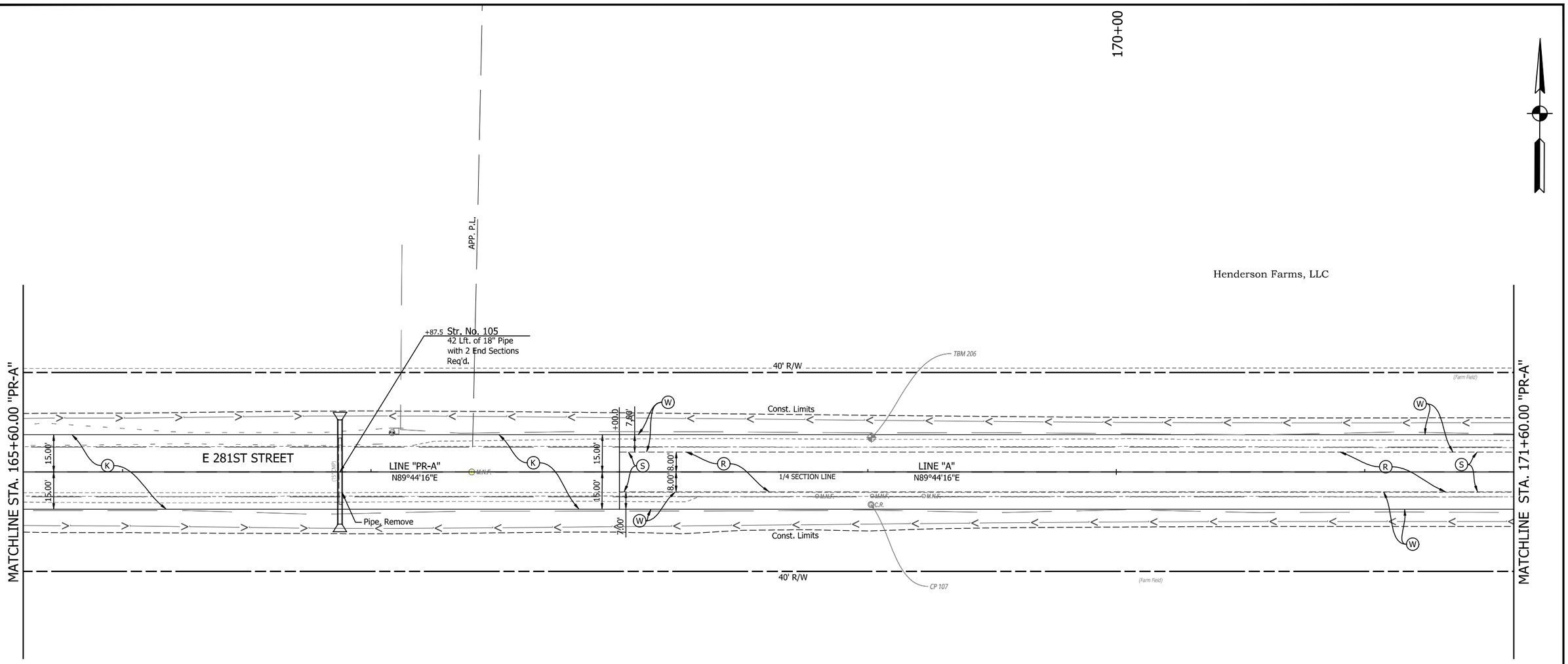

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

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CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 165+60.00 TO 171+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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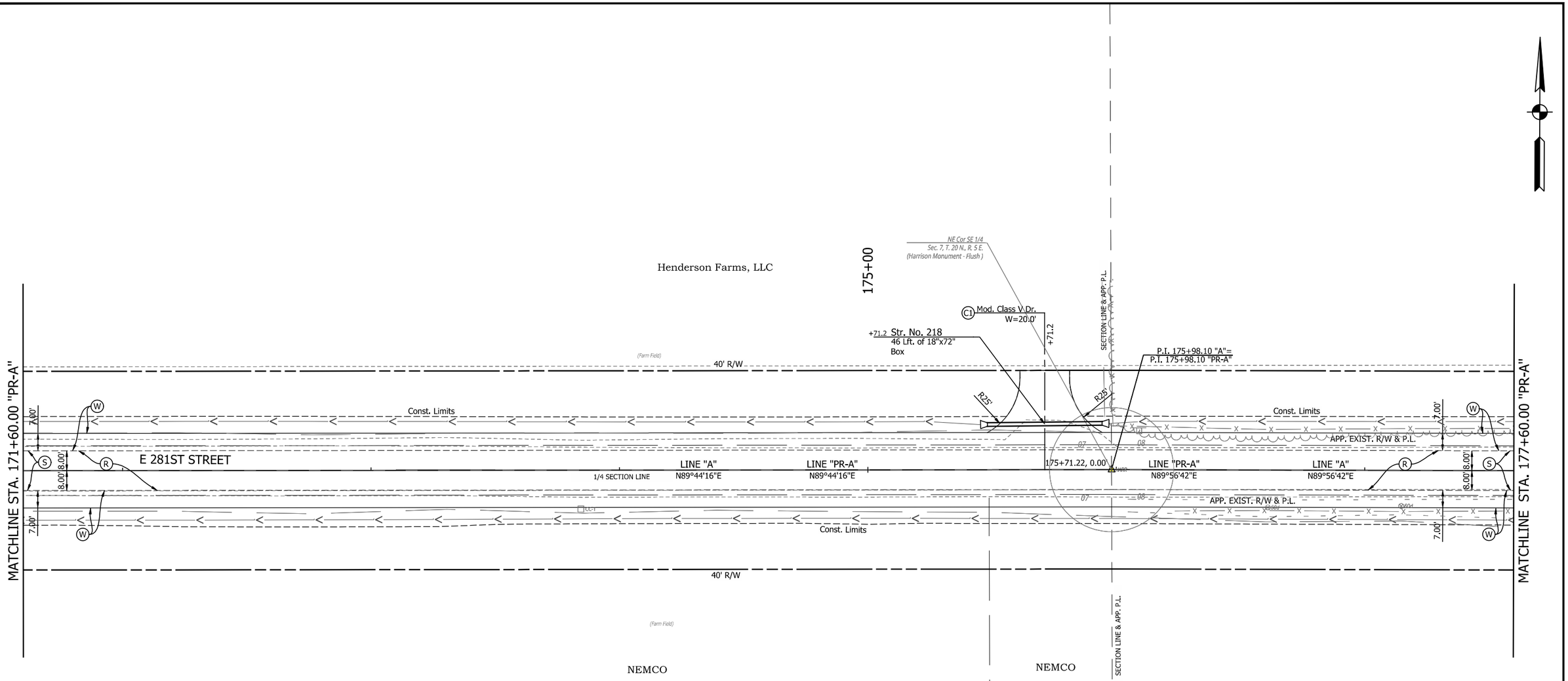
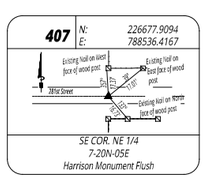
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHUAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DT\KRD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 171+60.00 TO 177+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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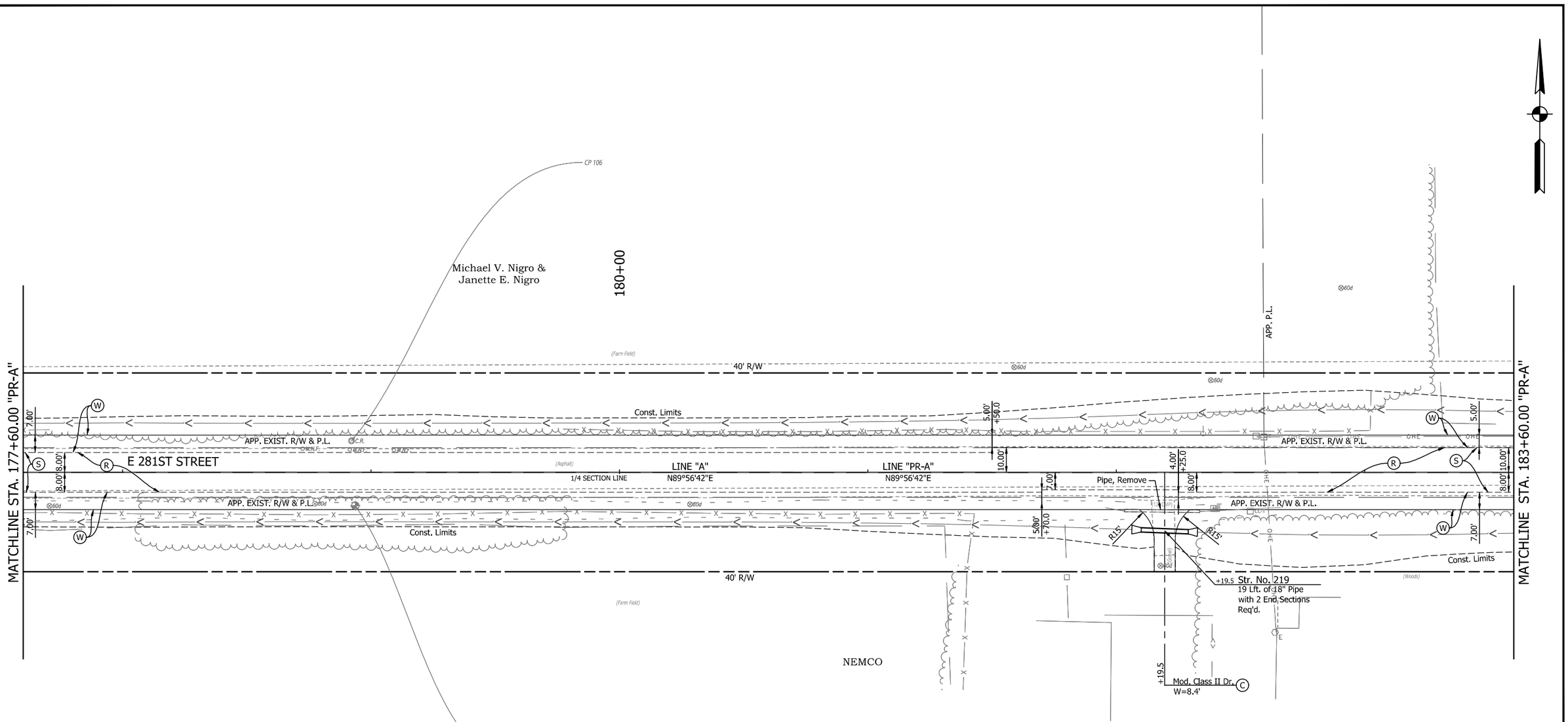
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-900-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

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INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 177+60.00 TO 183+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
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PRINT DATE: 1/8/24
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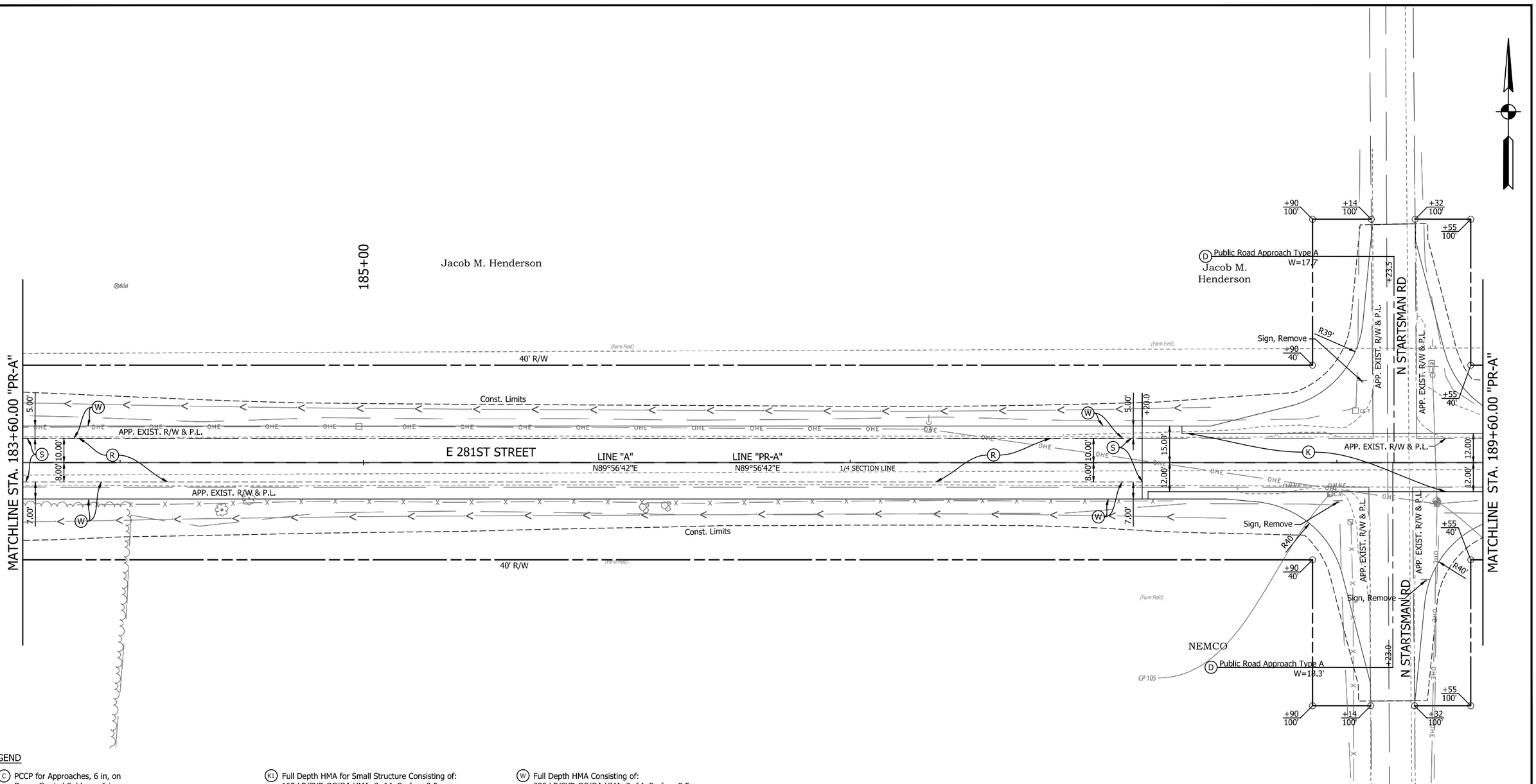

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

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CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 183+60.00 TO 189+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
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CONTRACT	PROJECT
R-43619	2003031

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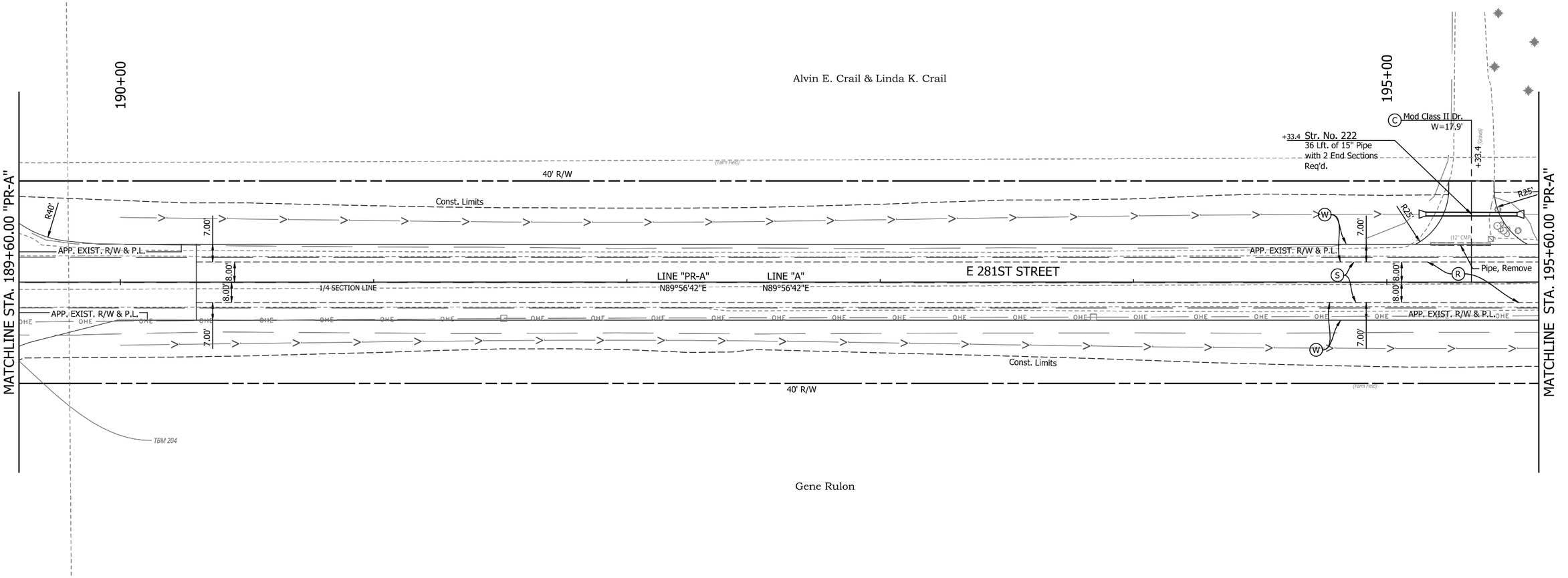

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
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- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

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CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 189+60.00 TO 195+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	40 of 177
CONTRACT	PROJECT
R-43619	2003031

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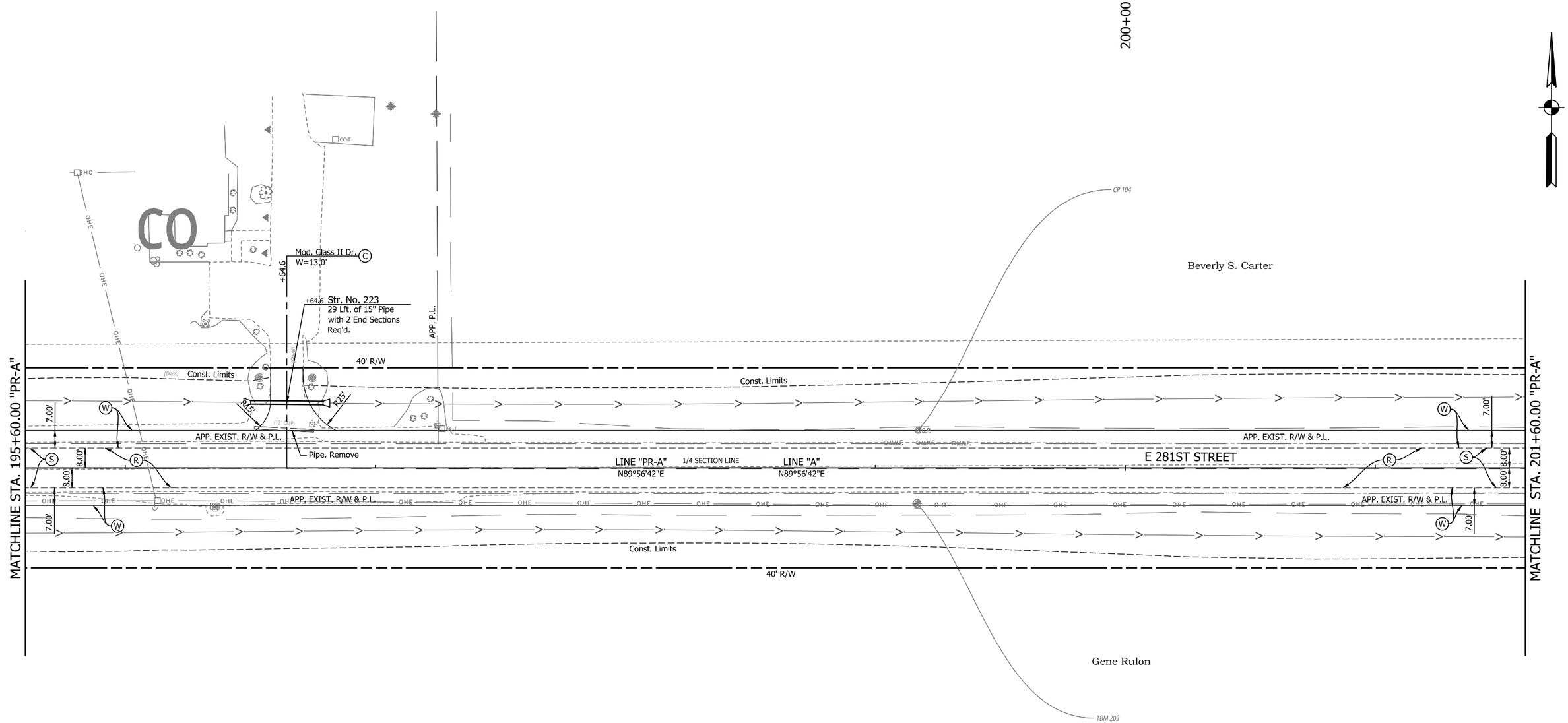

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
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- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
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- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

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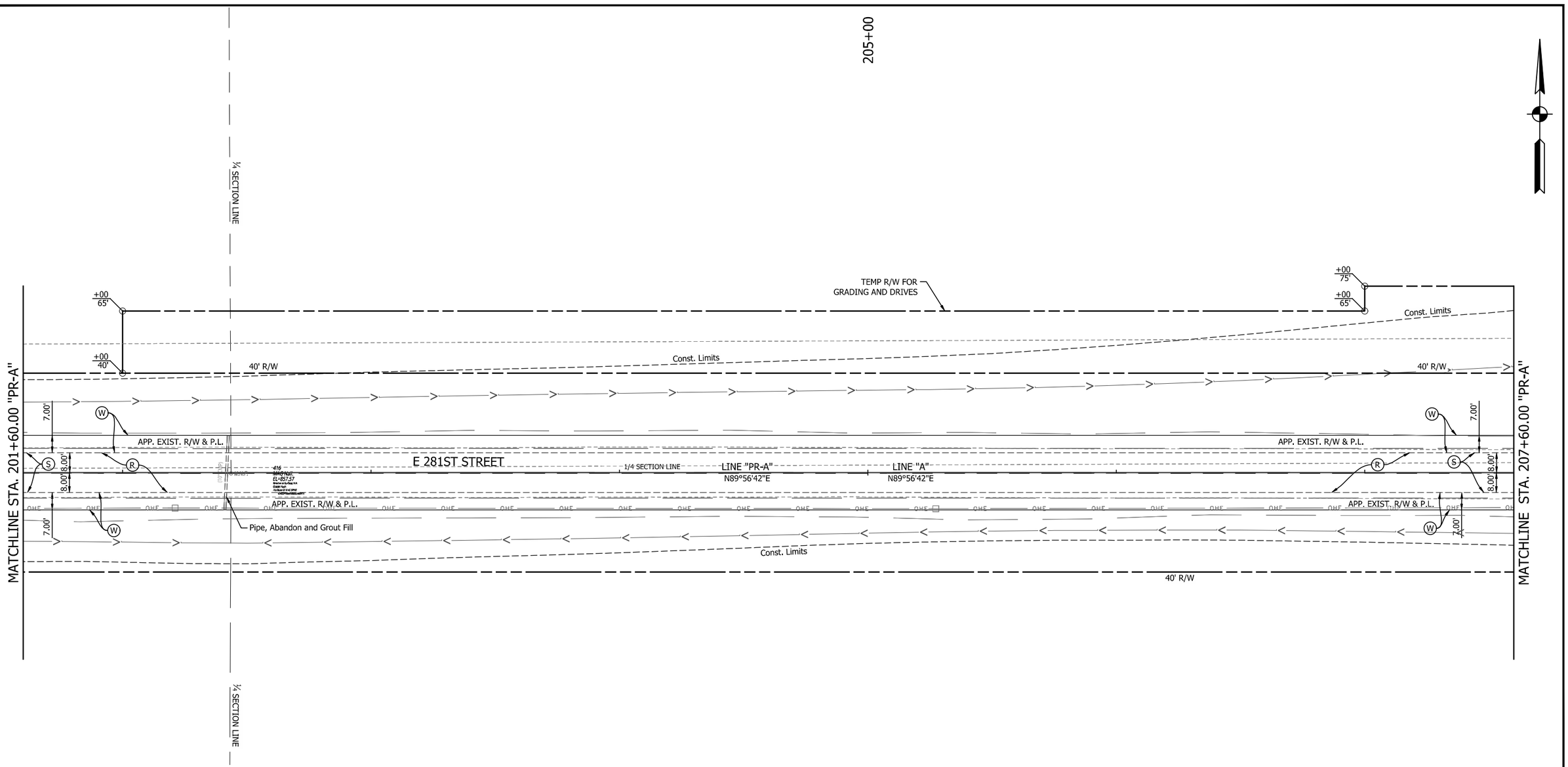
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 195+60.00 TO 201+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	41 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

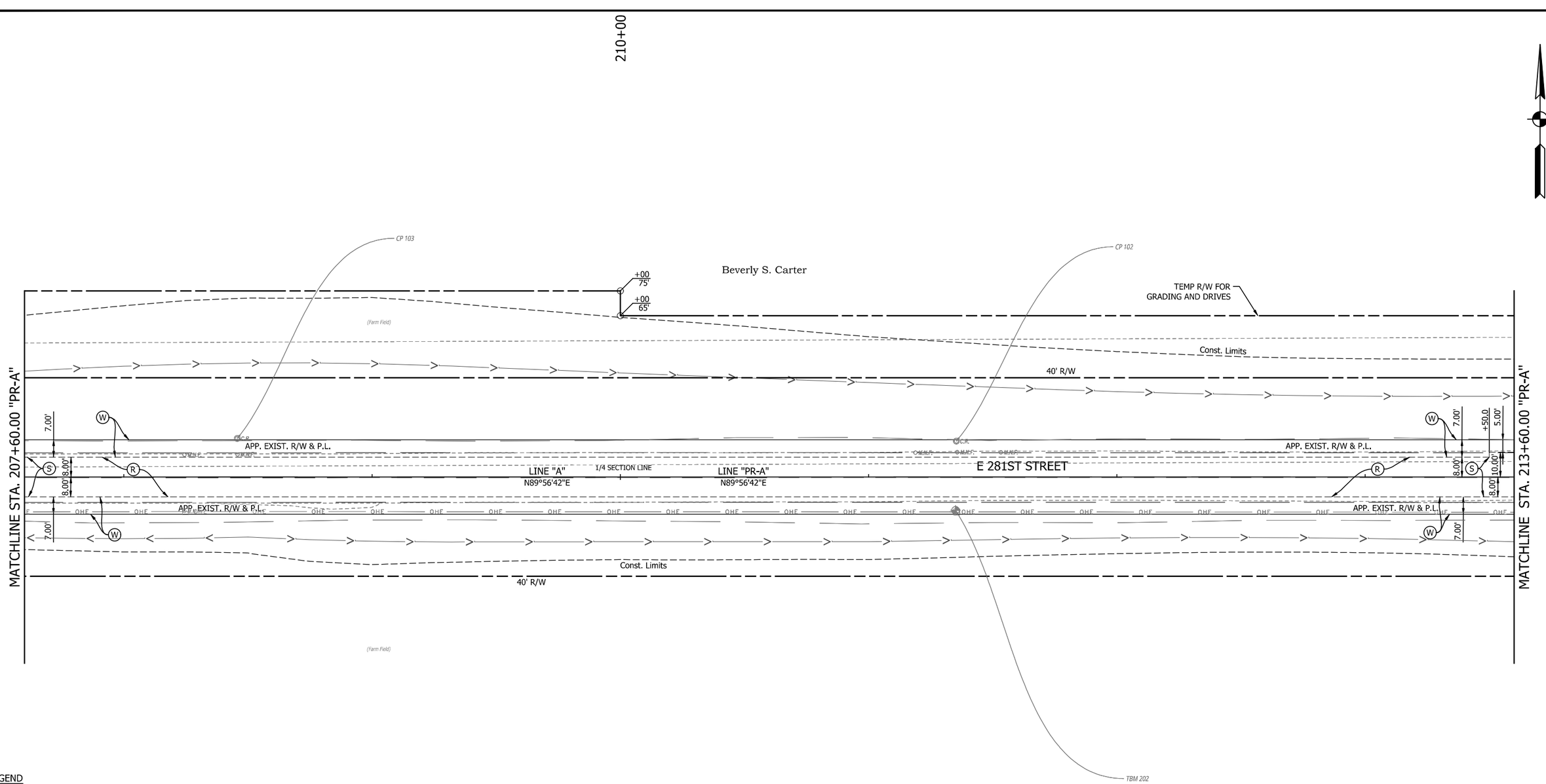
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 201+60.00 TO 207+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	42 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-900-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE

DESIGNED: MJR 12/22/2023 | DRAWN: MJR 12/22/2023

CHECKED: NDH 1/8/2024 | CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 207+60.00 TO 213+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	43 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
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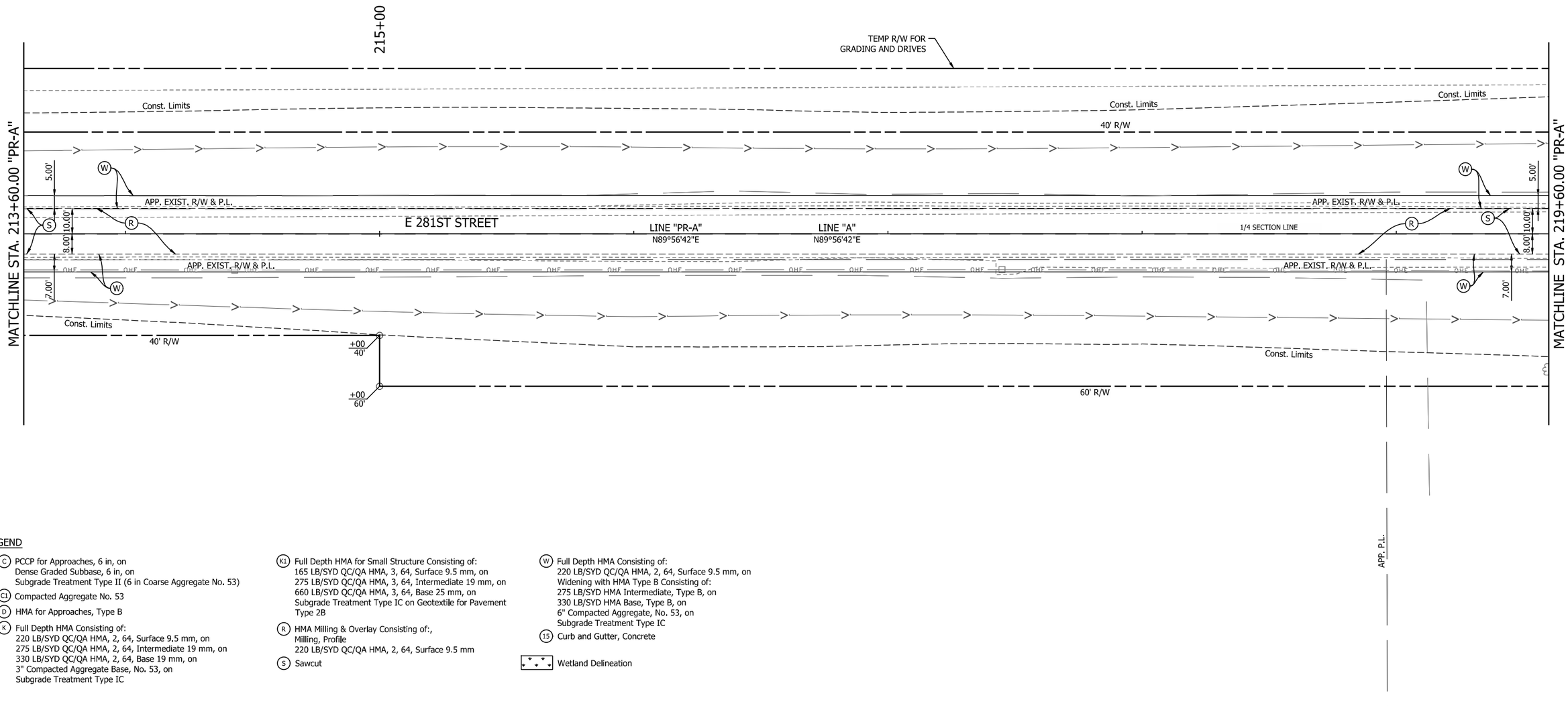


LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

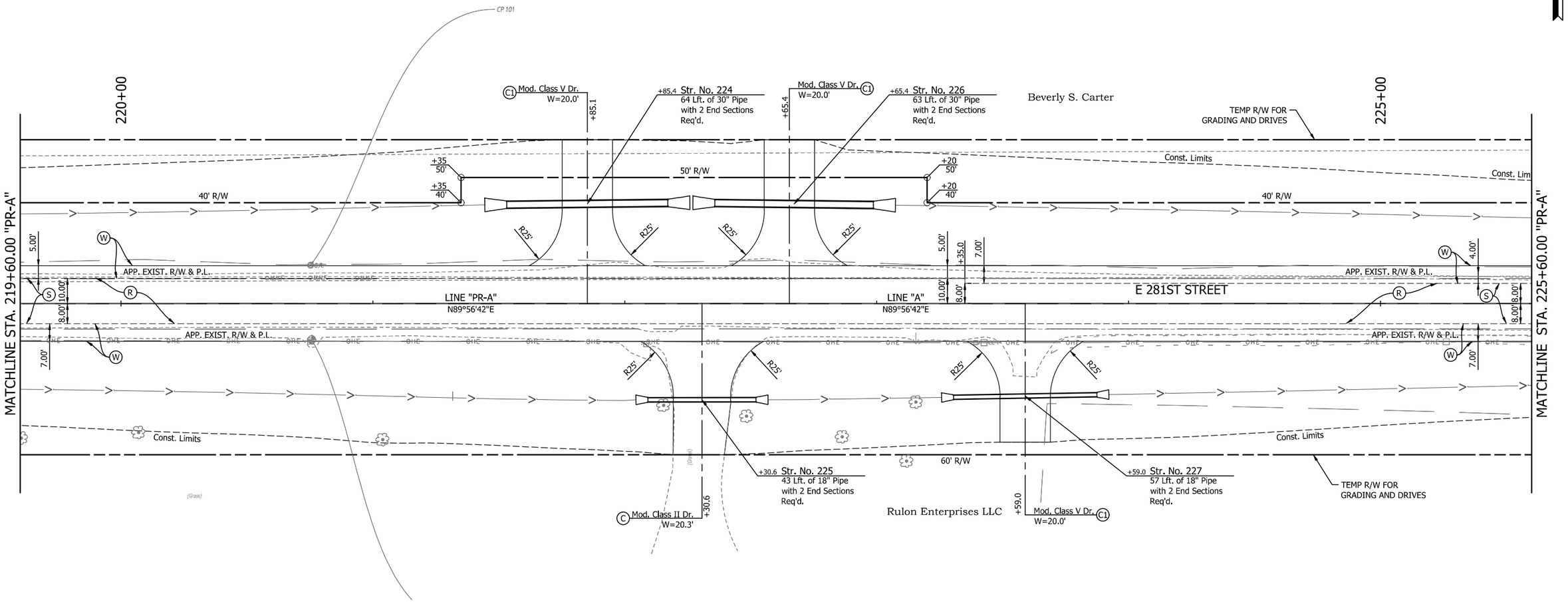
DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 213+60.00 TO 219+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	44 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/22/2023 DRAWN: MJR 12/22/2023

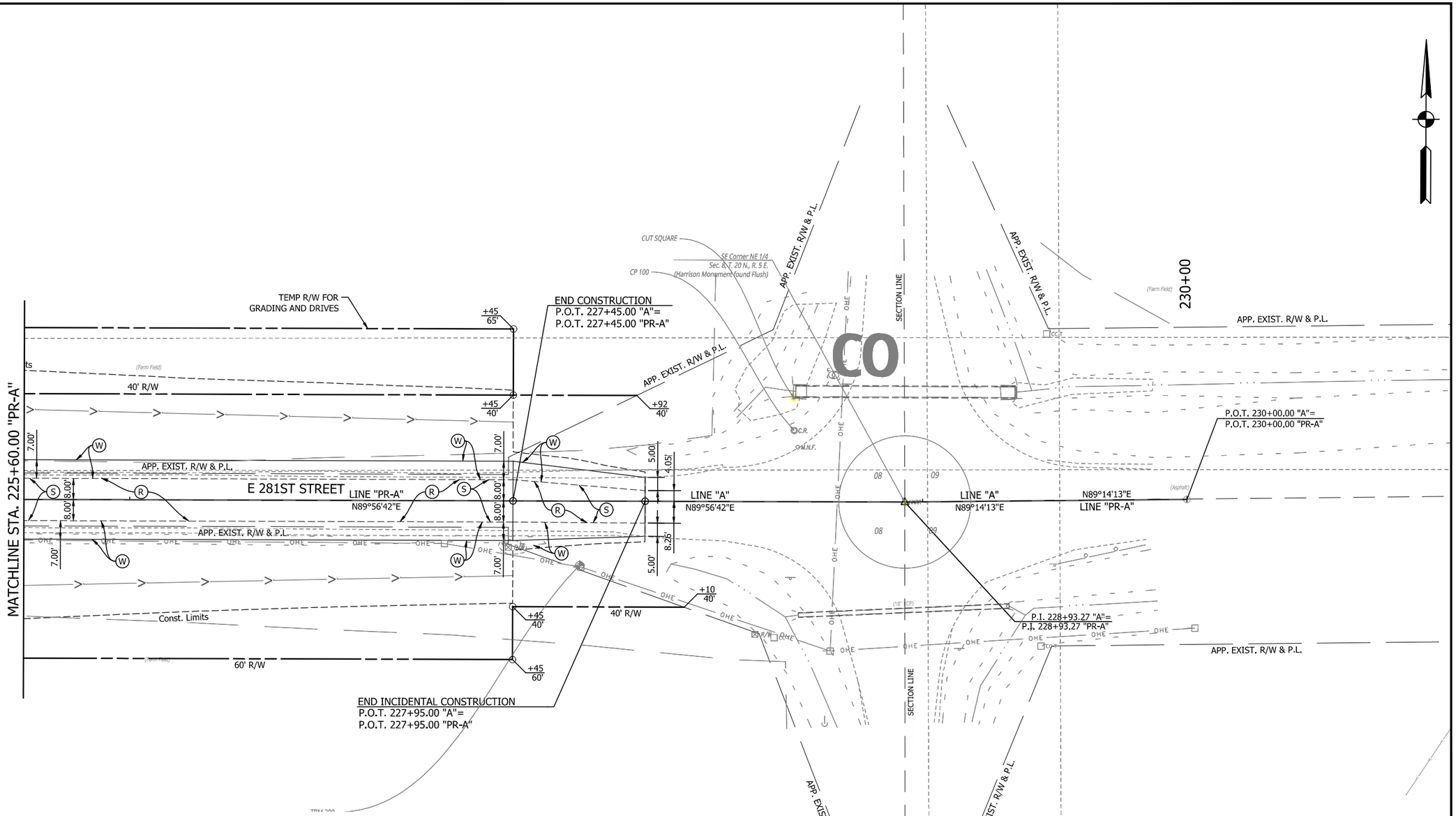
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
STA. 219+60.00 TO 225+60.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	45 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DT\RD-CD_PR-A_281ST ST_05-31-23.DWG



LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- Wetland Delineation

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

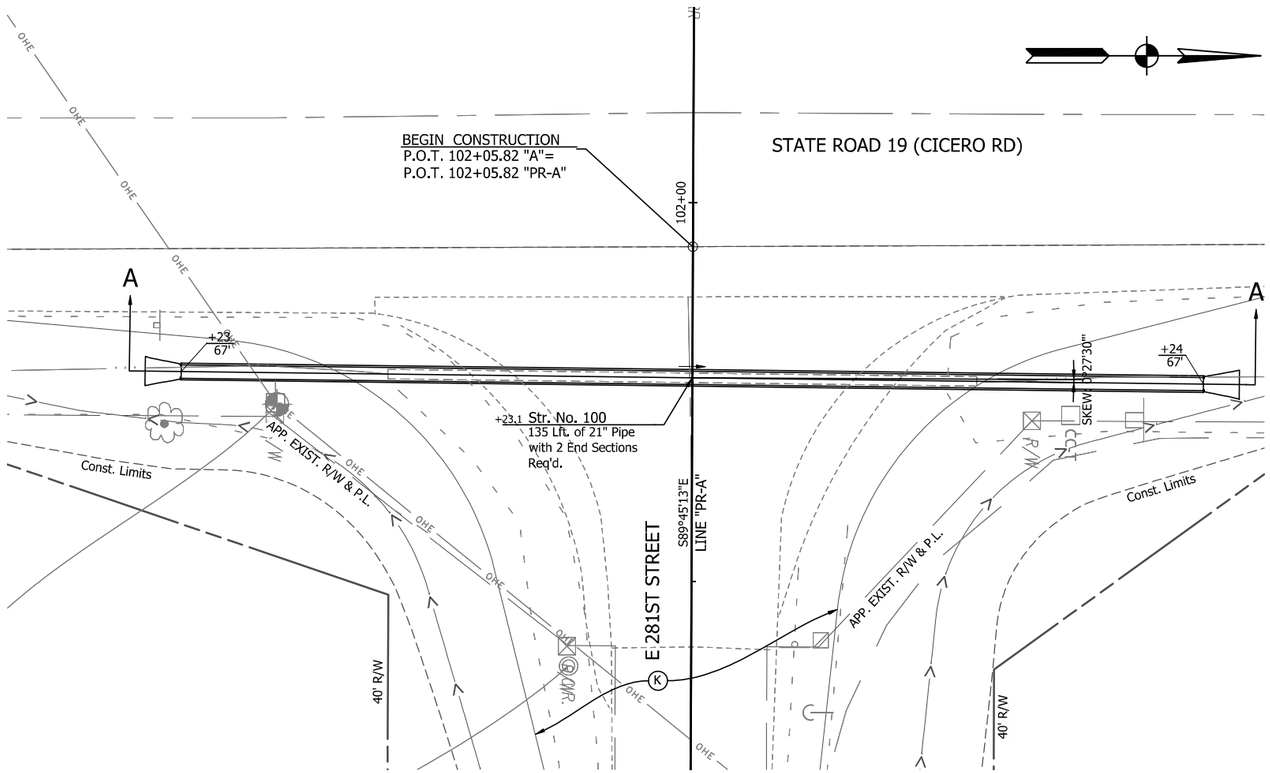
DESIGNED: MJR 12/22/2023
DRAWN: MJR 12/22/2023
CHECKED: NDH 1/8/2024
CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

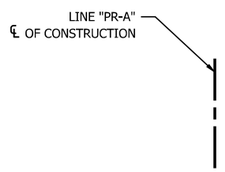
CONSTRUCTION DETAILS
STA. 225+60.00 TO 230+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	46 of 177
CONTRACT	PROJECT
R-43619	2003031

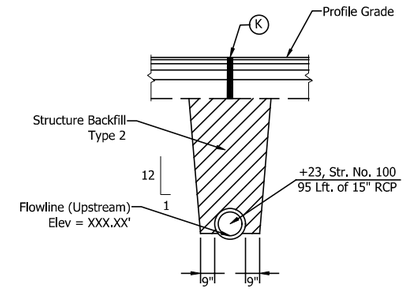
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/22/23 - 11:35 AM EDITED BY: CKANPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-CD_PR-A_281ST ST_05-31-23.DWG



PLAN VIEW
SCALE: 1" = 10'-0"



SECTION A-A
SCALE: 1" = 5'-0"



STRUCTURE BACKFILL AT PIPE
SCALE: 1/4" = 1'-0"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- Wetland Delineation
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:, Seed Mixture, R Fertilizer Mulching Material

HYDRAULIC DATA

Drainage Area	= X.XX acres
Q100 Discharge	= X.XX cfs
Headwater Elevation at Q100	= XXX.XX ft
Backwater at Q100	= X.XX ft
Velocity at Q100	= X.XX ft/s
Velocity at Q50	= X.XX ft/s
Skew	= XX° XX' XX"
Existing Q100 Discharge	= X.XX cfs
Existing Headwater Elevation at Q100	= XXX.XX ft
Existing Backwater at Q100	= X.XX ft
Existing Velocity at Q50	= X.XX f/s

GENERAL PLAN
SMOOTH INTERIOR CONCRETE PIPE
SPAN: 1'-3" RISE: 1'-3"
XX'-X" CLEAR ROADWAY SKEW: XX°XX'XX"
281st ST
HAMILTON COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

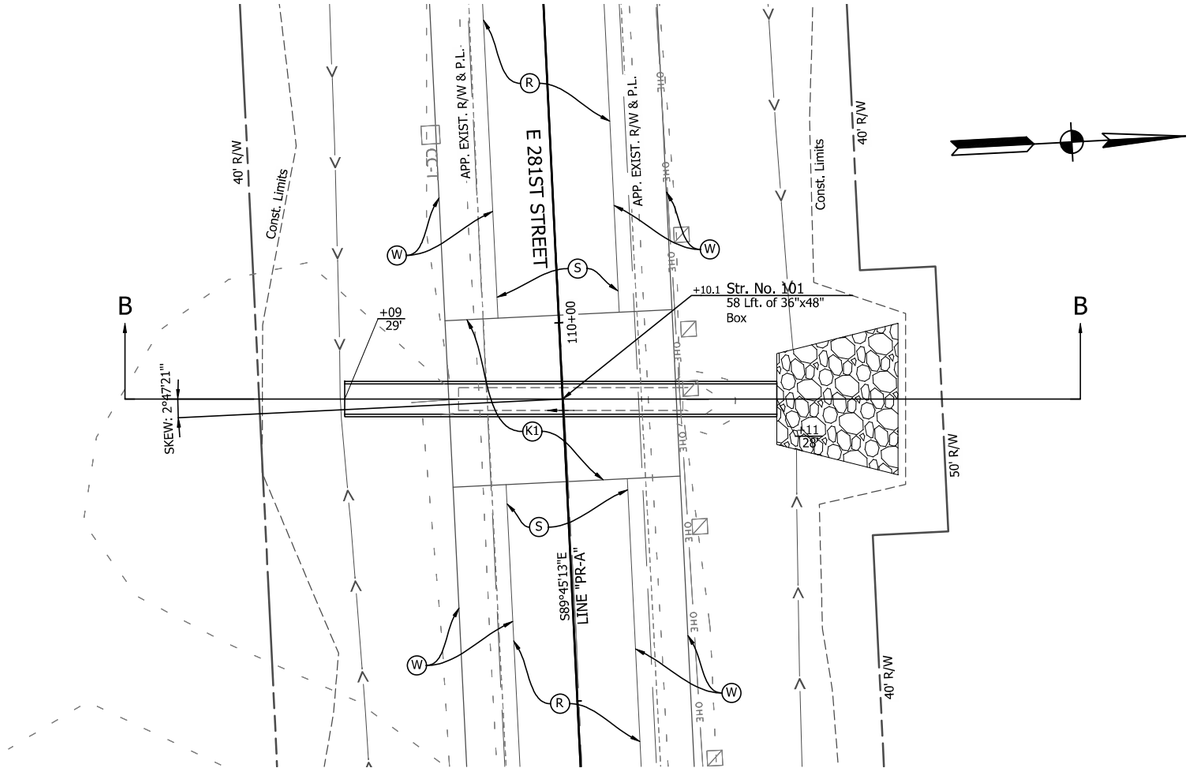
DESIGNED: ESB DRAWN: ESB
CHECKED: NDH CHECKED: NDH

INDIANA DEPARTMENT OF TRANSPORTATION

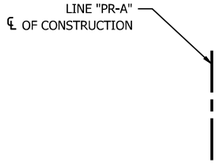
CULVERT DESIGN DETAILS
STR. NO. 100

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	53 of 177
CONTRACT	PROJECT
R-43619	2003031

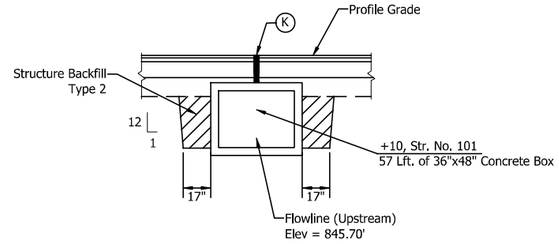
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/13/23 - 10:17 AM EDITED BY: EBYERS DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\103 GENERAL PLAN\RD-GENERAL PLAN-281ST.DWG



PLAN VIEW
SCALE: 1" = 10'-0"



SECTION B-B
SCALE: 1" = 5'-0"



STRUCTURE BACKFILL AT PIPE
SCALE: 1/4" = 1'-0"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- Wetland Delineation
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:, Seed Mixture, R Fertilizer Mulching Material

HYDRAULIC DATA

Drainage Area	= 50.09 acres
Q100 Discharge	= 52.44 cfs
Headwater Elevation at Q100	= 848.43 ft
Backwater at Q100	= 1.98 ft
Velocity at Q100	= 9.99 ft/s
Velocity at Q50	= 9.70 ft/s
Skew	= 2° 47' 21"
Existing Q100 Discharge	= 46.68 cfs
Existing Headwater Elevation at Q100	= 849.96 ft
Existing Backwater at Q100	= 3.48 ft
Existing Velocity at Q50	= 8.25 f/s

GENERAL PLAN
SMOOTH INTERIOR CONCRETE BOX
SPAN: 4'-0" RISE: 3'-0"
30'-0" CLEAR ROADWAY SKEW: 2° 47' 21"
281st ST
HAMILTON COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

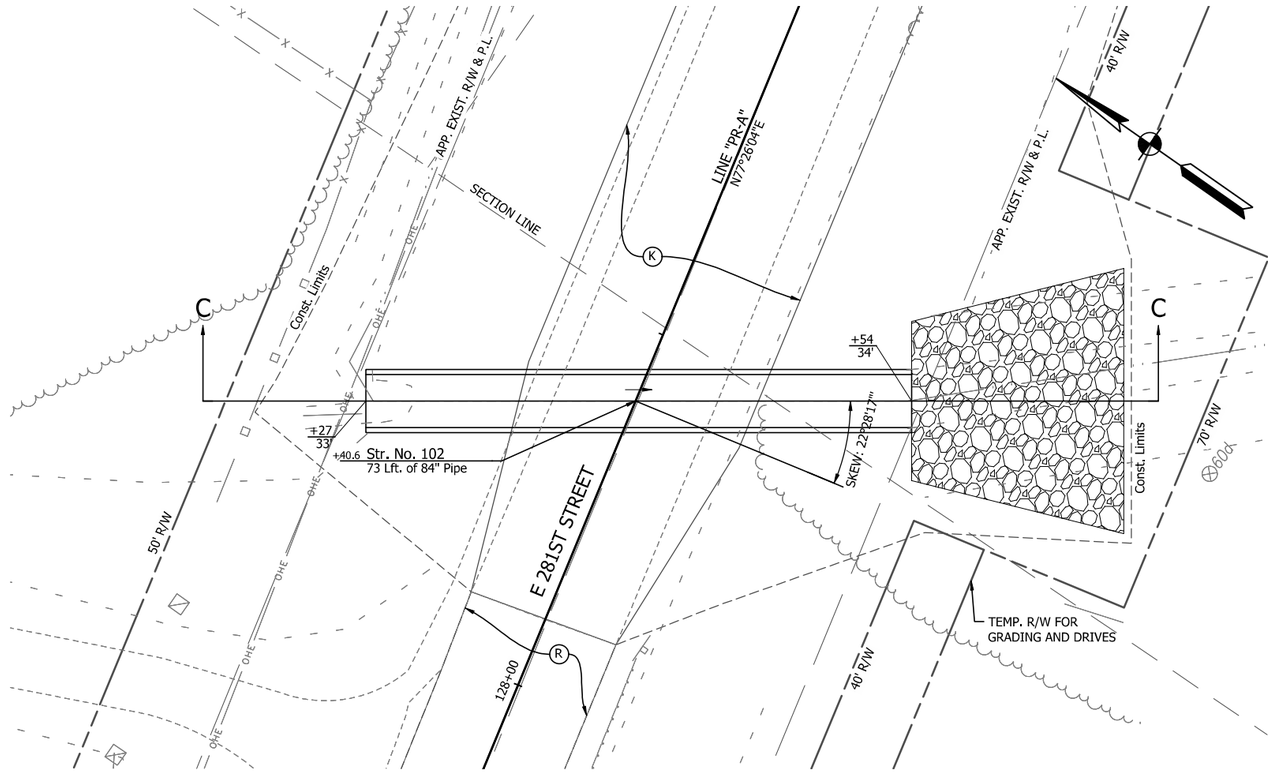
DESIGNED: ESB DRAWN: ESB
CHECKED: NDH CHECKED: NDH

INDIANA DEPARTMENT OF TRANSPORTATION

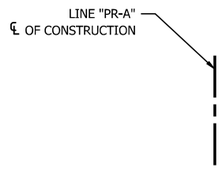
CULVERT DESIGN DETAILS
STR. NO. 101

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	54 of 177
CONTRACT	PROJECT
R-43619	2003031

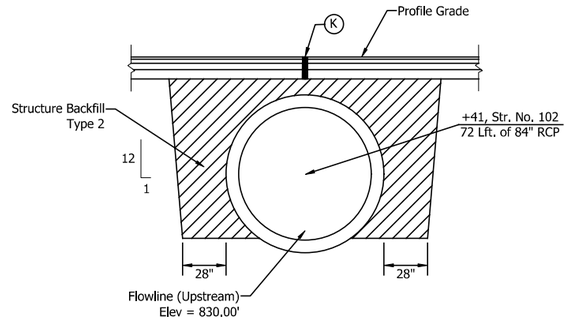
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/13/23 - 10:17 AM EDITED BY: EBYERS DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\103 GENERAL PLAN\RD-GENERAL PLAN-281ST ST.DWG



PLAN VIEW
SCALE: 1" = 10'-0"



SECTION C-C
SCALE: 1" = 5'-0"



STRUCTURE BACKFILL AT PIPE
SCALE: 1/4" = 1'-0"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- Wetland Delineation
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:, Seed Mixture, R Fertilizer Mulching Material

HYDRAULIC DATA

Drainage Area	= 43.44 acres
Q100 Discharge	= 47.77 cfs
Headwater Elevation at Q100	= 832.37 ft
Backwater at Q100	= 1.07 ft
Velocity at Q100	= 3.34 ft/s
Velocity at Q50	= 3.13 ft/s
Skew	= 22° 28' 17"
Existing Q100 Discharge	= 47.77 cfs
Existing Headwater Elevation at Q100	= 832.41 ft
Existing Backwater at Q100	= 1.11 ft
Existing Velocity at Q50	= 9.64 f/s

GENERAL PLAN
SMOOTH INTERIOR CONCRETE PIPE
SPAN: 7'-0" RISE: 7'-0"
31'-7" CLEAR ROADWAY SKEW: 22° 28' 17"
281st ST
HAMILTON COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

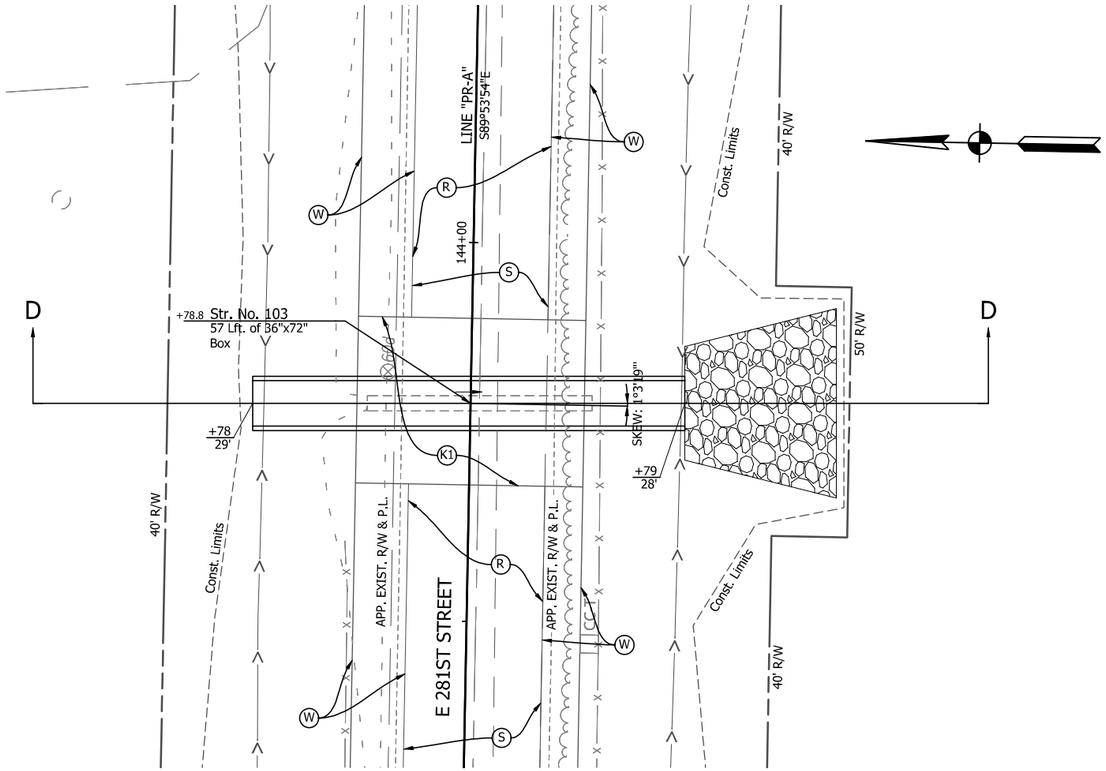
DESIGNED: ESB DRAWN: ESB
CHECKED: NDH CHECKED: NDH

INDIANA DEPARTMENT OF TRANSPORTATION

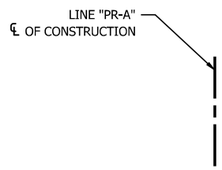
CULVERT DESIGN DETAILS
STR. NO. 102

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	55 of 177
CONTRACT	PROJECT
R-43619	2003031

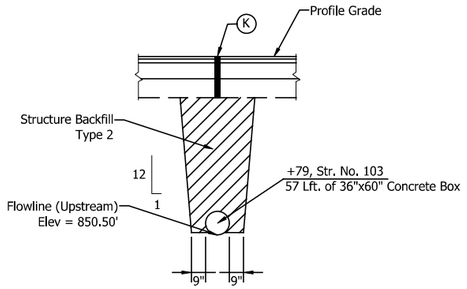
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/13/23 - 10:17 AM EDITED BY: EBYERS DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\103 GENERAL PLAN\RD-GENERAL PLAN-281ST ST.DWG



PLAN VIEW
SCALE: 1" = 10'-0"



SECTION D-D
SCALE: 1" = 5'-0"



STRUCTURE BACKFILL AT PIPE
SCALE: 1/4" = 1'-0"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- Wetland Delineation
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:, Seed Mixture, R Fertilizer Mulching Material

HYDRAULIC DATA

Drainage Area	= 54.36 acres
Q100 Discharge	= 56.37 cfs
Headwater Elevation at Q100	= 852.87 ft
Backwater at Q100	= 2.34 ft
Velocity at Q100	= 7.16 ft/s
Velocity at Q50	= 6.93 ft/s
Skew	= 1° 3' 19"
Existing Q100 Discharge	= 20.24 cfs
Existing Headwater Elevation at Q100	= 853.76 ft
Existing Backwater at Q100	= 3.23 ft
Existing Velocity at Q50	= 7.43 f/s

GENERAL PLAN
SMOOTH INTERIOR CONCRETE BOX
SPAN: 5'-0" RISE: 3'-0"
30'-0" CLEAR ROADWAY SKEW: 1° 3' 19"
281st ST
HAMILTON COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: ESB DRAWN: ESB

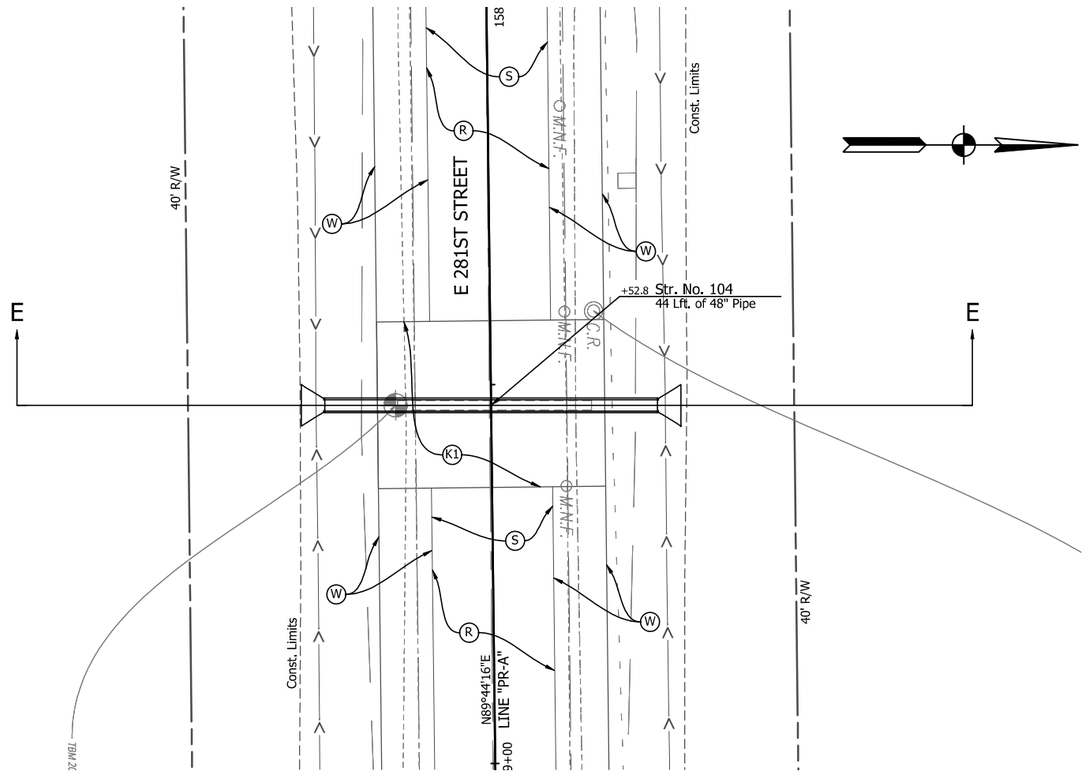
CHECKED: NDH CHECKED: NDH

INDIANA DEPARTMENT OF TRANSPORTATION

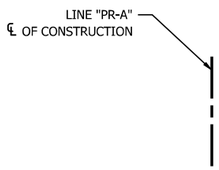
CULVERT DESIGN DETAILS
STR. NO. 103

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	56 of 177
CONTRACT	PROJECT
R-43619	2003031

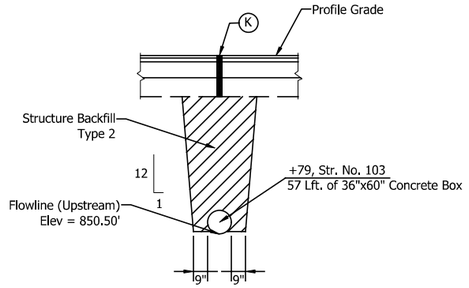
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/13/23 - 10:17 AM EDITED BY: EBYERS DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\103 GENERAL PLAN\RD-GENERAL PLAN-281ST ST.DWG



PLAN VIEW
SCALE: 1" = 10'-0"



SECTION E-E
SCALE: 1" = 5'-0"



STRUCTURE BACKFILL AT PIPE
SCALE: 1/4" = 1'-0"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- Wetland Delineation
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:, Seed Mixture, R Fertilizer Mulching Material

HYDRAULIC DATA

Drainage Area	= XX.XX acres
Q100 Discharge	= XX.XX cfs
Headwater Elevation at Q100	= XXX.XX ft
Backwater at Q100	= X.XX ft
Velocity at Q100	= X.XX ft/s
Velocity at Q50	= X.XX ft/s
Skew	= XX° XX' XX"
Existing Q100 Discharge	= XX.XX cfs
Existing Headwater Elevation at Q100	= XXX.XX ft
Existing Backwater at Q100	= X.XX ft
Existing Velocity at Q50	= X.XX f/s

GENERAL PLAN
SMOOTH INTERIOR CONCRETE BOX
SPAN: X'-X" RISE: X'-X"
XX'-X" CLEAR ROADWAY SKEW: XX° XX' XX"
281st ST
HAMILTON COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

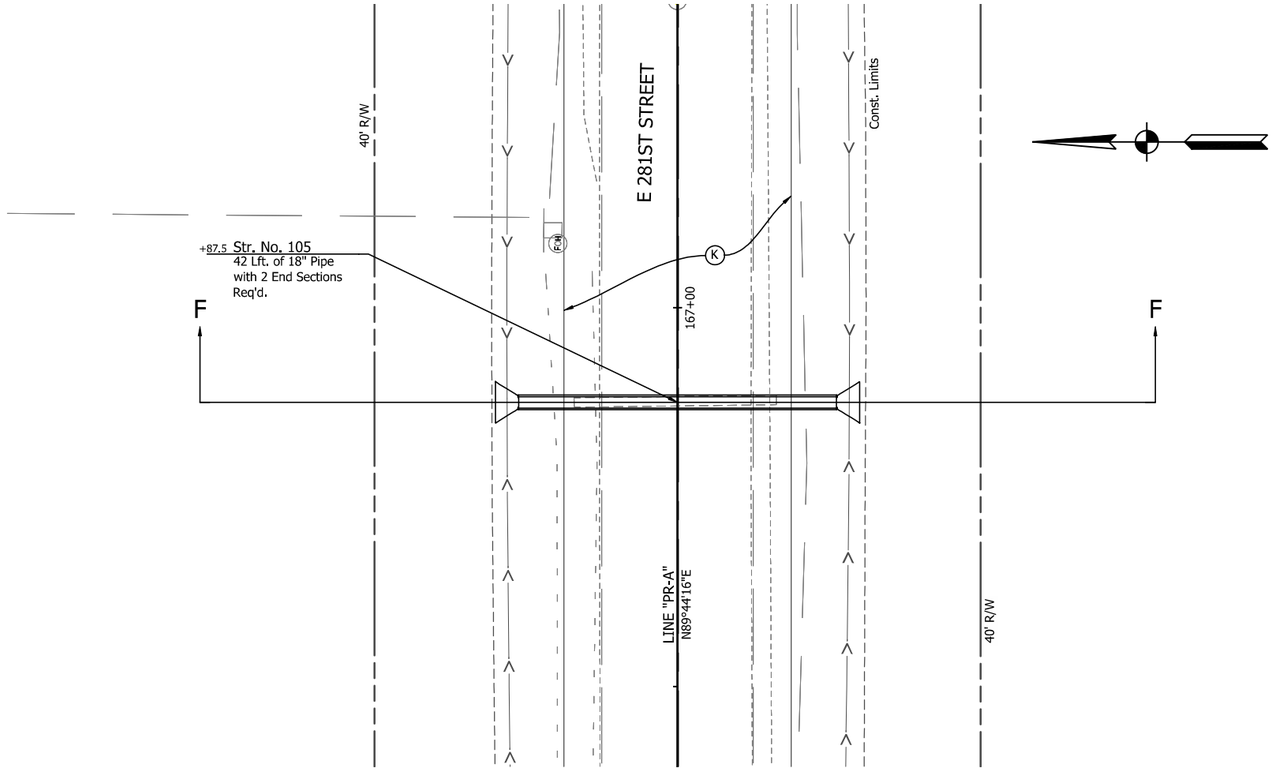
DESIGNED: ESB DRAWN: ESB
CHECKED: NDH CHECKED: NDH

INDIANA DEPARTMENT OF TRANSPORTATION

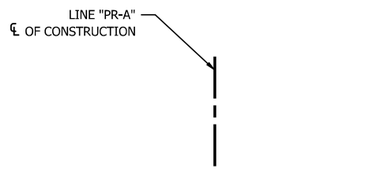
CULVERT DESIGN DETAILS
STR. NO. 104

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	57 of 177
CONTRACT	PROJECT
R-43619	2003031

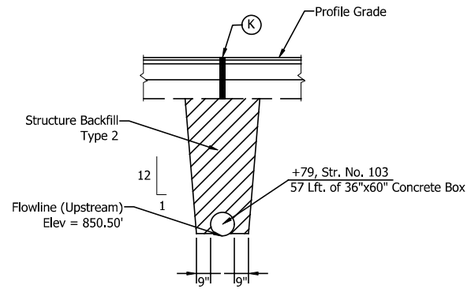
PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/13/23 - 10:17 AM EDITED BY: EBYERS DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\103 GENERAL PLAN\RD-GENERAL PLAN-281ST ST.DWG



PLAN VIEW
SCALE: 1" = 10'-0"



SECTION F-F
SCALE: 1" = 5'-0"



STRUCTURE BACKFILL AT PIPE
SCALE: 1/4" = 1'-0"

LEGEND

- (C) PCCP for Approaches, 6 in, on Dense Graded Subbase, 6 in, on Subgrade Treatment Type II (6 in Coarse Aggregate No. 53)
- (C1) Compacted Aggregate No. 53
- (D) HMA for Approaches, Type B
- (K) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 2, 64, Intermediate 19 mm, on 330 LB/SYD QC/QA HMA, 2, 64, Base 19 mm, on 3" Compacted Aggregate Base, No. 53, on Subgrade Treatment Type IC
- (K1) Full Depth HMA for Small Structure Consisting of: 165 LB/SYD QC/QA HMA, 3, 64, Surface 9.5 mm, on 275 LB/SYD QC/QA HMA, 3, 64, Intermediate 19 mm, on 660 LB/SYD QC/QA HMA, 3, 64, Base 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- Wetland Delineation
- (O) Compacted Aggregate, No. 53
- (R) HMA Milling & Overlay Consisting of:, Milling, Profile 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm
- (S) Sawcut
- (W) Full Depth HMA Consisting of: 220 LB/SYD QC/QA HMA, 2, 64, Surface 9.5 mm, on Widening with HMA Type B Consisting of: 275 LB/SYD HMA Intermediate, Type B, on 330 LB/SYD HMA Base, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment Type IC
- (15) Curb and Gutter, Concrete
- (27) Seeding Consisting of:, Seed Mixture, R Fertilizer Mulching Material

HYDRAULIC DATA

Drainage Area	= XX.XX acres
Q100 Discharge	= XX.XX cfs
Headwater Elevation at Q100	= XXX.XX ft
Backwater at Q100	= X.XX ft
Velocity at Q100	= X.XX ft/s
Velocity at Q50	= X.XX ft/s
Skew	= XX° XX' XX"
Existing Q100 Discharge	= XX.XX cfs
Existing Headwater Elevation at Q100	= XXX.XX ft
Existing Backwater at Q100	= X.XX ft
Existing Velocity at Q50	= X.XX f/s

GENERAL PLAN
SMOOTH INTERIOR CONCRETE PIPE
SPAN: X'-X" RISE: X'-X"
XX'-X" CLEAR ROADWAY SKEW: XX° XX' XX"
281st ST
HAMILTON COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

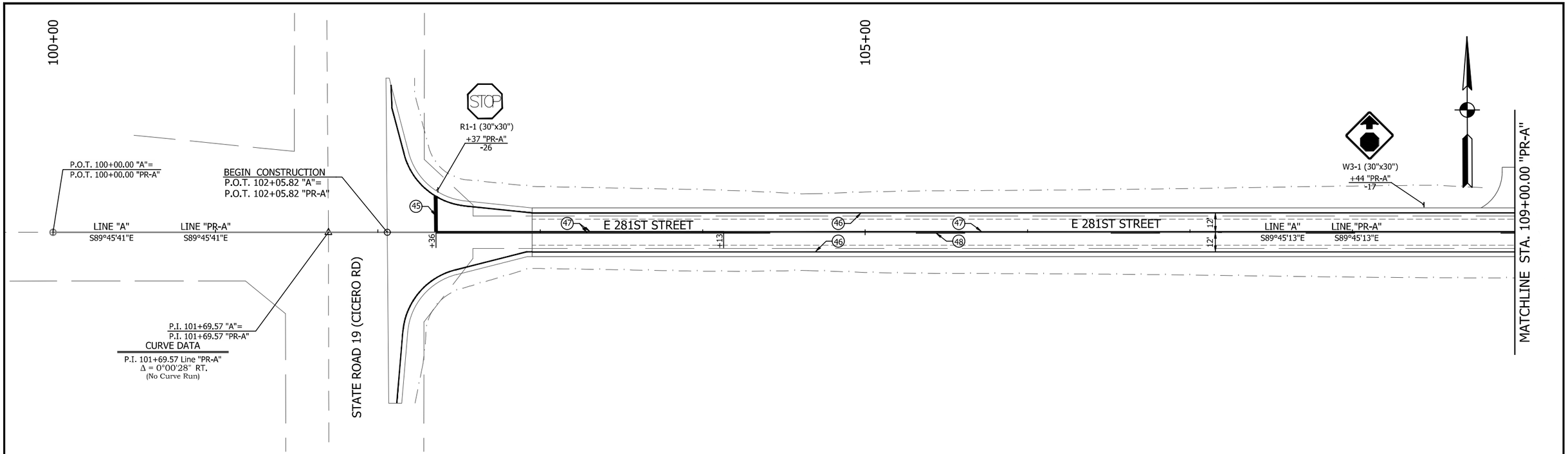
DESIGNED: ESB DRAWN: ESB
CHECKED: NDH CHECKED: NDH

INDIANA DEPARTMENT OF TRANSPORTATION

CULVERT DESIGN DETAILS
STR. NO. 105

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	58 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/13/23 - 10:17 AM EDITED BY: EBYERS DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\103 GENERAL PLAN\RD-GENERAL PLAN-281ST ST.DWG



LEGEND

45 Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
46 Line, Thermoplastic, Solid, White, 6 in.
47 Line, Thermoplastic, Solid, Yellow, 6 in.
48 Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

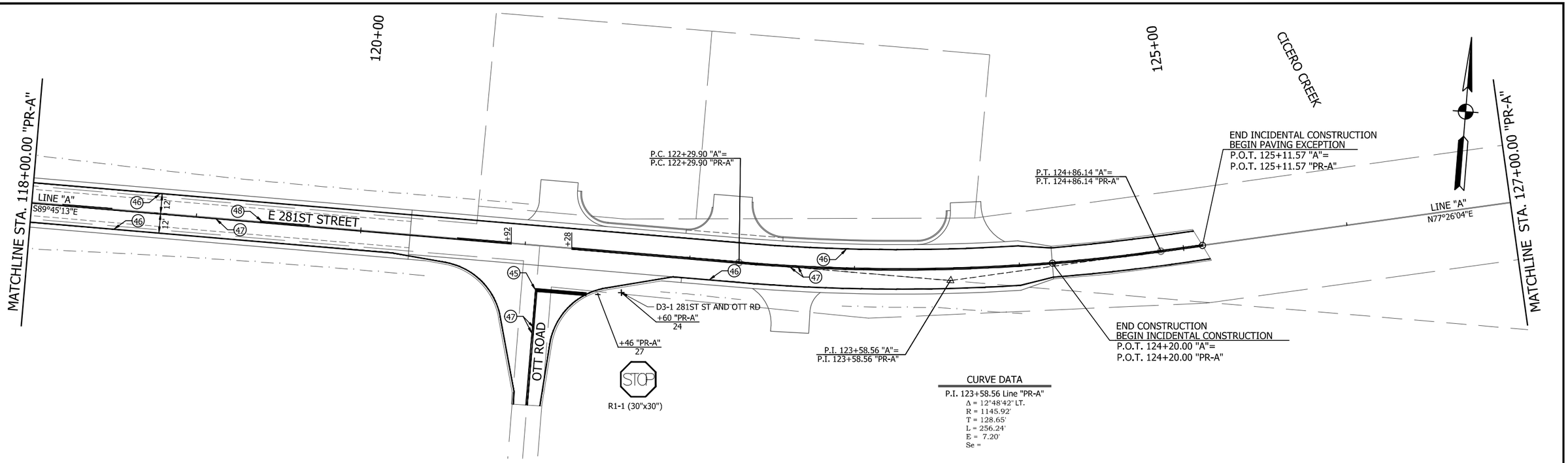
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 100+00.00 TO 118+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	66 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANIHUAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG



LEGEND

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
(46) Line, Thermoplastic, Solid, White, 6 in.
(47) Line, Thermoplastic, Solid, Yellow, 6 in.
(48) Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

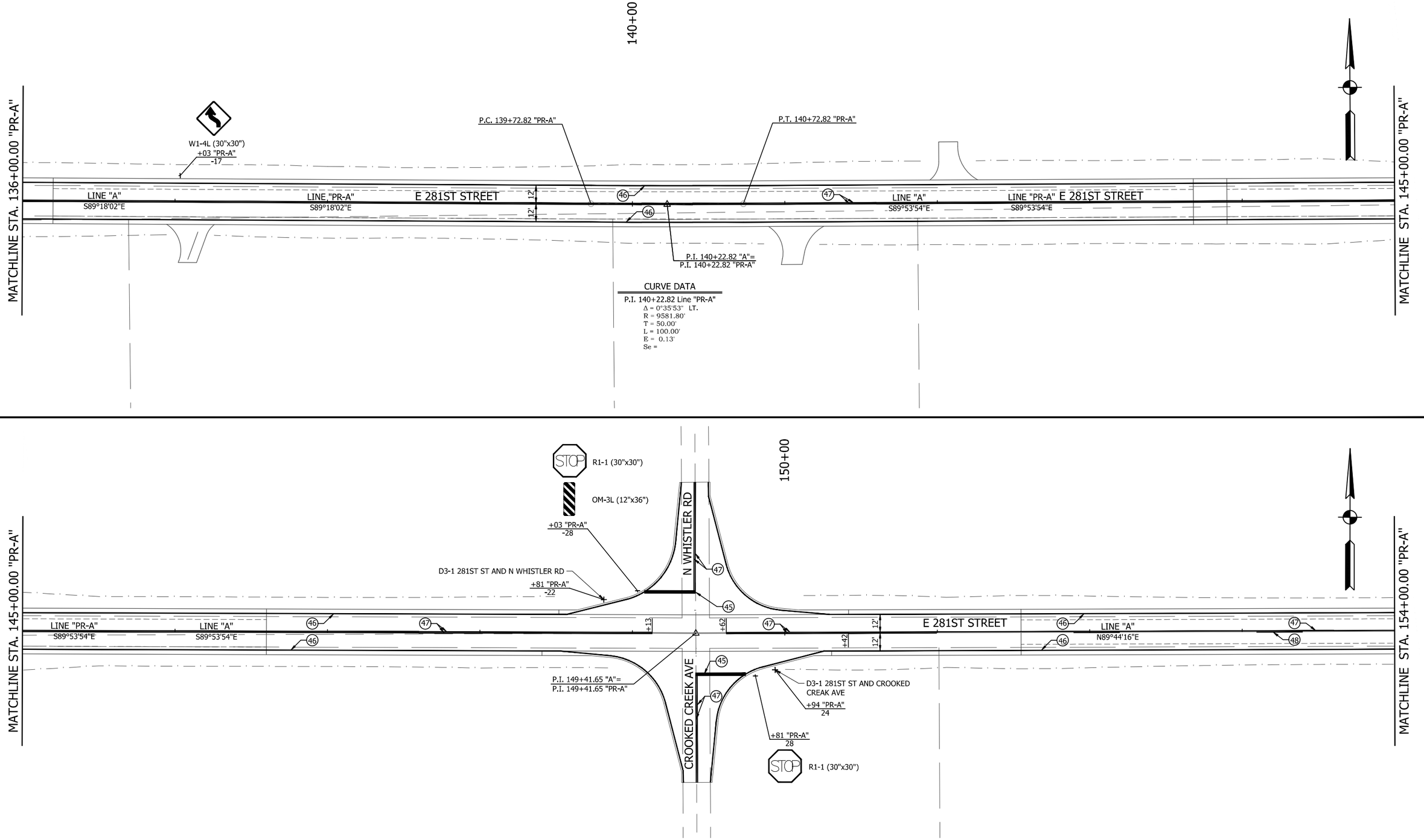
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 118+00.00 TO 136+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	67 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANIHUAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST RE\4BIS ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG



LEGEND

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
(46) Line, Thermoplastic, Solid, White, 6 in.
(47) Line, Thermoplastic, Solid, Yellow, 6 in.
(48) Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

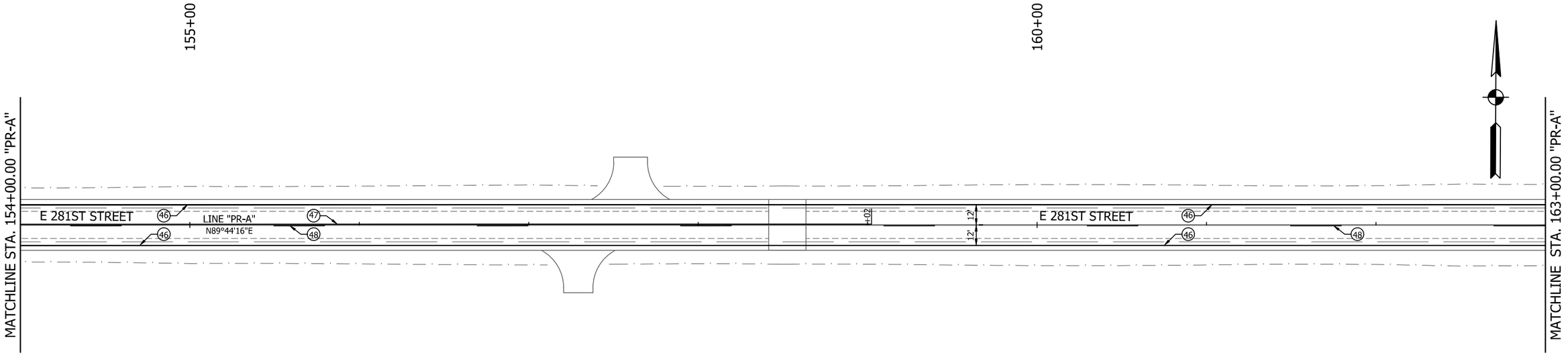
DESIGNED:	MJR 12/14/2023	DRAWN:	MJR 12/14/2023
CHECKED:	NDH 1/8/2024	CHECKED:	NDH 1/8/2024

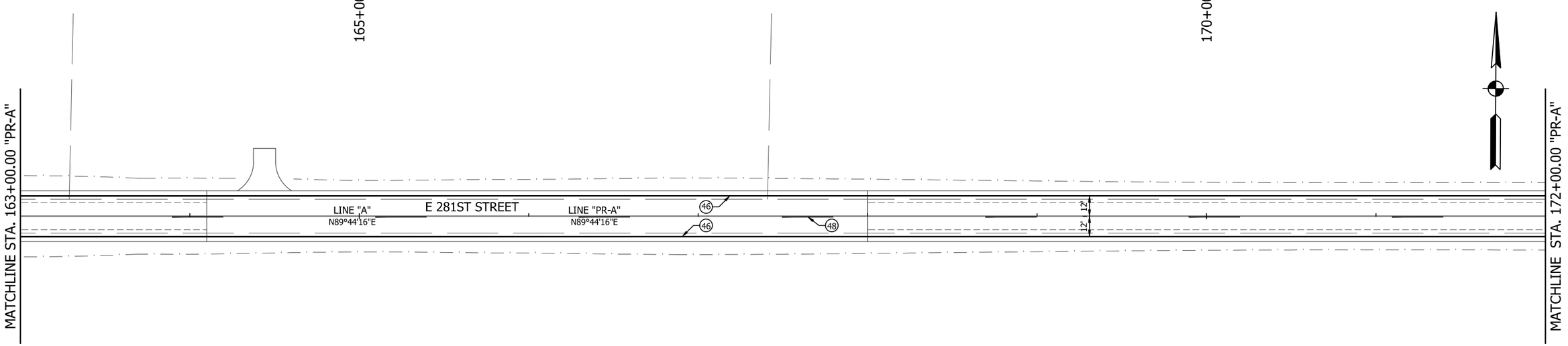
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 136+00.00 TO 154+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	68 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG





LEGEND

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
(46) Line, Thermoplastic, Solid, White, 6 in.
(47) Line, Thermoplastic, Solid, Yellow, 6 in.
(48) Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

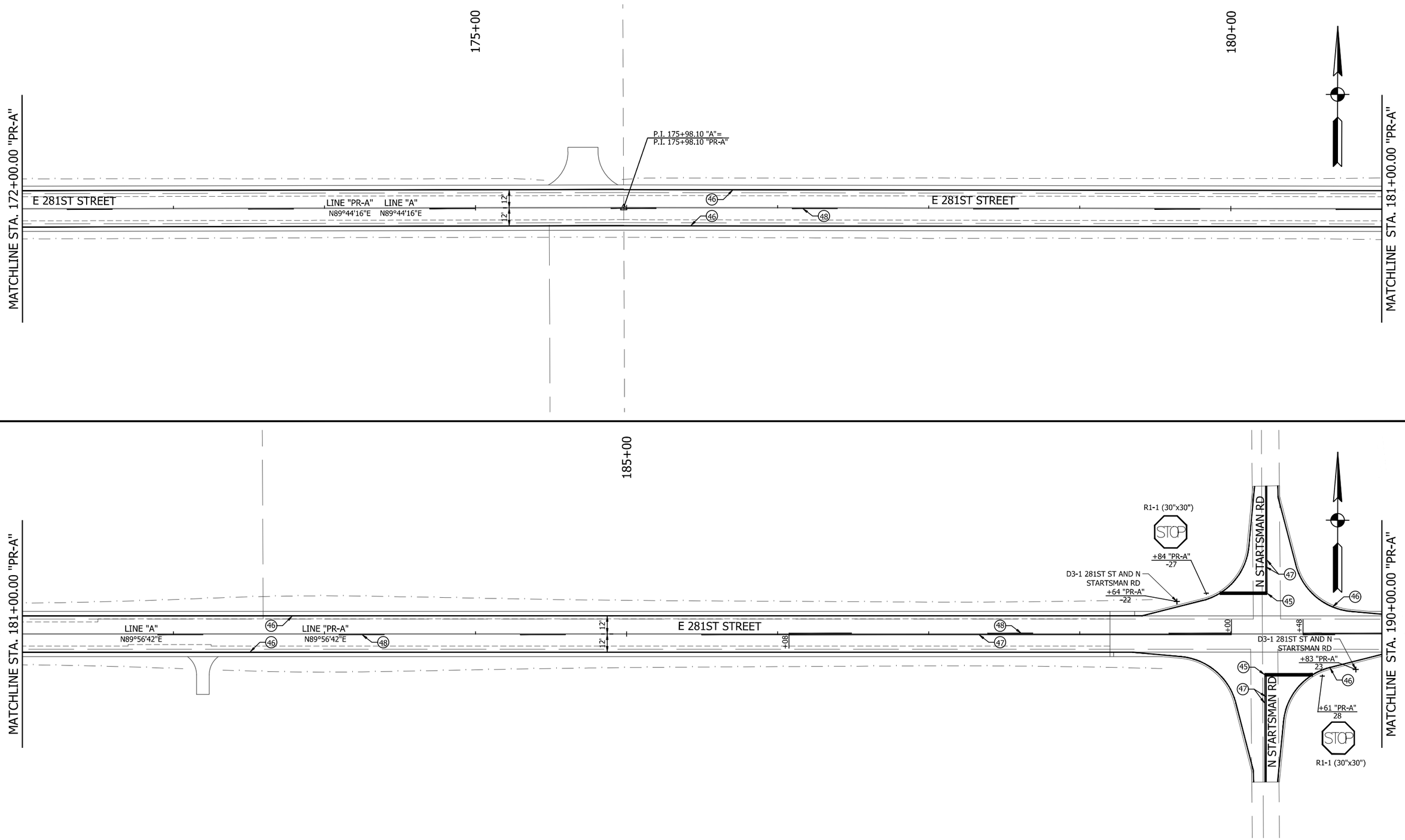
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 154+00.00 TO 172+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	69 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\6 ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG



LEGEND

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
(46) Line, Thermoplastic, Solid, White, 6 in.
(47) Line, Thermoplastic, Solid, Yellow, 6 in.
(48) Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

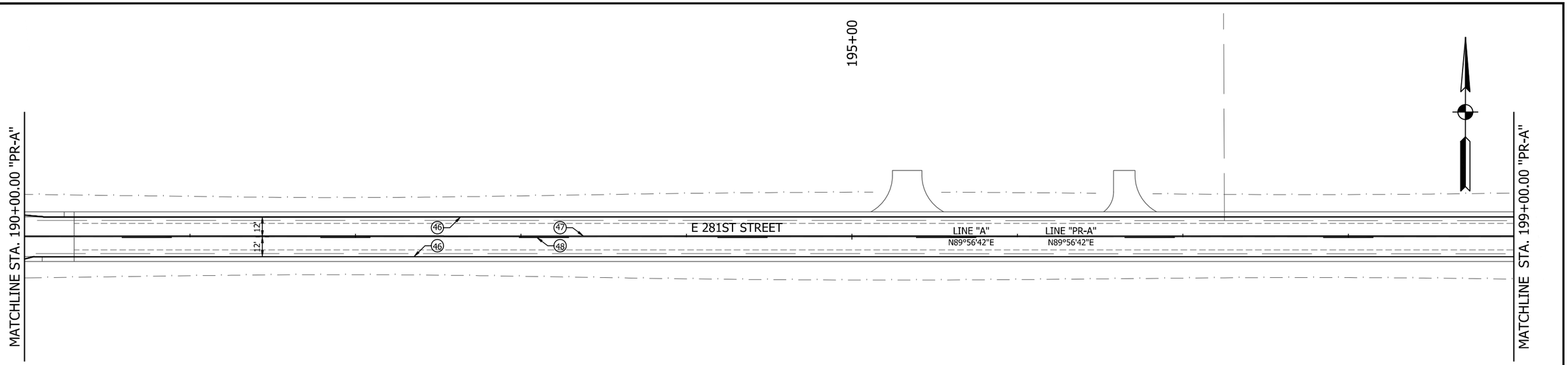
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

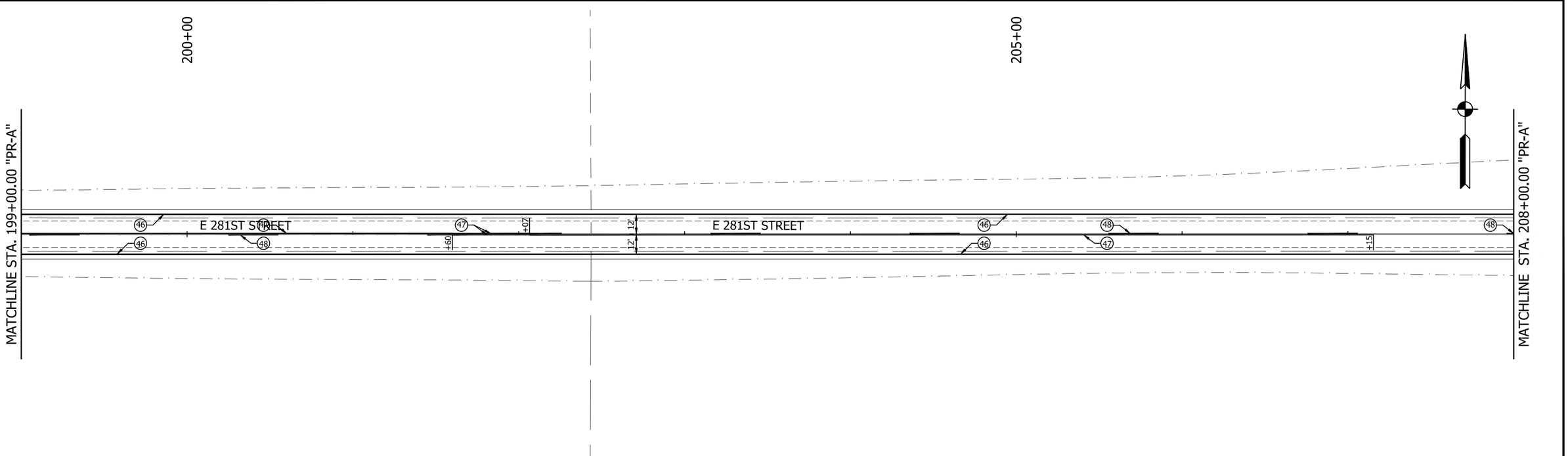
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 172+00.00 TO 190+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	70 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG





LEGEND

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
(46) Line, Thermoplastic, Solid, White, 6 in.
(47) Line, Thermoplastic, Solid, Yellow, 6 in.
(48) Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

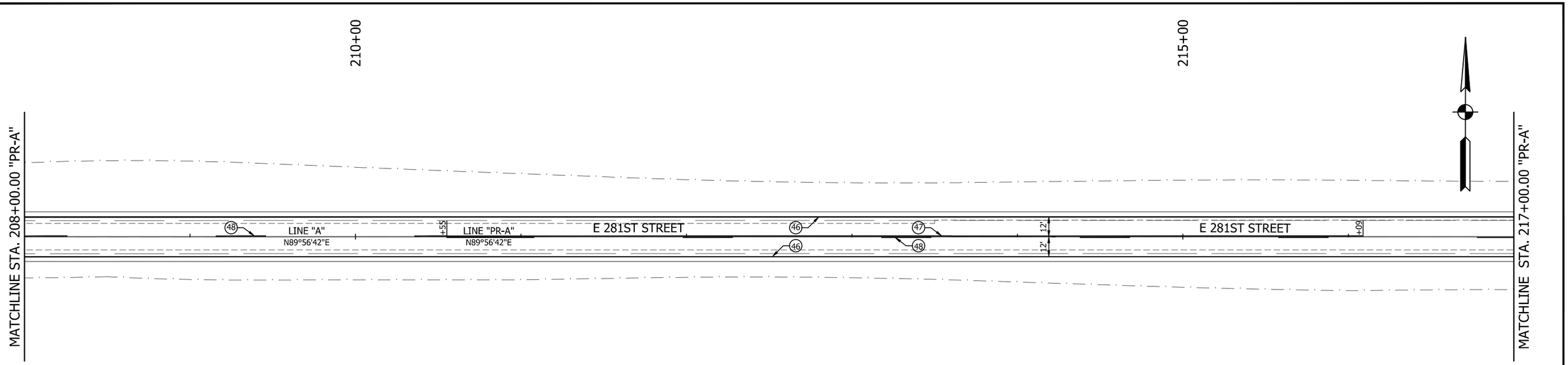
DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

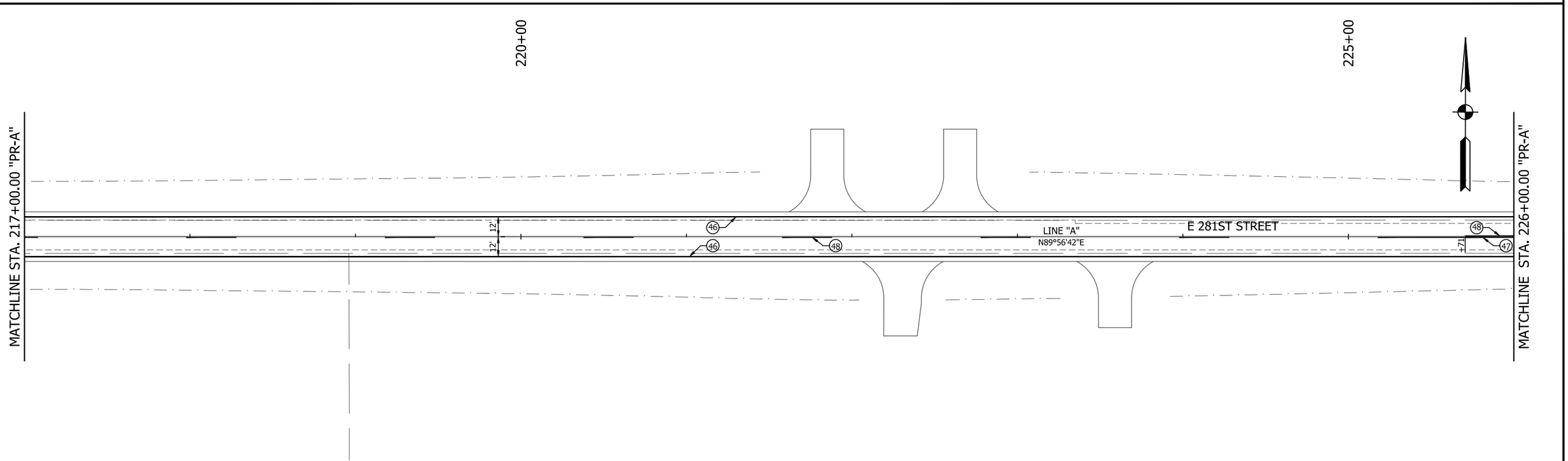
INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 190+00.00 TO 208+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	71 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANIPHAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\S ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG





LEGEND

(45) Transverse Marking, Thermoplastic, Stop Line, White, 24 in.
(46) Line, Thermoplastic, Solid, White, 6 in.
(47) Line, Thermoplastic, Solid, Yellow, 6 in.
(48) Line, Thermoplastic, Broken, Yellow, 6 in.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

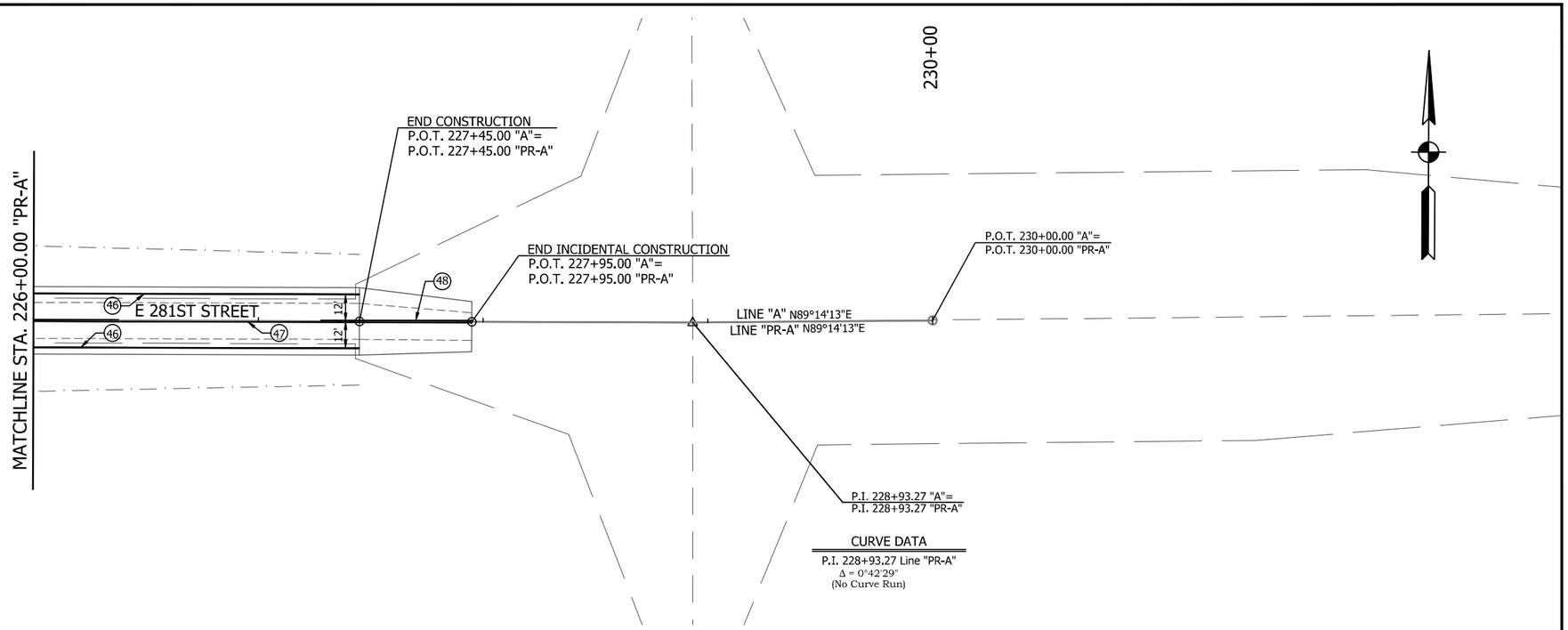
DESIGNED: MJR 12/14/2023 | DRAWN: MJR 12/14/2023
CHECKED: NDH 1/8/2024 | CHECKED: NDH 1/8/2024

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 208+00.00 TO 226+00.00 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	72 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:05 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\07 CONST DTL\RD-SHT-PVMT MRKG.DWG



LEGEND

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INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNING
STA. 226+00.00 TO 230+00.00 LINE "PR-A"

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VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	73 of 177
CONTRACT	PROJECT
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STRUCTURE DATA

STRUCTURE NUMBER	LOCATION					SIZE	DESCRIPTION		LENGTH	VIDEO INSPECTION LENGTH	SKEW	COVER		FLOW LINE		TOP OF CASTING	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL TYPE 1	STRUCTURE BACKFILL TYPE 2	UNDERCUT				GEOTEXTILES for RIPRAP TYPE 1A	REVETMENT RIPRAP	CLASS 1 RIPRAP	SCOUR PROTECTION				PIPE, REMOVE	PIPE END SECTION	GRATED BOX END SECTION			SAFETY METAL END SECTION			CONNECT TO STR.	CULVERT ASSET ID	REMARKS
	STATION	LEFT	RIGHT	CROSS	OFFSET		PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE				MIN	MAX	UP STREAM	DOWN STREAM								EXCAVATION	COMPACTED AGGREGATE #5	COMPACTED AGGREGATE #53	GEOTEXTILES for ????? TYPE?? (??)				SUMP DEPTH	GEOTEXTILE	RIPRAP													
					FT	IN.			LFT	LFT		FT	FT	ELEV.	ELEV.	ELEV.	YRS				CYS	CYS	CYS	? IN. CYS	? IN. CYS	SYS	SYS	TON	TON	IN.	SYS.	TYPE	TONS	LFT	EA.	TYPE	SLOPE	EA.	TYPE	SLOPE	EA.			
	LINE "PR-A"																																											
100	102+23.1			X			1	Pipe Culvert									50	Non-AB	7	2															77.7	2									
201	109+04.2	X			27.6	15	3	Pipe Culvert	43	43				848.00	847.27		50	Non-AB	7	2												Revetment				2									Drive Pipe
101	110+10.1			X		36x48	1	Culvert	57	57				845.20	844.70		50	Non-AB	7	2										6		Class 1		29.6										
202	111+38.2	X			30.3	15	3	Pipe Culvert	39	39				846.47	846.06		50	Non-AB	7	2												Revetment				25.1	2								Drive Pipe
206	122+63.0		X		22.1	15	3	Pipe Culvert	56	56				851.27	849.57		50	Non-AB	7	2										6		Revetment			29.6	2								Drive Pipe
102	128+40.6			X		84	1	Pipe Culvert	72	72				829.50	828.50		50	Non-AB	7	2										6		Revetment			70.6									
208	132+54.7		X		30.2	15	3	Pipe Culvert	64	64				844.55	839.85		50	Non-AB	7	2												Revetment			48.9	2								Drive Pipe
209	133+77.3	X			28.5	15	3	Pipe Culvert	37	37				848.83	847.35		50	Non-AB	7	2												Revetment			39.3	2								Drive Pipe
211	141+04.4		X		26.6	15	3	Pipe Culvert	31	31				851.71	851.62		50	Non-AB	7	2										6		Revetment				2								Drive Pipe
212	142+07.3	X			27.5	15	3	Pipe Culvert	31	31				851.91	851.59		50	Non-AB	7	2												Revetment			39.1	2								Drive Pipe
103	143+78.8			X		36x72	1	Culvert	57	57				848.75	848.55		50	Non-AB	7	2										15		Class 1			29.7									
213	149+40.7	X			24.4	18	3	Pipe Culvert	133	133				856.96	855.30		50	Non-AB	7	2										6		Revetment				2								Drive Pipe
214	149+42.0		X		23.3	15	3	Pipe Culvert	144	144				857.26	855.31		50	Non-AB	7	2										6		Revetment				2								Drive Pipe
215	157+29.3		X		23.4	15	3	Pipe Culvert	31	31				851.28	851.19		50	Non-AB	7	2										6		Revetment				2								Drive Pipe
216	157+60.1	X			23.0	18x36	3	Culvert	39	39				851.24	851.12		50	Non-AB	7	2										6		Revetment				2								Drive Pipe
104	158+52.8			X			1	Pipe Culvert									50	Non-AB	7	2															25.6									
217	164+44.1	X			22.2	15	3	Pipe Culvert	29	29				853.45	853.11		50	Non-AB	7	2										9		Revetment				2								Drive Pipe
105	166+87.5			X			1	Pipe Culvert									50	Non-AB	7	2															26.7	2								
218	175+71.2	X			18.4	24x72	3	Pipe Culvert	51	51				851.46	851.41		50	Non-AB	7	2										18		Revetment				2								Drive Pipe
219	182+19.5		X		23.5	24x36	3	Pipe Culvert	19	19				854.75	854.60		50	Non-AB	7	2										15		Revetment			30.3	2								Drive Pipe
222	195+33.4	X			26.9	15	3	Pipe Culvert	36	36				855.74	855.64		50	Non-AB	7	2												Revetment			23.6	2								Drive Pipe
223	196+64.6	X			26.1	15	3	Pipe Culvert	29	29				855.34	855.25		50	Non-AB	7	2												Revetment			23.9	2								Drive Pipe
224	221+85.4	X			39.6	30	3	Pipe Culvert	64	64				847.83	847.64		50	Non-AB	7	2												Revetment				2								Drive Pipe
225	222+30.6		X		38.1	18	3	Pipe Culvert	43	43				848.20	848.01		50	Non-AB	7	2												Revetment				2								Drive Pipe
226	222+65.4	X			39.5	30	3	Pipe Culvert	63	63				847.59	847.40		50	Non-AB	7	2												Revetment				2								Drive Pipe
227	223+59.0		X		36.7	18	3	Pipe Culvert	57	57				847.81	847.63		50	Non-AB	7	2												Revetment				2								Drive Pipe

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: MJR 12/14/2023 DRAWN: MJR 12/14/2023

CHECKED: NDH 1/8/2024 CHECKED: NDH 1/8/2024

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	2003031
SURVEY BOOK	SHEET
	79 of 177
CONTRACT	PROJECT
R-43619	2003031

PRINT DATE: 1/8/24
PLOT SCALE: 1:1 EDIT DATE: 12/14/23 - 7:52 PM EDITED BY: CKANPHIAN DRAWING FILE: P:\21-500-371-1 HAMILTON CO 281ST ST REHAB\5 ACAD\09 TABLES\SHT TABLE-STRUCTURE DATA.DWG

Categorical Exclusion

Appendix C

Early Coordination

Corporate Headquarters
8770 North St., Ste. 110
Fishers, IN 46038
317.588.1798

September 27, 2023

Example Early Coordination

Re: Agencies Early Coordination
Designation (Des.) Number (No.) 2003031
Roadway Project
Along East 281st Street between State Road (SR) 19 / Cicero Road and SR 213 / Walnut Grove Road
Hamilton County, Indiana

Dear «Position»,

Hamilton County, with funding from the Federal Highway Administration (FHWA), proposes to proceed with a roadway project in Hamilton County, Indiana (Des. No. 2003031). This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above Des. Number and description in your reply.** We will incorporate your comments into the formal environmental study.

Project Location
The project is located along East 281st Street between SR 19 / Cicero Road and SR 213 / Walnut Grove Road in Hamilton County, Indiana. The project is within Jackson and White River Civil Townships, Section 12 of Township 20 North, Range 4 East, Sections 7-10 of Township 20 North, Range 5 East of the Arcadia and Omega U.S. Geological Survey (USGS) Quadrangles. Refer to attached project area maps.

Existing Conditions
East 281st Street is classified as a Major Collector roadway and consists of two 9 to 10-foot-wide travel lanes (one westbound and one eastbound), and 0 to 4-foot-wide gravel shoulders. Within the project area, East 281st Street intersects SR 19, Ott Road, Crooked Creek Road, North Startsman Road, Rulon Road, Hill Road, Lacy Road, and SR 213. In addition, East 281st Street crosses Cicero Creek and Weasel Creek. Generally, road runoff drains to adjacent farm fields as roadside ditches are minimal or nonexistent. Sidewalks are not present within the project area. Adjacent land use consists of residential, wooded, and agricultural properties. Refer to attached project area photos.

Two bridges are within the project area. National Bridge Inventory (NBI) No. 2900058 is a 3-span, 200-foot-long, prestressed concrete continuous bridge that carries East 281st Street over Cicero Creek. NBI No. 2900060 is a 49-foot-long, wood bridge that carries East 281st Street over Weasel Creek. One culvert is within the project area. The 4-foot-diameter corrugated metal pipe (CMP) carries East 281st Street over an unnamed tributary (UNT) to Cicero Creek and is located approximately 225 feet east of Cicero Creek. The CMP is not inventoried and does not have an

assigned structure number. Several smaller structures (12 to 15 inches in diameter) are also located throughout the project area. The existing right-of-way width is generally the edge of pavement; however, it expands to approximately 35 feet from the roadway centerline where East 281st Street crosses Cicero Creek and Weasel Creek.

The draft need of the project is due to the substandard pavement conditions, inadequate travel lane widths, and poor roadway drainage. In addition, the traffic volume is anticipated to increase within the project area. The draft purpose of the project is to provide connectivity across this portion of Hamilton County that would accommodate the expected increase in traffic volume.

Proposed Conditions

Design and construction would occur in two phases. Phase 1 (western project area) would extend from SR 19 to Rulon Road. Phase 2 (eastern project area) would extend from Rulon Road to SR 213. Construction is anticipated to begin in the spring of 2026. The proposed project would include the following:

- Widening the travel lanes to 12-foot-wide and shoulders to 3-foot-wide paved.
- Constructing curb and gutter with storm sewer inlets to minimize impacts to properties, particularly within the Town of Omega.
- Conducting full-depth or partial-depth reconstruction based on superelevations, cross slopes, and existing grades / elevations.
- Reconstructing drives and roadway approaches to match the proposed roadway width.
- Constructing roadside ditches to promote positive drainage away from the roadway and adjacent properties.
- Replacing all small structures.
- Potentially replacing the bridge that carries East 281st Street over Weasel Creek (NBI No. 2900060).
- Avoiding all work to the bridge that carries East 281st Street over Cicero Creek (NBI No. 2900058). This would be a pavement exempted area.
- Acquiring approximately 59 acres of permanent right-of-way and 5 acres of temporary right-of-way. The proposed permanent right-of-way would expand to approximately 40 feet from the roadway centerline.
- Clearing and trimming trees.
- Maintaining traffic using phased construction and local detours. Access to all properties would be maintained during construction.

Resources

To identify potential environmental concerns within the project vicinity, a Red Flag Investigation is being completed by RQAW. Coordination with any applicable agencies / owners will occur, if necessary.

A site visit was performed on August 8, 2023, by RQAW to identify any ecological resources present within the project area. Streams and potential wetlands were observed within and adjacent to the project area. RQAW is preparing a *Waters of the U.S. Report* documenting these resources.

The project is anticipated to qualify for the U.S. Fish and Wildlife Service (USFWS) Range-wide Programmatic Agreement for the Indiana bat and northern long-eared bat by completing the Information for Planning and Consultation (IPaC).

Coordination will occur with the Indiana Department of Transportation (INDOT) Cultural Resources Office (CRO) to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this study will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence, as appropriate.

Please provide your response within 30 calendar days from the date of this letter. However, if you feel an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please contact Jaime Byerly (NEPA Specialist at RQAW, 317-588-1798, jbyerly@rqaw.com), Nicholas Hoevener (Project Manager at RQAW, 317-588-1735, nhoevener@rqaw.com), and Joel Thurman (Project Manager at Hamilton County Highway Department, 317-773-7770, joelthurman@hamiltoncounty.in.gov).

To reduce the file size of this letter, preliminary plans are not attached. Please contact Jaime Byerly (contact information above) to request a copy of the preliminary plans.

Thank you in advance for your input,

Jaime Byerly

Jaime Byerly
RQAW | Environmental Department

Appendices:

- Appendix A: Project Area Maps and Photographs

Cc:

- INDOT Greenfield District (e-mail)
- FHWA (e-mail)
- Indiana Geological and Water Survey (electronic submission)
- Indiana Department of Environmental Management (IDEM) Groundwater Section (e-mail)
- Citizens Water-Indianapolis (e-mail)
- Indiana Division of Natural Resources (IDNR) Division of Fish and Wildlife (e-mail)
- IDNR Division of Oil and Gas (e-mail)
- U.S. Department of Housing and Urban Development (USHUD) (e-mail)
- National Park Service (NPS) Midwest Regional Office (e-mail).
- Natural Resources Conservation Service (NRCS) (e-mail)
- U.S. Army Corps of Engineers (USACE) Louisville District (e-mail)
- U.S. Coast Guard (USCG) 8th District (e-mail)
- Hamilton County Plan Commission (e-mail)
- Hamilton County Parks and Recreation (e-mail)
- Omega Christian Church (USPS)
- Hamilton County Municipal Separate Storm Sewer (MS4) Coordinator (USPS)
- Hamilton Heights School Corporation (e-mail)

- Indianapolis Metropolitan Planning Organization (IMPO) (e-mail)
- Arcadia Building and Zoning / Local Floodplain Administrator (e-mail)
- Hamilton County Plan Commission / Local Floodplain Administrator (e-mail)
- Hamilton County Council (USPS)
- Hamilton County Board of Commissioners (USPS)
- Hamilton County Surveyor (e-mail)
- Hamilton County Highway Supervisor (e-mail)
- Hamilton County Engineer (e-mail)

INDIANA GEOLOGICAL & WATER SURVEY
INDIANA UNIVERSITY

Organization and Project Information

Project ID: 281st St Roadway Improvement
Des. ID: 2003031
Project Title: 281st Street Roadway Improvement
Name of Organization: RQAW
Requested by: Jenna Garrison

Environmental Assessment Report

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

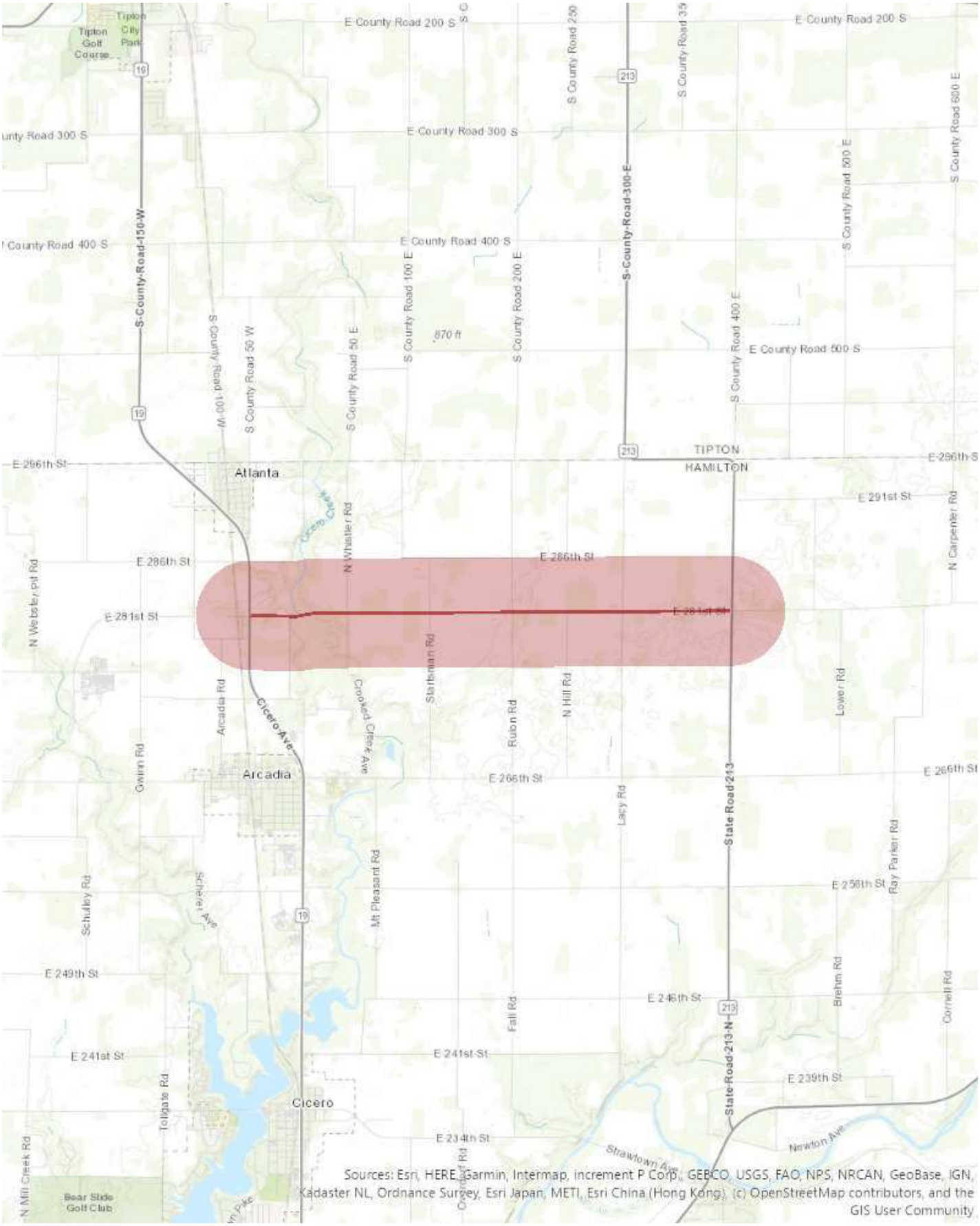
*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

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

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

Date: December 19, 2023



Jaime Byerly

From: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Sent: Wednesday, August 30, 2023 3:34 PM
To: Jaime Byerly
Subject: RE: IDEM & SWA Coordination: 281st Street Roadway Project in Hamilton County, IN, Des. No. 2003031

Hi Jaime,

I appreciate the reminder; I missed the original email.

Des No 2003031 is located in Citizens Water – Indianapolis' Source Water Assessment Area. The contact for Citizens Water – Indianapolis is John Havard and he can be reached at JHavard@citizensenergygroup.com and 317-693-8716.

Let me know what questions you have.

Sincerely,

Alisha Turnbow
Environmental Manager
Office of Water Quality
Drinking Water Branch, Groundwater Section
(317) 233-9158 • aturnbow@idem.IN.gov

Indiana Department of Environmental Management

From: Jaime Byerly <jbyerly@rqaw.com>
Sent: Wednesday, August 30, 2023 1:20 PM
To: Turnbow, Alisha <ATurnbow@idem.IN.gov>
Subject: FW: IDEM & SWA Coordination: 281st Street Roadway Project in Hamilton County, IN, Des. No. 2003031

Good afternoon,

I'm just following up on the below. Thanks!

Jaime Byerly

From: Royer, Brian <BRoyer@dnr.IN.gov>
Sent: Wednesday, September 27, 2023 11:51 AM
To: Jaime Byerly
Subject: RE: Agencies Early Coordination Letter: East 281st Street Roadway Project in Hamilton County, Indiana (Des. No. 2003031)

There are no known oil and gas related wells within this project area.

Thanks,

Brian Royer
Orphan Well Manager
Indiana Department of Natural Resources
Division of Reclamation
317-417-6556
broyer@dnr.IN.gov
www.dnr.IN.gov

** Please let us know about the quality of our service by taking this brief* customer survey.

From: Cook, Christy <CCook@dnr.IN.gov>
Sent: Wednesday, September 27, 2023 10:22 AM
To: Royer, Brian <BRoyer@dnr.IN.gov>
Subject: FW: Agencies Early Coordination Letter: East 281st Street Roadway Project in Hamilton County, Indiana (Des. No. 2003031)

Christy Cook
Administrative Assistant
Indiana Department of Natural Resources
Division of Oil and Gas
402 W Washington St Rm W293
Indianapolis, IN 46204
Office: 317-234-6376
Fax: 317-232-1550

www.dnr.in.gov

U.S. Department of Homeland Security
United States Coast Guard

Commander
Eighth Coast Guard District

1222 Spruce Street, Room 2.102D
St. Louis, MO 63103
Staff Symbol: (dwb)
Phone: (314) 269-2381
Rob.e.mccaskey@uscg.mil

16211
September 28, 2023

Jaime Byerly
RQAW
8770 North Street, Suite 110
Fishers, IN 46038

Subj: Des. No. 2003031, Roadway Project, Hamilton County, IN

Dear Ms. Byerly:

This is in response to your email dated September 27, 2023 and corresponding information requesting whether the Coast Guard will require a permit and navigational lighting for the referenced bridge project. We have examined the proposed project area with regard to its status as a navigable water of the United States for purposes of Coast Guard bridge jurisdiction.

Our examination indicates that there is no sufficient factual support for concluding that the study area, at the project location, has current or historic navigation occurring on a waterway. Since this is the case, a Coast Guard bridge permit or exemption will not be required for the referenced bridge project.

In consideration of the uses of the waterway, bridge lighting is not required.

Sincerely,

ERIC A. WASHBURN
Bridge Supervisor, Western Rivers
By direction of the District Commander

Aaron Lawson

From: Havard, John E. <JHavard@citizensenergygroup.com>
Sent: Friday, September 29, 2023 8:18 AM
To: Jaime Byerly
Subject: RE: Agencies Early Coordination Letter: East 281st Street Roadway Project in Hamilton County, Indiana (Des. No. 2003031)

Jaime Byerly,

Thank you for informing us of this project. Our chief concern is the protection of Cicero Creek from fuel or chemicals that may be used for the construction of the project. Please ensure that the construction workers are aware that Cicero Creek is a source of drinking water for Hamilton county and Indianapolis. We request that construction workers take precautions to prevent releases into the creek including the water shed area (soil and tributaries). The construction workers should be prepared to remove any fuels or chemicals that they release near or into the creek. The Construction Company should be prepared to mobilize an emergency response contractor in the event that they need assistance to respond to a spill.

Please require the contractor to immediately report any release of fuels or chemicals into the creek to IDEM. The caller should be prepared to describe the nature of the contamination (quantity and type of material), location and time of release.

Thank you,

John Havard, PE
Manager, Environmental Technical Programs
O: 317.693.8716
citizens energy group

From: Jaime Byerly <jbyerly@rqaw.com>
Sent: Wednesday, September 27, 2023 9:25 AM
To: Havard, John E. <JHavard@citizensenergygroup.com>
Subject: Agencies Early Coordination Letter: East 281st Street Roadway Project in Hamilton County, Indiana (Des. No. 2003031)

Good morning,

Attached is an early coordination letter and supporting graphics for the above referenced project. Through coordination with IDEM, it was determined the project is located within your Source Water Assessment Area.

Aaron Lawson

From: Wil Rettinger <Wil.Rettinger@hamiltoncounty.in.gov>
Sent: Monday, October 2, 2023 9:55 AM
To: Jaime Byerly
Cc: Bruce Oldham
Subject: RE: Agencies Early Coordination Letter: East 281st Street Roadway Project in Hamilton County, Indiana (Des. No. 2003031)

Good morning Jaime,

Our Department does not own or is actively pursuing the acquisition of any properties along this stretch or in this vicinity. We will defer to Hamilton County Highway for their inputs and concerns.

Thank you,
Wil

Wil Rettinger | Park Development and Operations Strategist
p. 317.774.2506 | e. wil.rettinger@hamiltoncounty.in.gov
www.myhamiltoncountyparks.com
400 Lafayette Road, Noblesville, IN 46060

From: Bruce Oldham <Bruce.Oldham@hamiltoncounty.in.gov>
Sent: Wednesday, September 27, 2023 11:46 AM
To: Wil Rettinger <Wil.Rettinger@hamiltoncounty.in.gov>
Subject: FW: Agencies Early Coordination Letter: East 281st Street Roadway Project in Hamilton County, Indiana (Des. No. 2003031)

Bruce Oldham
Deputy Director
Hamilton County Parks & Recreation
Phone 317-774-2575 **Mobile** 317-989-6862
Web myhamiltoncountyparks.com

SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

RQAW
Jaime Byerly
8770 North Street, Suite 110
Fishers, IN 46038

RE: Des. No. 2003031
Road Project along East 281st Street between State Road (SR) 19/Cicero Road and SR 213/Walnut Grove Road
Hamilton County, Indiana

I received your Early Coordination Letter dated September 27, 2023 regarding the above referenced project. I have the following comments regarding this project.

Regulated Drains –

The regulated drains affected by this project west to east are as follows:

Big Cicero Creek is a regulated drain which is under the jurisdiction of the Big Cicero Creek Joint Drainage Board.

W.W. Forkner Drain's Drainage Shed extends down to 281st Street at and east of Startsman Road. The drain itself does not run to the 281st Street right of way.

Henry Bright Drain (aka Weasel Creek) is an open ditch crossing 281st Street east of Rulon Road.

Charles Caylor Drain has three (3) tile portions which cross 281st Street east of Lacy Road. The main drain crosses approximately 930 feet east of Lacy Road and Arm 3 crosses approximately 1,660 feet and 2,290 feet east of Lacy Road. These are agricultural drains which may need reconstructed in order to accommodate the additional flow due to impervious surfaces being added.

J.J. Billhymer Drain is located east and north of Omega but has a drainage shed which will be impacted by the project. Omega has a history of drainage issues. Currently plans are being prepared to bring drainage facilities into the area along 281st Street east of SR 213. The current plan is to provide inlets at each corner of the 281st and SR 213 intersection low enough and sized to extend the facilities north, south, and west of the intersection. Detention will need to be provided for the additional impervious surface areas. Close coordination will need to be done with this office for the drainage plans as related to each of these drains and/or drainage sheds.

Please coordinate plans with Mr. John Campbell, P.S. or Andy Conover of this office. All MS4 issues shall be coordinated with Mrs. Clara Furst of this office.

Floodplains-

There are two (2) floodplains within the project area as noted in your letter. Those are at Big Cicero Creek and the Henry Bright Drain (aka Weasel Creek). Any fill in these areas must be mitigated. Any new structures should be able to convey the 100- year flood through the structure.

Section Corners-

There are eight (8) section corners within the project area. These are corner numbers 20041205, 20050705, 20050706, 20050806, 20050905, 20050906, 20051005 and 20051006. The corner records are attached. Please coordinate with Brian Rayl of this office regarding the section corners. Replacement of these corners need to be shown on the construction plan and noted in the bid documents.

Benchmarks-

There is one (1) benchmark within the project limits. This is Station HCBR 66 located on the 281st Street Bridge over the Henry Bright Drain (aka Weasel Creek). If this bridge is replaced or the benchmark disturbed the placement needs to be noted in the bid documents and shown on the construction plans. Please coordinate with Brian Rayl of this office regarding the benchmark.

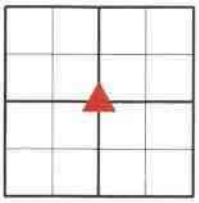
Regards,

Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD

N
NTS



12 - 20N - 04E
SEC. - T - R

FIELD CREW:
Bob King, CST2
Todd Whisman, CST1

DATE: 7-2-2020
FB: 20-04 PG: 52-53

GEODETIC CONTROL
Bob King, CST2
DATE: 7-2-2020

MONUMENT: HARRISON RESET AT SURFACE

Ref.	Distance	Witness Monument Ties
1.	89.67'	PK nail found 0.5' up on S. face of corner post.
2.	113.03'	Mag nail found 0.8' up on S. face of utility pole.
3.	79.42'	PK nail found 1.2' up on W. face of utility pole.
4.	107.68'	Mag nail found 1.7' up on E. face of utility pole.

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1802871.917
E: 228692.991
NAVD 88 (GEOID12A)
ELEV: 854.06

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 12A

HISTORY

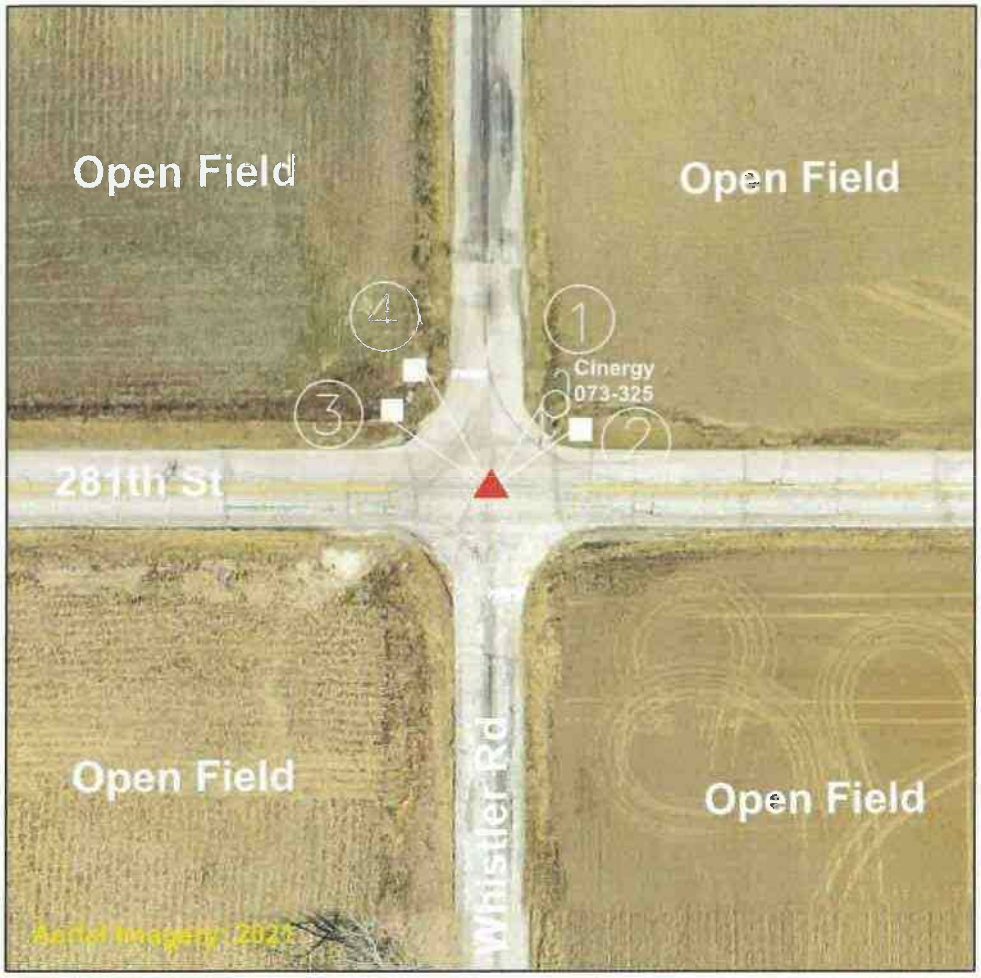
8-11-1854 Stone with "X" perpetuated. 8-4-1978 Tie sheet doesn't mention type of marker. 4-22-1991 Railroad spike found. 11-3-2006 Harrison set at surface. 9-17-2015 Harrison found at surface. 5-21-2020 Harrison found at surface.

DRAWN BY:
Todd Whisman, CST1
DATE: 9-22-2020

Sheet 1 of 1	Indiana Tie Card References: IN02_T20NR04E12_40	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	CORNER NUMBER 20041205

S:\E-Surv\Section Corners\New Tie Sheets\20041205.dwg, 9/22/2020 10:55:59 AM

HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD



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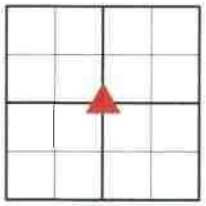


07 - T20N - R05E
SEC. - T - R

FIELD CREW:
Scott Dykes, CST1
Teresa Dudley

DATE: 7-7-2022
FB: 20-05.2 PG: 70-71

GEODETIC CONTROL
Scott Dykes, CST1
DATE: 7-7-2022
JOB NAME:
Master Section Corner

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1802999.311
E: 233448.924
NAVD 88 (GEOID18)
ELEV: 859.522

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 18

DRAWN BY:
Scott Dykes, CST1
DATE: 7-11-2022

MONUMENT: BENT REBAR FOUND 0.2' BELOW SURFACE

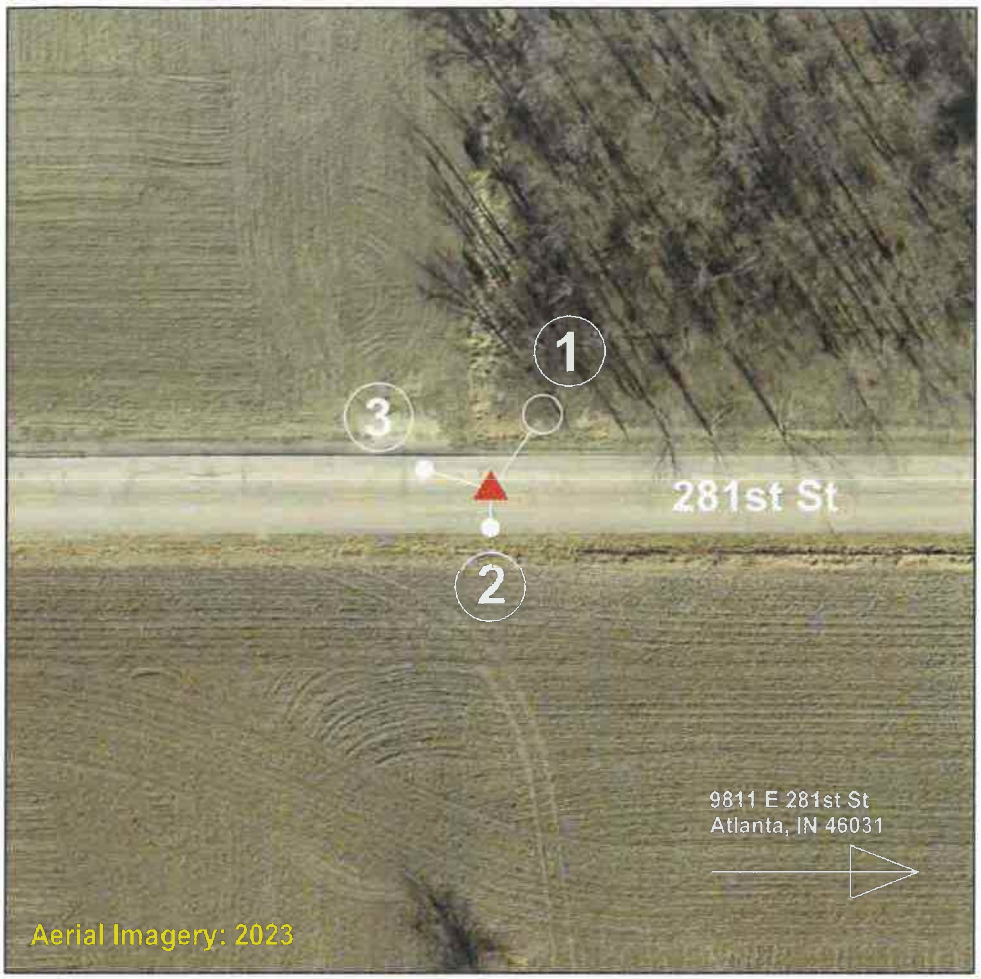
Ref.	Distance	Witness Monument Ties
1.	24.10'	Mag nail with HCSO washer set 1' up on East face of utility pole
2.	23.98'	PK nail found 0.8' up on West face of 8'x 8' fence post
3.	33.27'	Mag nail with HCSO washer found 1.65' up on East face of fence post
4.	30.16'	Mag nail with HCSO washer found 1.5' up on South face of fence post

HISTORY

7-20-1983 1" rebar set 2" below surface, no stone found. 5-10-1994 1" rebar found. 8-2-1996 1" rebar found at surface. 7-6-2000 Bent 1" rebar found at surface. 5-22-2009 Bent 1" rebar found.

Sheet 1 of 1	Indiana Tie Card References: IN02_T20NR05E07_40	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	CORNER NUMBER 20050705

HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD



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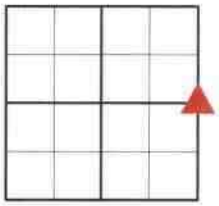


07 - T20N - R05E
SEC. - T - R

FIELD CREW:
Scott Dykes, CST1
Teresa Dudley

DATE: 5-24-2023
FB: 20-5.2 PG 106-107

GEODETIC CONTROL
Teresa Dudley
DATE: 5-24-2023
JOB NAME:
Master Section Corner

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1803001.581
E: 236105.297
NAVD 88 (GEOID18)
ELEV: 853.9

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 18

DRAWN BY:
Todd Whisman, CST1
DATE: 5-24-2023

MONUMENT: HARRISON FOUND AT SURFACE

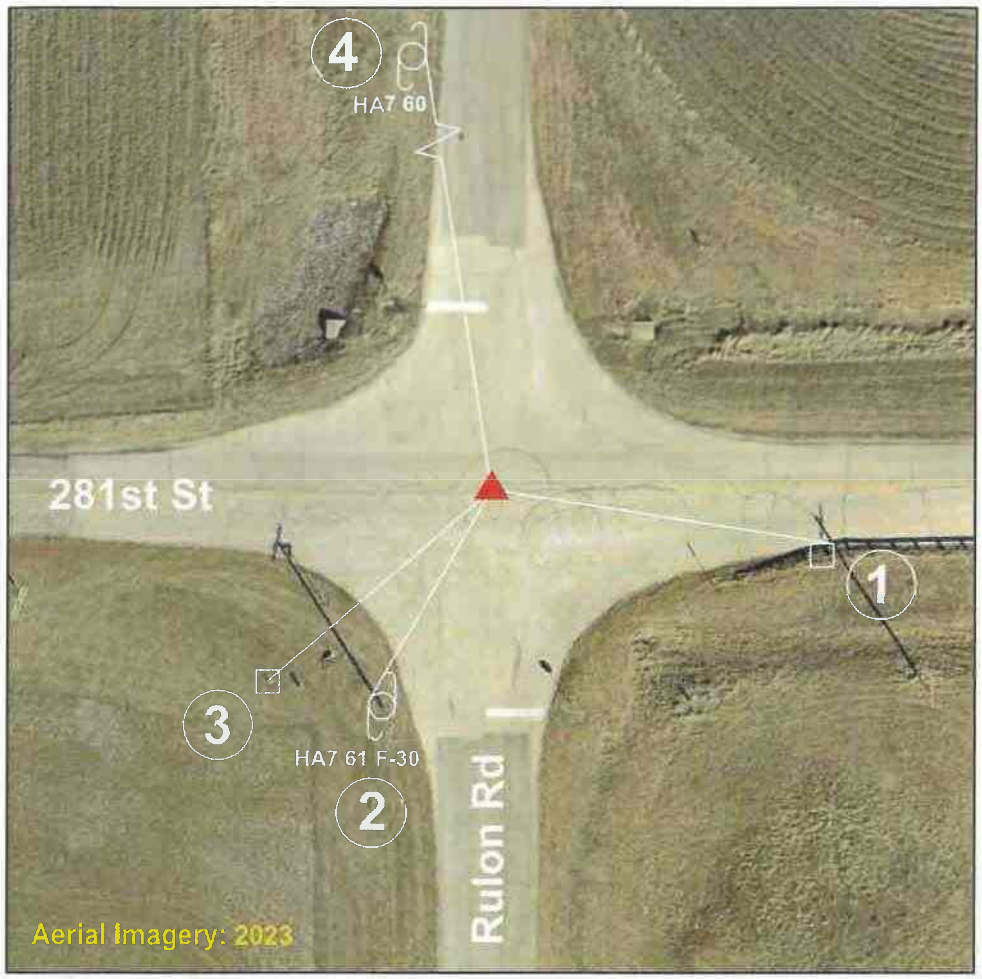
Ref.	Distance	Witness Monument Ties
1.	19.11'	Near face of fiber optics marker.
2.	10.66'	Mag spike found 0.5' from edge of pavement.
3.	20.63'	Mag spike found 0.8' from edge of pavement.

HISTORY

8-11-1854 Stone with "X" perpetuated. 7-20-1983 Stone found 0.2' below surface, R.R. spike placed beside stone. 9-2-1992, 8-6-1995 R.R. spike found. 7-16-2009 Harrison set at surface.

Sheet 1 of 1	Indiana Tie Card References: IN02_T20NR05E07_44 IN02_T20NR05E08_36	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	CORNER NUMBER 20050706

HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD



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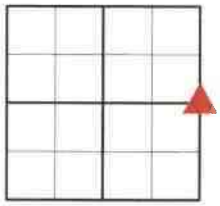


08 - T20N - R05E
SEC. - T - R

FIELD CREW:
Scott Dykes, CST1
Teresa Dudley

DATE: 5-24-2023
FB: 20-5.2 PG: 110-111

GEODETIC CONTROL
Teresa Dudley
DATE: 5-24-2023

JOB NAME:
Master Section Corner

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1802986.697
E: 241400.045
NAVD 88 (GEOID18)
ELEV: 849.4

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 18

DRAWN BY:
Todd Whisman, CST1
DATE: 5-25-2023

MONUMENT: HARRISON FOUND AT SURFACE

Ref.	Distance	Witness Monument Ties
1.	84.19'	Mag nail found 0.5' up on N.E. corner of guardrail post.
2.	62.78'	Mag nail set 1' up on N.W. face of utility pole.
3.	75.50'	PK nail found in top of right of way marker.
4.	146.70'	Mag nail found 0.7' up on N.E. face of utility pole.

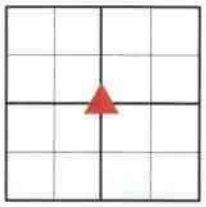
HISTORY

3-2-1854 Stone with "X" perpetuated. 9-30-1997 Harrison set. 7-6-2000, 1-14-2004, 6-13-2007 Harrison found at surface.

Sheet	Indiana Tie Card References:	Hamilton County Surveyor's Office	CORNER NUMBER
1 of 1	IN02_T20NR05E08_44 IN02_T20NR05E09_36	One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	20050806

HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD

N
NTS



09 - T20N - R05E
SEC. - T - R

FIELD CREW:
Scott Dykes

DATE: 9-28-2020
FB: 20-05 PG: 136-137

GEODETIC CONTROL
Todd Whisman, CST1
DATE: 1-28-2021
JOB NAME:
20-05

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1803015.112
E: 244061.768
NAVD 88 (GEOID18)
ELEV: 857.13

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 18

DRAWN BY:
Scott Dykes
DATE: 1-29-2021

MONUMENT: HARRISON FOUND 0.35' DOWN

Ref.	Distance	Witness Monument Ties
1.	19.05'	Mag nail found 1.6' up on West side of fence post
2.	39.20'	Mag nail found 1.2' up on South East side of utility pole
3.	23.66'	Mag nail with HCSO washer found 1.2' up on North East side of utility pole.
4.	26.24'	HCSO red capped rebar found 0.5' South West of road edge

HISTORY

3-2-1859 Stone perpetuated. 11-18-1977 Stone with X found 1' deep, RR spike set at surface. 5-28-1982 Stone with X found 1' down. 5-2-1994 PK found, Stone found 1' down. 8-1995 PK found, Stone found 1' down. 9-4-1997 PK found, Harrison set. 7-6-00, 11-13-2000 Harrison found at surface. 1-14-2004 Harrison found 0.5' down. 3-16-2016 Harrison found 0.5' down.

Sheet	Indiana Tie Card References:		CORNER NUMBER
1 of 1	IN02_T20NR05E09_40	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	20050905

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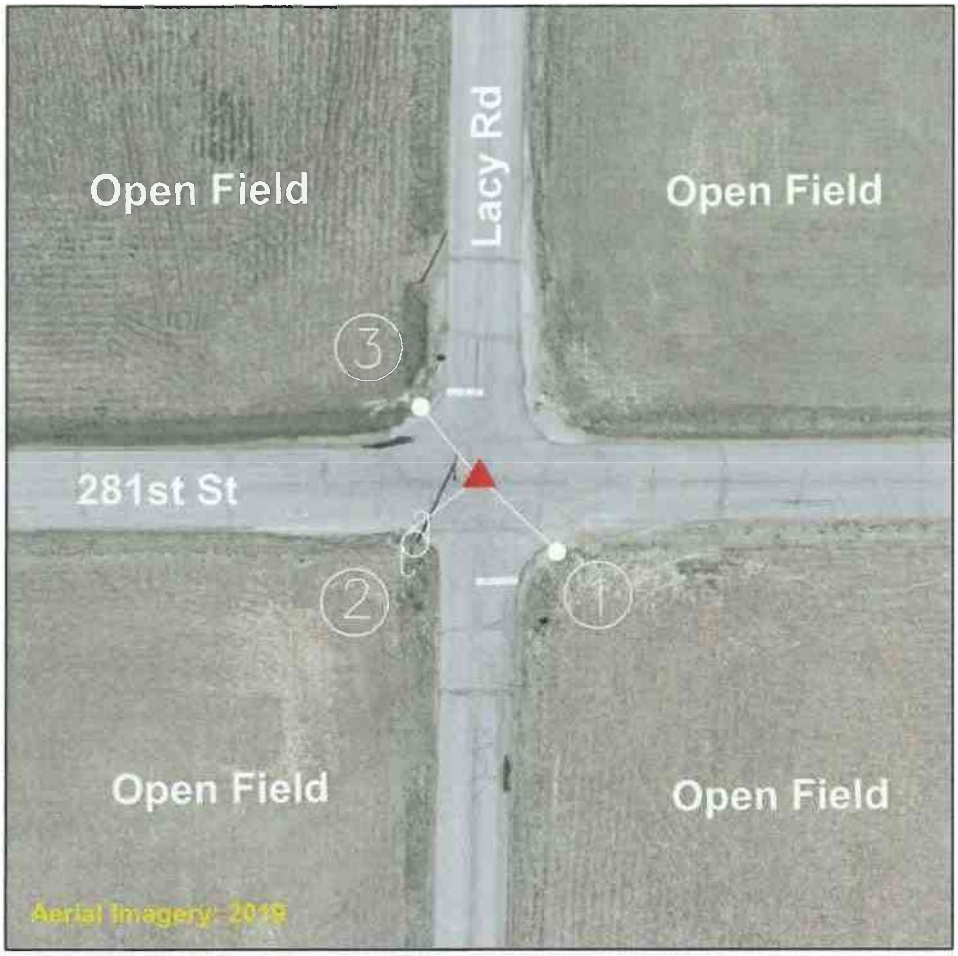
HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD



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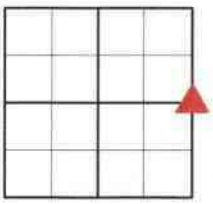


09 - 20N - 05E
SEC. - T - R

FIELD CREW:
Todd Whisman, CST1
Scott Dykes

DATE: 4-22-2020
FB: 20-05 PG: 10-11

GEODETIC CONTROL
BY: Bob King, CST2
DATE: 6-10-2020

MONUMENT: RAILROAD SPIKE FOUND 0.4' BELOW SURFACE

Ref.	Distance	Witness Monument Ties
1.	28.22'	Rebar found off edge of povement.
2.	23.4'	Mag nail with wosher set 1' up on N.W. foce of utility pole.
3.	24.2'	Copped rebor found off edge of povement.

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1803050.945
E: 246727.492
NAVD 88 (GEOID12A)
ELEV: 856.95

NOTE: The Orthometric Height wos determined by RTK GPS observation & Geoid model GEOID 12A

HISTORY

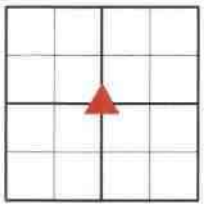
3-2-1854 Stone with "X" perpetuated. 11-18-1972 Roilrood spike set over found stone. 6-9-1982 Roilroad spike set over high point of found stone, no "X" found. 1-5-1994 Railroad spike found. 9-30-1997 Roilroad spike found .2' below surface. 7-6-2000 Roilroad spike found. 1-14-2003 Railroad spike found 5" below surface. 1-14-2003 Roilrood spike found 5" below surfoce.

DRAWN BY:
Todd Whisman, CST1
DATE: 7-30-2020

Sheet	Indiana Tie Card References:		CORNER NUMBER
1 of 1	IN02_T20NR05E09_44 IN02_T20NR05E10_36	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	20050906

HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD

N
NTS



10 - T20N - R05E
SEC. - T - R

FIELD CREW:
Scott Dykes

DATE: 10-5-2020
FB: 20-05 PG:132-133

GEODETIC CONTROL
Todd Whisman, CST1
DATE: 1-28-2021
JOB NAME:
20-05

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1803058.270
E: 249378.874
NAVD 88 (GEOID18)
ELEV: 850.06

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 18

DRAWN BY:
Scott Dykes
DATE: 1-22-2021

MONUMENT: 1" REBAR FOUND 0.35' DOWN

Ref.	Distance	Witness Monument Ties
1.	17.86'	PK nail found 1.3' up on South side of fence post
2.	29.27'	PK nail found 1.5' up on West side of fence post
3.	34.48'	PK nail found 1' up on South West side of fence post
4.	57.40'	Mag nail with HCSO washer set 1' up on North side of utility pole

HISTORY

Stone perpetuated 1864. 9-6-1982 Iron rod 2" below surface. 5-2-1994 Iron pin found no stone. 1-14-2004 Iron pipe found 2" below surface. 1-14-2004 RR spike found 5" down.

Sheet	Indiana Tie Card References:		CORNER NUMBER
1 of 1	IN02_T20NR05E10_40	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	20051005

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HAMILTON COUNTY SURVEYOR'S OFFICE
CORNER RECORD

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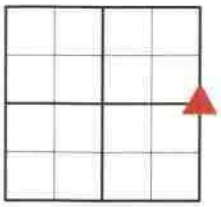

10 - T20N - R05E
SEC. - T - R

FIELD CREW:
Bob King, CST2
Todd Whisman, CST1
Scott Dykes
DATE: 1-7-2021
FB: 20-05 PG: 94-95

GEODETIC CONTROL
Bob King, CST2
DATE: 1-21-2021
JOB NAME:
20-05

SPC Indiana East 1301
NAD 83 US Survey ft.
N: 1803063.797
E: 252030.272
NAVD 88 (GEOID18)
ELEV: 852.838

NOTE: The Orthometric Height was determined by RTK GPS observation & Geoid model GEOID 18

DRAWN BY:
Scott Dykes
DATE: 1-27-2021

MONUMENT: HARRISON FOUND 0.1' DOWN

Ref.	Distance	Witness Monument Ties
1.	45.30'	Mag nail with HCSO washer set 0.8' up on Northwest face of the utility pole
2.	46.90'	PK nail found 0.9' up on North face of utility pole
3.	53.73'	Mag nail with HCSO washer set on South face of mailbox post

HISTORY

3-20-1967 Stone with + found 14" down. 7-21-1978 PK nail found.
6-1-1967 Mag nail found.

Sheet	Indiana Tie Card References:		CORNER NUMBER
1 of 1	IN02_T20NR05E10_44 IN02_T20NR05E11_36	Hamilton County Surveyor's Office One Hamilton County Square, Suite 188 Noblesville, IN 46060 Surveyor@HamiltonCounty.IN.gov 317-776-8495	20051006

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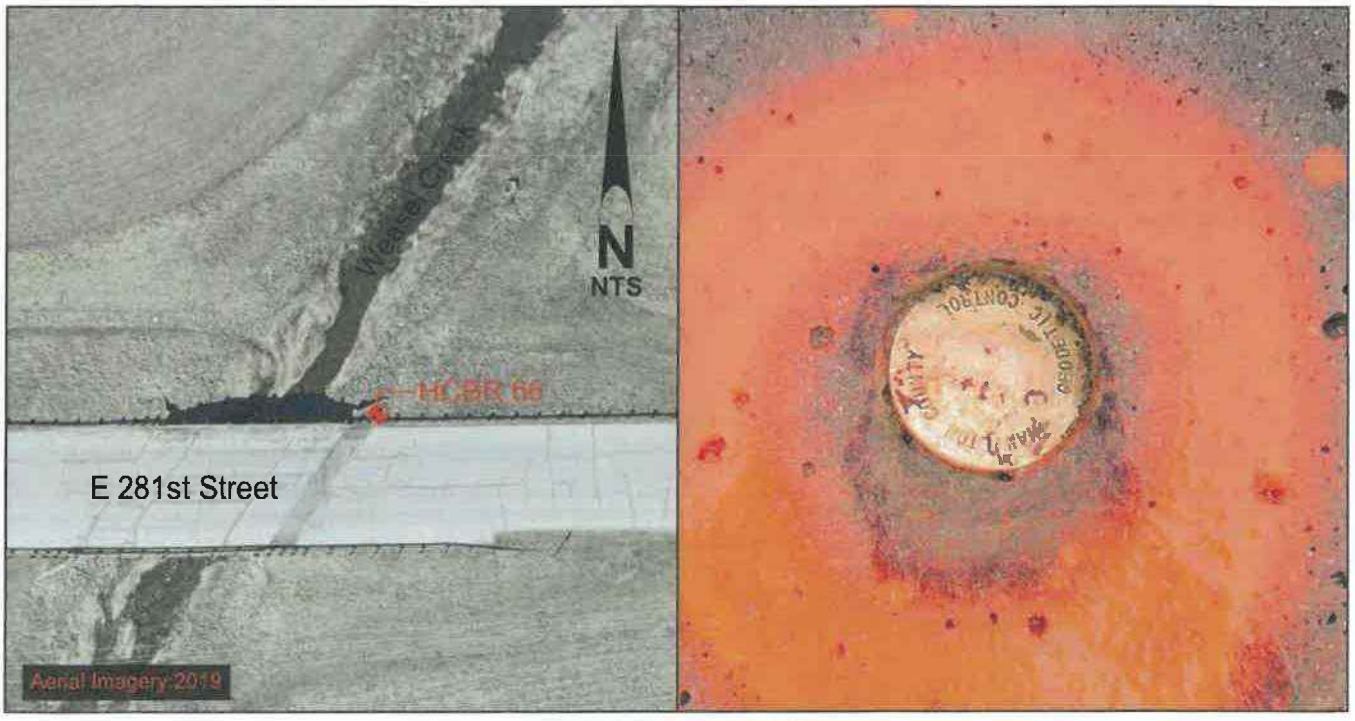
HAMILTON COUNTY SURVEYOR'S OFFICE
VERTICAL CONTROL

STATION NAME: HCBR 66
Type of Monument: Hamilton County Geodetic Control Disk

Organization:
Hamilton County Surveyor's Office
Section: 9 Township: 20 North Range: 5 East
Civil Township: White River
USGS Quad: OMEGA

DESCRIPTIVE LOCATION:
2" Ø Brass Disk stamped Hamilton County Geodetic Control. Set in a 10" x 10" concrete column, 1.7' above grade. Located neer the Northeast corner of Bridge 66 and 19' North of 281st Street, and 305' east of Rulon Road. Year Established 2002.

Current Field Verification	Reported / Published
DATE: 6-19-2020	DATE: 6-13-2002
FIELD CREW: Steve Fesmire CST	FIELD CREW: Rodney Kelly Jared Henry
SPC Indiana East 1301	SPC Indiana East 1301
NAD 83 US Survey ft.	NAD 83
N: 1803008.973	N:
E: 241703.019	E:
NAVD 88 (GEOID12A)	NGVD 29
ELEV: 851.22	ELEV: 851.75
NOTE: The Orthometric Height was determined by GPS (RTK) observation & Geoid model GEOID 12A	NOTE:The Orthometric Height was established by three wire level circuit / see attachments



Hamilton County Surveyor's Office
One Hamilton County Square, Suite 188 Noblesville, IN 46060
Surveyor@HamiltonCounty.IN.gov
317-776-8495

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White River - #20
Photo #7 & 8
1/5/07 3:4

WYATT JOHNSON P.E. ,L.S., L.L.C.

SURVEYING AND ENGINEERING

COPY

BM# HBBR-66

BRIDGE #66

June 18, 2002

George R. Harvey & Son, Inc.
964 N State Road 39
Danville, IN 46122

To Whom It May Concern:

Following is the information requested by George Harvey.

A three-wire level circuit was performed on the morning of June 13, 2002 by Rodney Kelly and Jared Henry., under the daily supervision of Wyatt Johnson, a Land Surveyor licensed in compliance with the laws of the State of Indiana. Weather conditions were 65 degrees and slightly humid with no haze and no heat waves. Back sights and foresights were held to 200' or less. The description of the Benchmark was taken from blueprints from USI Consultants, 8415 E. 56th Street, Indianapolis, IN 46216 given to us by George F. Harvey of George R. Harvey and Son, Inc.

Existing Benchmark Information

USC & GS BM Stamped "J-205" in top of SW end of NE Abutment of 30' conc. Bridge carrying Rulon Rd over Weasel Creek. per USI plans: Adj. Elev. = 849.32'

This was found by us to be undisturbed and in good standing.

New Bench Mark Description

A 2" diameter brass cap labeled "Hamilton County Geodetic Control" in a 10"x10" square concrete column standing 1.7' above grade found to be approximately 19' north of the centerline of 281st St. at the north east corner of a newly constructed bridge carrying 281st over Weasel Creek. Said point being approximately 303' east of a Harrison Monument found at the intersection of Rulon Rd. E108 and 281st St.

Elev. = 851.75'

Level Notes consisted of 6 setups with a closure error of 0.01' = 0.0017' per setup.

Sincerely,
RODNEY KELLY, S.I.T.

Wyatt Johnson

Wyatt Johnson, P.E., L.S.
License No. S0302

WYATT JOHNSON REGISTERED NO. S0302 STATE OF INDIANA LAND SURVEYOR

RK

555 MARKET RD. • TIPTON IN • 46072
PHONE: 765-675-6455 • FAX: 765-675-7635
RODNEYKELLY@INSIGHTBB.COM

THIS IS NOT A PERMIT

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

DNR#: ER-25974

Request Received: September 27, 2023

Requestor:
Jaime Byerly
RQAW Environmental
8770 North Street, Suite 110
Fishers, IN 46038

Project:
East 281st Street road reconstruction from SR 19 / Cicero Road to SR 213 / Walnut Grove Road, including lane widening, small structure replacements, and a potential bridge (NBI 2900060) replacement over Weasel Creek but avoiding all work to the bridge (NBI 2900058) over Cicero Creek; Des #2003031

County/Site Info: Hamilton 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 will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1 for work proposed in the floodway of Weasel Creek. Please submit a copy of this letter with the permit application.

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

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

A) Stream Crossing Design
Bridges are preferred over culverts, and three-sided culverts are preferred over box or pipe culverts. Multiple culverts or culverts with multiple openings are not recommended for approval. These types of structures are often problematic for fish and wildlife passage as they tend to accumulate debris and become blocked. If box and pipe culverts are used, the culvert bottoms should be sumped a minimum of 6” (or 20% of the culvert height or diameter, whichever is greater up to a maximum of 2’) below the stream bed elevation. Sumping is not required for bridges or three-sided culverts. Crossings must span the entire channel width (a minimum of 1.2 times the ordinary high-water mark width). Crossings must maintain the natural stream substrate within the structure (natural stream substrate must be replaced in sumped box and pipe culverts up to the existing flowline). Scour protection at the inlet and outlet must not extend above the existing flowline elevation.

Stream depth, channel width and water velocities in the crossing structure during low-flow conditions must approximate those in the natural stream channel.

The new/replacement/rehabilitated crossing structure, and any bank stabilization under or around the structure, 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. White-tailed deer passage must be incorporated into all new structures where no structure previously existed. Minimum structure dimensions for white-tailed deer passage are 20 feet of width clearance (overall span of the structure) and 8 feet of height clearance measured from the ordinary high-water mark (OHWM). Bank lines must be maintained or restored within structures to allow for wildlife passage above the OHWM. 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 several techniques and materials for incorporating wildlife passage into the design of a crossing structure if maintaining or restoring banklines is not possible. Coordination with a Regional Environmental Biologist to address wildlife passage issues before submitting a permit application (if required) is encouraged to avoid delays in the permitting process. The 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/ccrc/tool/fishxing-fish-passage-learning-systems
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

B) 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

C) Pavement Rehabilitation

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

D) Clearing Trees Within a Floodway

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

Impacts to non-wetland forest of one (1) acre or more in a rural or urban area should be mitigated at a minimum 2:1 ratio based on area of impact. Impacts to non-wetland forest under one (1) acre but at least 0.10

acre in a rural or urban area should be mitigated at a minimum 1:1 ratio based on area of impact. Impacts under 0.10 acre in a rural area typically do not require mitigation or additional plantings beyond seeding and stabilizing disturbed areas, though there are exceptions for high quality habitat sites. Impacts under 0.10 acre in an urban area should be mitigated by replacing trees that are 10” diameter-at-breast height (dbh) or greater by planting five trees, 1” to 2” in dbh, for each tree which is removed that is 10" dbh or greater. Seeding and stabilizing disturbed areas is required regardless of the impact amount and location. If floodway impacts to forested wetland and non-wetland habitat areas combine to be 0.10 acres or more, mitigation should be done and coordinated with the biologist, as needed.

E) Clearing Trees Outside a Floodway

The Division of Fish and Wildlife recommends avoiding removing trees along linear infrastructure to the greatest extent possible and replacing trees that must be removed. Trees along roadways and trails are important to fish and wildlife resources in urban and rural areas. Trees also provide millions of dollars of tangible benefits to Indiana communities. Their shade and beauty contribute to the quality of life. They provide significant increases in real estate values, create attractive settings for commercial businesses, and improve community neighborhood appeal. Trees decrease energy consumption by providing shade and acting as windbreaks. They reduce water treatment costs and impede soil erosion by slowing the runoff of stormwater. Trees also cool the air temperature, cleanse pollutants from the air, and produce oxygen while absorbing carbon dioxide. Trees are an integral component of the urban and rural environment. Proactively managing and maintaining a tree population will ultimately maximize the benefits afforded by their aesthetic and ecological functions. The following links give a good overview of the benefits of a street tree program and how to select the right species to avoid the negative impacts of non-native invasive species such as the common and popular Bradford pear: https://www.in.gov/dnr/forestry/forestry-publications-and-presentations/ (scroll down to the Community & Urban Forestry section).

F) Street Lighting

The need for new lighting was not mentioned in the submitted information but could potentially be needed in certain areas. Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. The Division of Fish and Wildlife strongly encourages visiting the International Dark-Sky Association's website to learn more about the potential negative impacts of improperly selected LED lighting systems, if required: https://www.darksky.org/our-work/lighting/lighting-for-citizens/led-guide/

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

1. Revegetate all bare and disturbed areas that are not currently mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in currently mowed areas only. A native herbaceous seed mixture must include at least 5 species of grasses and sedges and 5 species of wildflowers.
2. Minimize and contain within the project limits in-channel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana Bat or Northern Long-eared Bat roosting (3 inches or greater diameter-at-breast height, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
6. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
7. Do not use broken concrete as riprap.
8. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
9. Minimize the movement of resuspended bottom sediment from the immediate project area.

10. Do not deposit or allow construction/demolition materials or debris to fall or otherwise enter the waterway. Any incidental fallen material or debris in the waterway must be removed within 24 hours using best management practices, particularly lifting material out of the waterway and not dragging it across the streambed whenever possible.
11. 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.
12. 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.
13. Plant five trees, 1 inch to 2 inches in diameter-at-breast height, for each tree which is removed that is 10 inches or greater in diameter-at-breast height.

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

Rachel Van Voorhis
Rachel Van Voorhis
Environmental Coordinator
Division of Fish and Wildlife

Date: October 27, 2023

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

October 26, 2023

Jaime Byerly
RQAW Corporation
8770 North Street, Suite 110
Fishers, Indiana 46038

Dear Ms. Byerly:

The proposed roadway project in Hamilton County, Indiana (Des. No. 2003031), as referred to in your letter received on September 27, 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: 2023.10.26 09:50:29 -04'00'

JOHN ALLEN
State Soil Scientist

Enclosers

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **9/27/23**	4. Sheet 1 of **1**
1. Name of Project **DES2003031 281st Street Roadway**	5. Federal Agency Involved **Federal Highway Administration**	
2. Type of Project **Rehabilitation (2003031)**	6. County and State **Hamilton County, Indiana**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form **JRA**
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐		4. Acres Irrigated | Average Farm Size **218 ac**
5. Major Crop(s) **Corn**	6. Farmable Land in Government Jurisdiction **Acres: 175655** **% 68**	7. Amount of Farmland As Defined in FPPA **Acres: 169413** **% 66**
8. Name Of Land Evaluation System Used **LESA**	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS **10/26/23**

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment : Corridor 1	Corridor 2	Corridor 3	Corridor 4
A. Total Acres To Be Converted Directly	33.5			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor	33.5	0.0	0.0	0.0
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	46.9			
B. Total Acres Statewide And Local Important Farmland	0.0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.0270			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	45.0			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	86			
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	5			
2. Perimeter in Nonurban Use — 10	2			
3. Percent Of Corridor Being Farmed — 20	10			
4. Protection Provided By State And Local Government — 20	0			
5. Size of Present Farm Unit Compared To Average — 10	7			
6. Creation Of Nonfarmable Farmland — 25	5			
7. Availablility Of Farm Support Services — 5	5			
8. On-Farm Investments — 20	10			
9. Effects Of Conversion On Farm Support Services — 25	0			
10. Compatibility With Existing Agricultural Use — 10	5			
TOTAL CORRIDOR ASSESSMENT POINTS — 160	49	0	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	86			
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	49	0	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260	135	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A		**9/27/23**	YES ☐ NO ☑

5. Reason For Selection:

Site A is the only location where the project is converting farmland.

Signature of Person Completing this Part: **Jenna Garrison** DATE **1/16/24**

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

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: 08/08/2024 14:40:02 UTC
Project Code: 2023-0133719
Project Name: 281st Street Roadway Project in Hamilton County (Des. No. 2003031)

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

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

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

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

Attachment(s):

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

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2023-0133719
Project Name: 281st Street Roadway Project in Hamilton County (Des. No. 2003031)
Project Type: Road/Hwy - Maintenance/Modification
Project Description: The 281st Street Roadway Project (Des. No. 2003031) is located along East 281st Street between SR 19 and SR 213 in Hamilton County, Indiana.

Two bridges are within the project area. NBI No. 2900058 is a 3-span, 200-foot-long, prestressed concrete continuous bridge that carries East 281st Street over Cicero Creek. NBI No. 2900060 is a 49-foot-long, wood bridge that carries East 281st Street over Weasel Creek. One culvert is within the project area. The 4-foot-diameter CMP carries East 281st Street over an UNT to Cicero Creek and is located approximately 225 feet east of Cicero Creek (the CMP does not have an assigned structure number). Several smaller structures (12 to 15 inches in diameter) are also located throughout the project area.

The project would include the following:
• Widening the travel lanes to 12-foot-wide and shoulders to 3-foot-wide paved.
• Constructing curb and gutter with storm sewer inlets to minimize impacts to properties, particularly within the Town of Omega.
• Conducting full-depth or partial-depth reconstruction based on superelevations, cross slopes, and existing grades / elevations.
• Reconstructing drives and roadway approaches to match the proposed roadway width.
• Constructing roadside ditches to promote positive drainage away from the roadway and adjacent properties.
• Replacing all small structures.
• Potentially replacing the bridge that carries East 281st Street over Weasel Creek (NBI No. 2900060).
• Avoiding all work to the bridge that carries East 281st Street over Cicero Creek (NBI No. 2900058). This would be a pavement exempted area.
• Acquiring approximately 59 acres of permanent right-of-way and 5 acres of temporary right-of-way. The proposed permanent right-of-way would expand to approximately 40 feet from the roadway centerline.
• Clearing / trimming trees.
• Maintaining traffic using phased construction and local detours. Access to all properties would be maintained during construction.

A review of the USFWS database by the INDOT Greenfield District on May 15, 2023, did not indicate the presence of endangered bat species, in or within, 0.50 mile of the project area. A field visit was conducted on

August 8, 2023, by RQAW. All structures within the project area were examined. Bats, or evidence of bats, were not seen or heard. Suitable summer habitat was observed within and adjacent to the project area.

The project would involve clearing and trimming trees. The dominant tree species consist of green ash (Fraxinus pennsylvanica) and red maple (Acer rubrum). Approximately 3.35 acres of tree clearing / trimming would be needed. All trees would be removed within 100 feet of the existing roadway. Tree clearing / trimming would be performed during the bat inactive season (October 1 through March 31).

Temporary lighting may be used during construction. The project would not install new or replace existing permanent lighting. Construction is anticipated to begin in spring of 2026.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.19796455,-85.98697573577809,14z

Counties: Hamilton County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 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.

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered

BIRDS

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

INSECTS

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

CRITICAL HABITATS

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

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

BALD & GOLDEN EAGLES

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

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

---

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

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

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

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

PROBABILITY OF PRESENCE SUMMARY

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

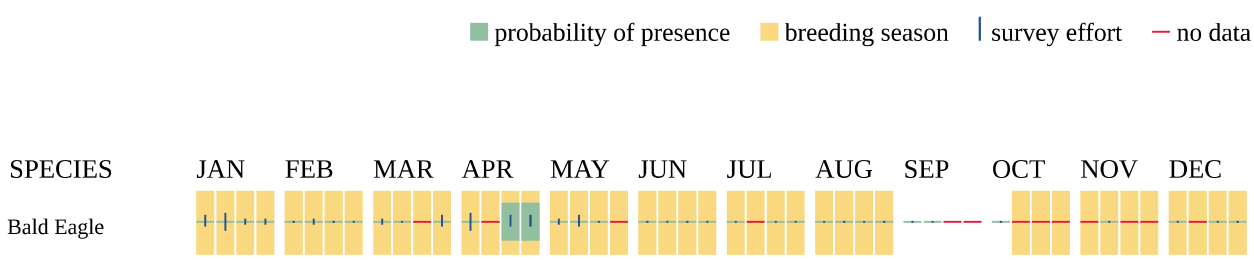
Probability of Presence (▪)

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

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

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

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



Non-BCC
Vulnerable

Additional information can be found using the following links:

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

MIGRATORY BIRDS

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

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

---

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

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

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

NAME	BREEDING SEASON
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Grasshopper Sparrow *Ammodramus savannarum perpallidus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
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
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Semipalmated Sandpiper *Calidris pusilla* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9603	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (■)

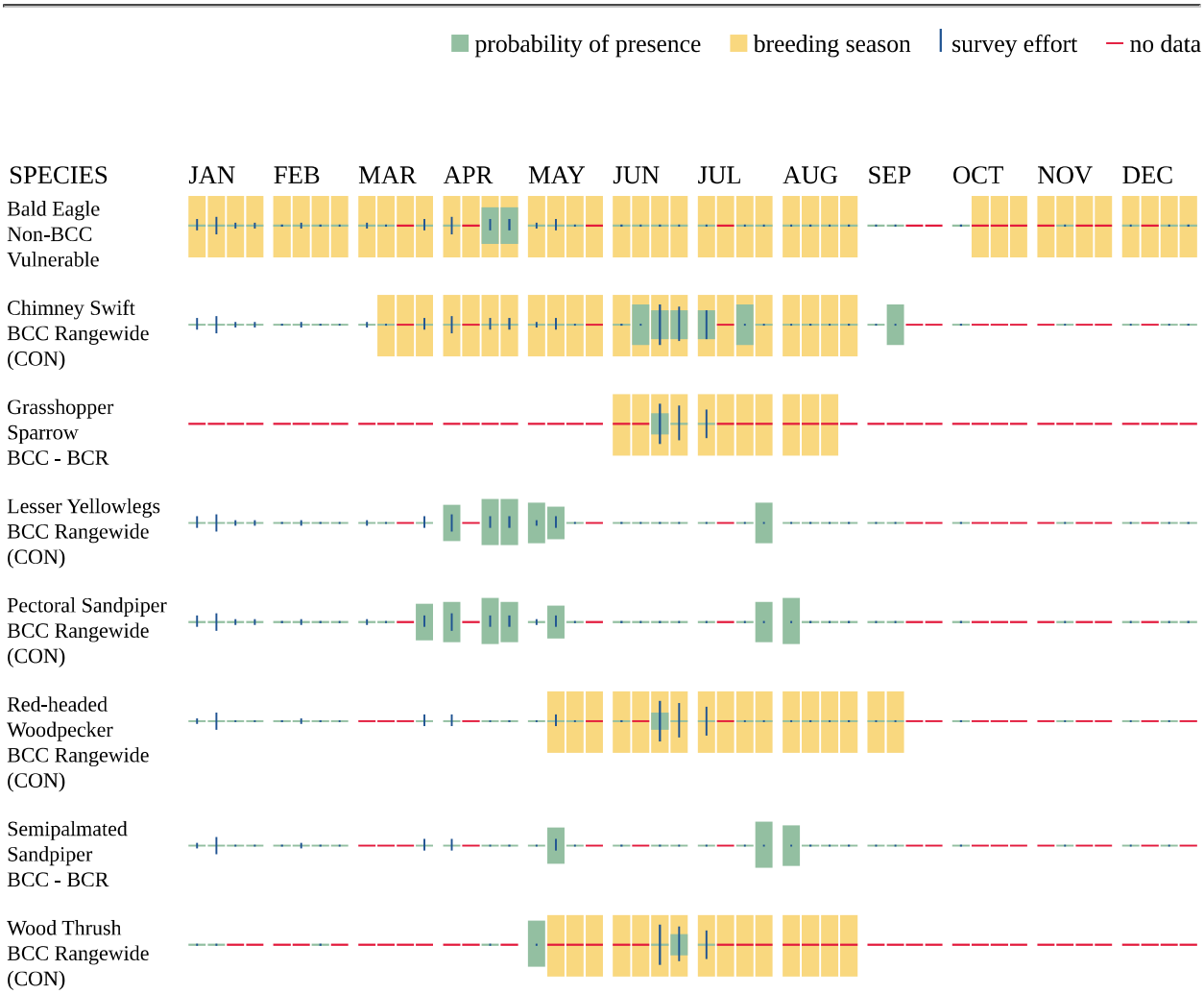
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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

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



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

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

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

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

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: RQAW
Name: Harlan Ford
Address: 8770 North St., Suite 110
City: Fishers
State: IN
Zip: 46038
Email hford@rqaw.com
Phone: 4234585979

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

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: October 03, 2023
Project code: 2023-0133719
Project Name: 281st Street Roadway Project in Hamilton County (Des. No. 2003031)

Subject: Concurrence verification letter for the '281st Street Roadway Project in Hamilton County (Des. No. 2003031)' 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 October 03, 2023 to verify that the **281st Street Roadway Project in Hamilton County (Des. No. 2003031)** (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
- 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

281st Street Roadway Project in Hamilton County (Des. No. 2003031)

DESCRIPTION

The 281st Street Roadway Project (Des. No. 2003031) is located along East 281st Street between SR 19 and SR 213 in Hamilton County, Indiana.

Two bridges are within the project area. NBI No. 2900058 is a 3-span, 200-foot-long, prestressed concrete continuous bridge that carries East 281st Street over Cicero Creek. NBI No. 2900060 is a 49-foot-long, wood bridge that carries East 281st Street over Weasel Creek. One culvert is within the project area. The 4-foot-diameter CMP carries East 281st Street over an UNT to Cicero Creek and is located approximately 225 feet east of Cicero Creek (the CMP does not have an assigned structure number). Several smaller structures (12 to 15 inches in diameter) are also located throughout the project area.

The project would include the following:
• Widening the travel lanes to 12-foot-wide and shoulders to 3-foot-wide paved.
• Constructing curb and gutter with storm sewer inlets to minimize impacts to properties, particularly within the Town of Omega.
• Conducting full-depth or partial-depth reconstruction based on superelevations, cross slopes, and existing grades / elevations.
• Reconstructing drives and roadway approaches to match the proposed roadway width.
• Constructing roadside ditches to promote positive drainage away from the roadway and adjacent properties.
• Replacing all small structures.
• Potentially replacing the bridge that carries East 281st Street over Weasel Creek (NBI No. 2900060).
• Avoiding all work to the bridge that carries East 281st Street over Cicero Creek (NBI No. 2900058). This would be a pavement exempted area.
• Acquiring approximately 59 acres of permanent right-of-way and 5 acres of temporary right-of-way. The proposed permanent right-of-way would expand to approximately 40 feet from the roadway centerline.
• Clearing / trimming trees.
• Maintaining traffic using phased construction and local detours. Access to all properties would be maintained during construction.

A review of the USFWS database by the INDOT Greenfield District on May 15, 2023, did not indicate the presence of endangered bat species, in or within, 0.50 mile of the project area. A field visit was conducted on August 8, 2023, by RQAW. All structures within the project area were examined. Bats, or evidence of bats, were not seen or heard. Suitable

summer habitat was observed within and adjacent to the project area.

The project would involve clearing and trimming trees. The dominant tree species consist of green ash (Fraxinus pennsylvanica) and red maple (Acer rubrum). Approximately 3.35 acres of tree clearing / trimming would be needed. All trees would be removed within 100 feet of the existing roadway. Tree clearing / trimming would be performed during the bat inactive season (October 1 through March 31).

Temporary lighting may be used during construction. The project would not install new or replace existing permanent lighting. Construction is anticipated to begin in spring of 2026.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.19796455,-85.98697573577809,14z

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.

   Yes

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

    No

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

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

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

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

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

    No

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

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

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

    No

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

    Yes

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

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

    B) During the inactive season

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

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

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

    No

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

    Yes

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

    B) During the inactive season

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

    Yes

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

    No

20. Are *all* trees that are being removed clearly demarcated?

    Yes

21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

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

    No

23. Does the project include slash pile burning?

    No

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

    Yes

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

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

    Yes

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

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

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

    Yes

    SUBMITTED DOCUMENTS

    - *Assessment over Cicero Creek-print.pdf https://ipac.ecosphere.fws.gov/project/UF54IEL7KJEMDCDMELWVGVPJCQ/projectDocuments/132419569*
    - *Assessment over Weasel Creek-print.pdf https://ipac.ecosphere.fws.gov/project/UF54IEL7KJEMDCDMELWVGVPJCQ/projectDocuments/132419570*

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

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

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

    No

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

    No

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

    No

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

    Yes

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

    Yes

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

    No

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

    No

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

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

    Yes

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

    No

36. Are the project activities that are not associated with habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

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

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

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

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

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

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

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

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

    Yes

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

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

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

    Yes

42. **Tree Removal AMM 3**
    Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

    Yes

43. **Tree Removal AMM 4**
    Can the project avoid cutting down/removal of *all* (1) **documented**[1] Indiana bat or NLEB roosts[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

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

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

    Yes

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

    Yes

PROJECT QUESTIONNAIRE

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

   N/A

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

   N/A

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

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

   3.35

4. Please describe the proposed bridge work:

   Potentially replacing the bridge that carries East 281st Street over Weasel Creek (NBI No. 2900060).
   Replacing all small structures (12 to 15 inches in diameter) located throughout the project area.

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

   Spring 2026

6. Please enter the date of the bridge assessment:

   August 8, 2023

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

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

TREE REMOVAL AMM 2

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

TREE REMOVAL AMM 3

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

TREE REMOVAL AMM 4

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

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.

TREE REMOVAL AMM 1

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

LIGHTING AMM 1

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

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

This key was last updated in IPaC on July 27, 2023. Keys are subject to periodic revision.

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

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

IPAC USER CONTACT INFORMATION

Agency: Indiana Department of Transportation
Name: Delaney Weston
Address: 32 S Broadway
City: Greenfield
State: IN
Zip: 46140
Email dweston@indot.in.gov
Phone: 3174673901

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

Structure No. Per Plans	Existing Size/Type and Length	Evidence of Bats?	Date of Assessment
100	18'' CMP (135 lft.)	NO	08/08/2023
101	36'' CMP (36 lft.)	NO	08/08/2023
102	60'' CMP (71 lft.)	NO	08/08/2023
103	24'' CMP (30 lft.)	NO	08/08/2023
104	15'' CMP (50 lft.)	NO	08/08/2023
105	15" CMP (27 lft.)	NO	08/08/2023
201	15" CMP (43 lft.)	NO	08/08/2023
202	15" CMP (39 lft.)	NO	08/08/2023
206	15'' CMP (56 lft.)	NO	08/08/2023
208	15'' CMP (64 lft.)	NO	08/08/2023
209	15'' CMP 37 (lft.)	NO	08/08/2023
211	15'' CMP (31 lft.)	NO	08/08/2023
212	15'' CMP (31 lft.)	NO	08/08/2023
213	15'' CMP (158 lft.)	NO	08/08/2023
214	15'' CMP (111 lft.)	NO	08/08/2023
215	15'' CMP (31 lft.)	NO	08/08/2023
216	18'' x 36'' BOX (39 lft.)	NO	08/08/2023
217	15'' CMP (29 lft.)	NO	08/08/2023
218	18'' x 72'' BOX (46 lft)	NO	08/08/2023
219	18'' CMP (19 lft.)	NO	08/08/2023
222	15'' CMP (36 lft)	NO	08/08/2023
223	15'' CMP (29 lft.)	NO	08/08/2023
224	30'' CMP (64 lft.)	NO	08/08/2023
225	18'' CMP (43 lft.)	NO	08/08/2023
226	30'' CMP (63 lft.)	NO	08/08/2023
227	18'' CMP (57 lft.)	NO	08/08/2023
N/A	60'' CMP TBD	NO	08/08/2023
N/A	36'' CMP TBD	NO	08/08/2023
N/A	30'' CMP TBD	NO	08/08/2023

N/A	24'' CMP TBD	NO	08/08/2023
N/A	24'' CMP TBD	NO	08/08/2023
N/A	24'' CMP TBD	NO	08/08/2023
N/A	15" CMP TBD	NO	08/08/2023
N/A	15" CMP TBD	NO	08/08/2023
N/A	15" CMP TBD	NO	08/08/2023
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N/A	15" CMP TBD	NO	08/08/2023
N/A	15" CMP TBD	NO	08/08/2023
N/A	15" CMP TBD	NO	08/08/2023
N/A	15" CMP TBD	NO	08/08/2023

Categorical Exclusion

Appendix D

Section 106 of the National Historic Preservation Act (NHPA)

Minor Projects PA Project Submittal and Assessment Form

SECTION 1

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

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

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

Original Submission Date: 07/17/2023 **Amended Submission Date*:**

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

Submitted By (Provide Name and Firm/Organization):

Kyle Boot
RQAW
8770 North St., Ste. 110
Fishers, IN 46028
O: 317.588.1762
kboot@rqaw.com

Project Designation Number: 2003031

Route Number: 281st Street

Feature crossed (if applicable):

City/Township: Jackson and White River Townships **County:** Hamilton

Project Description: The proposed road rehabilitation project is located along 281st Street and extends from State Road (SR) 19/Cicero Road to SR 213/Walnut Grove Road in Hamilton County, Indiana. 281st Street consists of 9- to 10-foot-wide travel lane and a 0- to 4-foot-wide gravel shoulder in each direction. Design and construction of the project are anticipated to be completed in two phases. The first phase (west) is anticipated between SR 19/Cicero Road and Rulon Road. The second phase (east) is anticipated between Rulon Road and SR 213/Walnut Grove Road. The proposed project is anticipated to involve the following:

- Widen the travel lanes to 12-foot-wide with 3-foot-wide paved shoulders;
- Construct curb and gutter (with storm sewer inlets) as needed to minimize impacts to some properties, particularly in the unincorporated town of Omega;
- Conduct full-depth and partial-depth reconstruction throughout the project corridor as needed based on superelevations, cross slopes, and existing grades/elevations;
- Reconstruct drives and approaches match the proposed roadway width;
- Reconstruct roadside ditches along the roadway where existing conditions allow;
- The existing pipes and small structures will be evaluated for extension, widening, or replacement. It is anticipated all pipes within the project corridor will be replaced.
- The bridge over Cicero Creek (Structure No. 2900058) and the bridge over Weasel Creek (Structure No. 2900066) will be excluded from the project.

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

The proposed curb work will occur west of the Structure No. 2900058 (bridge over Cicero Creek) for approximately 250 feet and within the unincorporated town of Omega. Please see the attached aerial map with these areas called out.

For bridge or small structure projects, please list feature crossed, structure number, NBI number, and structure type:

Note: The bridge over Cicero Creek (Structure No. 2900058) and the bridge over Weasel Creek (Structure No. 2900066) will be exempted from the project.

Small Structures (including drive pipes):

Structure Number on Plans / Asset No. / Location	Existing Size / Type	Proposed Structure Size / Type	Work Type	Phase	Existing Photo
100 / CLV-61658 East of SR 19	18" CMP	Approx. 21'' CMP or RCP	Replacement	1	1 & 2
101 Approx. 800 feet east of SR 19	36" CMP	Approx. 36'' X 48'' BOX	Replacement	1	3 & 4
102 East of Cicero Creek	60" CMP	Approx. 84'' CMP or RCP	Replacement	1	8 & 9
103 Approx. 575 feet west of Crooked Creek Ave.	24" CMP	Approx. 36'' X 72''	Replacement	1	14 & 15
104 Approx. 850 feet east of Crooked Creek Ave.	15" CMP	Approx. 18" CMP or RCP	Replacement	1	16 & 17
105 Approx. 1,750 feet east of Crooked Creek Ave.	15" CMP	Approx. 18" CMP or RCP	Replacement	1	18 & 19
201 Field entrance drive pipe approx. 700 feet east of SR 19	N/A	Approx. 15" CMP or RCP	New	1	N/A
202 Drive pipe approx. 950 feet east of SR 19	Unidentifiable drive pipe	Approx. 15" CMP or RCP	Replacement	1	No photo
206 Drive pipe for 28089 Ott Road	Approx. 15" CMP	Approx. 15'' CMP or RCP	Replacement	1	5 & 6
208 Drive pipe for 8750 E 281st Street	Approx. 15" Plastic Pipe	Approx. 15'' CMP or RCP	Replacement	1	10 & 11
209 Drive pipe to utility approx. 1,550 feet west of Crooked Creek Rd.	Approx. 8" CMP	Approx. 15'' CMP or RCP	Replacement	1	12 & 13
211 Drive pipe for 8915 E 281st Street	N/A	Approx. 15'' CMP or RCP	New	1	N/A
212 Drive pipe for 8910 E 281st Street	Approx. 12" CMP	Approx. 15'' CMP or RCP	Replacement	1	41
213 Pipe carrying Whistler Rd.	N/A	Approx. 15'' CMP or RCP	New	1	N/A

214 Pipe carrying Crooked Creek Rd.	N/A	Approx. 15'' CMP or RCP	New	1	N/A
215 Field entrance drive pipe approx. 750 feet east of Crooked Creek Rd.	N/A	Approx. 15'' CMP or RCP	New	1	N/A
216 Field entrance drive pipe approx. 810 feet east of Crooked Creek Rd.	N/A	Approx. 18'' x 36'' BOX	New	1	N/A
217 Drive pipe for 9590 E 281st Street	N/A	Approx. 15'' CMP or RCP	New	1	N/A
218 Field entrance drive pipe approx. 1,350 feet west of Startsman Rd.	N/A	Approx. 18'' x 72'' BOX	New	1	N/A
219 Drive pipe for 9811 E 281st Street	12" CMP	Approx. 18'' CMP or RCP	Replacement	1	20 & 21
222 Drive pipe for 10220 E 281st Street	12" CMP	Approx. 15'' CMP or RCP	Replacement	1	22 & 23
223 Drive pipe for 10220 E 281st Street	12" CMP	Approx. 15'' CMP or RCP	Replacement	1	24 & 25
224 Field entrance drive pipe approx. 680 feet west of Rulon Rd.	N/A	Approx. 30'' CMP or RCP	New	1	N/A
225 Drive pipe for 10701 E 281st Street	N/A	Approx. 18'' CMP or RCP	New	1	N/A
226 Field entrance drive pipe approx. 610 feet west of Rulon Rd.	N/A	Approx. 30'' CMP or RCP	New	1	N/A
227 Drive pipe for 10701 E 281st Street	N/A	Approx. 18'' CMP or RCP	New	1	N/A
N/A Rulon Rd. north of 281st Street	Approx. 48" Concrete Box	Approx. 60" CMP or RCP	Replacement	2	26 & 27
N/A Rulon Rd. south of 281st Street	18" Concrete Pipe	Approx. 36" CMP or RCP	Replacement	2	28 & 29
N/A Crossing pipe between Hill Rd. and Lacy Rd.	inlet, unknown pipe	Approx 30" CMP or RCP	Replacement	2	34
N/A Crossing pipe approx. 1,100 feet east of Lacy Rd.	Approx 18" CMP	Approx. 24" CMP or RCP	Replacement	2	35 & 36
N/A Crossing pipe approx. 1,750 feet east of Lacy Rd.	Approx 18" CMP	Approx. 24" CMP or RCP	Replacement	2	37 & 38
N/A Crossing pipe approx. 2,250 feet east of Lacy Rd.	Approx 18" CMP	Approx. 24" CMP or RCP	Replacement	2	39 & 40

N/A Field entrance drive pipe approx. 860 feet east of Rulon Rd.	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 10970 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 11168 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Field entrance drive pipe in the northeast quadrant of the Hill Road intersection	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 11370 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 11550 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 11608 Lacy Road	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 11911 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 12110 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Field entrance drive pipe approx. 2,650 feet east of Lacy Road	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 12395 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Drive pipe at 12413 E 281st Street	N/A	Approx. 15" CMP or RCP	New	2	N/A
N/A Field entrance drive pipe approx. 1,500 feet west of SR 213	N/A	Approx. 15" CMP or RCP	New	2	N/A

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:
Temporary ROW: approximately 5.0 acres
Permanent ROW: approximately 59.0 acres
ROW is anticipated from every parcel within the project corridor due to shoulder widening and ditch grading.

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

Archaeology (check one):

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

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

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

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

Condition A (Archaeological Resources)

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

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

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

Condition B (Above-Ground Resources)

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

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

Condition A (Archaeological Resources)

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

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

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

Condition B (Above-Ground Resources)

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

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

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

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):

Rusche, Michael

2023 A Phase Ia Archaeological Reconnaissance for the Proposed Rehabilitation of 281st Street from State Road 19 to State Road 213 in Hamilton County, Indiana (INDOT Des. No. 2003031). Cultural Resource Analysts, Inc., Evansville. 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 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) list for Hamilton County. No listed resources are located within 0.25 mile of the project area, a distance that serves as an adequate area of potential effects given the project scope and terrain.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Hamilton County is available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The Hamilton County Interim Report (1992; Jackson and White River Township) was also referenced. All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. Two (2) IHSSI documented property rated higher than "Contributing" are located within 0.25 mile of the project area.

- IHSSI# 057-020-05017, Farm, c. 1840, Central Passage Greek Revival, rated "Notable"
- IHSSI# 057-478-00010, Colip Farm, c. 1885, Queen Anne, rated "Notable" in 1992 Interim Report and "Demolished" in IHBBCM.

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

The INDOT-CRO historian reviewed structures adjacent to the project area utilizing online aerial, consultant provided photographs, and the Hamilton County GIS. The project area is along 281st Street between SR 19 and SR 213. The project area is located along a two-lane local county road and is within an agricultural setting with adjacent agricultural fields. The housing stock along the project area ranges from mid-nineteenth to early twenty-first century residential buildings. The parcels that these properties are located on exhibit large agricultural setbacks and typically extend at least approximately 0.25 mile from the project area. Many of these parcels also exhibit thick treelines. Due to these factors, only parcels immediately adjacent to the project area were reviewed.

Two (2) resources rated higher than "Contributing" were noted within 0.25 mile of the project area. IHSSI# 057-478-00010, as noted above, was documented in the 1992 Interim Report and is now listed as "Demolished" in the IHBBCM. Historic aerials confirm that this property was demolished sometime between 1998 and 2003. The other property (IHSSI# 057-020-05017, Farm) is located at 0 E 281st St and has a "Notable" rating. The parcel itself consists of approximately 147 acres and is immediately adjacent to the project area. However, the structures are located approximately 0.35 mile away from the project area and are set in several thick wooded areas with treelines screening the buildings from the road. Therefore, this resource is not considered adjacent to the project area for the purposes of this MPPA determination. In addition, it is the opinion of the INDOT-CRO QP historian that any historic boundaries would not extend beyond the farmyards. While ROW acquisition may potentially be taken from the property, the acquisition would be outside the anticipated historic boundary. None of the other resources appear to possess either the age or significance/integrity necessary to be considered National Register-eligible.

With regard to the new and replacement drainage structures noted above, none were identified in a review of the IHBBCM. The structures were reviewed through photographs provided by the consultant. Only one (1) structure exhibited material that was not concrete or metal. This structure had wooden components but are modern landscape timbers. None of the structures appear to possess any historical or engineering significance.

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

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, Inc. (Rusche 2023). There are no previously recorded archaeological sites within or adjacent to the project area. A 30.8-hectare (76.1-acre) survey area stretching approximately 7 kilometers in length was investigated through visual inspection of disturbed areas (7.9 ha at no less than 30 m intervals); intensive pedestrian survey (16.2 ha at 10 m intervals, reduced to 5 m intervals when artifacts were found); and systematic shovel probing (6.7 ha at 15 m intervals with additional 5 m interval radial probes when artifacts were encountered). Nine previously unrecorded sites (12H1991–12H1999) were located as a result of this survey.

Sites 12H1991 and 12H1994 are precontact artifact scatters with unidentified temporal or cultural components. Sites 12H1992, 12H1993, and 12H1996 are historic artifact scatters; additionally, sites 12H1992 and 12H1996 are associated with non-extant structures appearing on historic maps. Site 12H1995 is a multicomponent site comprised of a precontact lithic scatter and historic artifact scatter that is not associated with a historically mapped structure. Finally, sites 12H1997–12H1999 are precontact isolated finds, each consisting of a biface fragment. All nine archaeological sites are not recommended for inclusion in the NRHP. Accordingly, no further work is recommended on these sites (Rusche 2023).

Therefore, 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 Division of Natural Resources-Division of Historic Preservation and Archaeology (DNR-DHPA) will be notified immediately.

INDOT-CRO staff reviewer(s): Clint Kelly and David Walton

INDOT Approval Date: 3/19/2024

Amendment Approval Date (if applicable):

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

Contract Publication Series 23-230

A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE FOR THE PROPOSED REHABILITATION OF 281ST STREET FROM STATE ROAD 19 TO STATE ROAD 213 IN HAMILTON COUNTY, INDIANA (INDOT DES. NO. 2003031)

by
Michael Rusche

Prepared for

RQAW Corporation

Prepared by

cra
cultural resource analysts, inc

Kentucky | West Virginia | Wyoming
Indiana | Louisiana | Tennessee | Virginia

Contract Publication Series 23-230

A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE FOR THE PROPOSED REHABILITATION OF 281ST STREET FROM STATE ROAD 19 TO STATE ROAD 213 IN HAMILTON COUNTY, INDIANA (INDOT DES. NO. 2003031)

by
Michael Rusche
With contributions by Lisa Kelley, RPA 4535, and Katharine Alexander, RPA 5461

Prepared for

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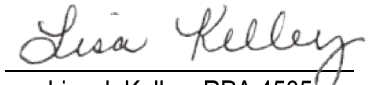
Evansville, Indiana 47708
Phone: (812) 253-3009
Fax: (812) 253-3010
Email: ljkelley@crai-ky.com
CRA Project No.: I230222



Lisa J. Kelley, RPA 4535
Principal Investigator

March 22, 2024

Lead Agency: Indiana Department of Transportation Des. No.: 2003031
Applied Anthropology Laboratories, Ball State University Accession No. 23.24

VI. CONCLUSIONS AND RECOMMENDATIONS

Between May 16 and 19, 2023, CRA personnel conducted a phase Ia archaeological reconnaissance at the request of RQAW Corporation for the proposed rehabilitation of E 281st Street in Jackson and White River Townships, Hamilton County, Indiana (INDOT Designation Number 2003031). The archaeological survey area for this project encompasses approximately 30.8 ha stretching approximately 7 km in length. The survey was investigated with systematic screened shovel testing, intensive pedestrian survey, and visual inspection of disturbed areas.

Prior to initiating the fieldwork, a records review was conducted utilizing data from the DHPA's SHAARD. The records review revealed that two previously conducted archaeological surveys were within the survey area and that there were no previously recorded sites in the survey area.

Nine previously unrecorded sites (12H1991–12H1999) were located during the current reconnaissance. Sites 12H1991 and 12H1994 are precontact artifact scatters with unidentified temporal or cultural components. Sites 12H1992, 12H1993, and 12H1996 are historic artifact scatters, with 12H1992 and 12H1996 being associated with non-extant structures appearing on historic maps. Site 12H1995 is a multicomponent site consisting of a precontact lithic scatter and a historic artifact scatter not associated with a historic mapped structure. Sites 12H1997–12H1999 are precontact isolated finds, each consisting of a portion of a biface. These sites are not recommended for inclusion in the NRHP or for further work.

It is likely that Sites 12H1991–12H1996 extend outside of the survey area boundary, and these sites cannot be fully assessed for inclusion in the NRHP. However, due to a lack of an ability to provide significant data to the history of the area, no further work is recommended for them within the survey area. Therefore, archaeological clearance is recommended for this proposed project.

Note that a principal investigator or field archaeologist cannot grant or withhold clearance to a project. Although the decision to grant or withhold clearance is reached, at least in part, on the recommendations made by the field investigator, clearance may be obtained only through an administrative decision made by a lead agency in consultation with INDOT and the State Historic Preservation Officer (Indiana DHPA).

If any previously unrecorded archaeological materials are encountered during construction activities, the DHPA should be notified immediately at (317) 232-1646, and the INDOT Cultural Resources Office (CRO) at (317) 697-9752. If human remains are discovered, construction activities should cease immediately, and the DHPA, the INDOT, CRO, the local coroner, and the local law enforcement agency must be notified.

Categorical Exclusion

Appendix E

Red Flag and Hazardous Materials

RQAW
DCCM

Corporate Headquarters
8770 North St., Ste. 110
Fishers, IN 46038
317.588.1798

Date: June 27, 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: Aaron Lawson
RQAW Corporation
8770 North Street, Suite 110
Fishers, IN 46038
alawson@rqaw.com

Re: RED FLAG INVESTIGATION
DES # 2003031, Local Project
Road Rehabilitation
281st Street, From State Road (SR) 19 to SR 213
Hamilton County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: Hamilton County and the Federal Highway Administration (FHWA) propose to proceed with a road rehabilitation project on 281st Street from SR 19 to SR 213, in Hamilton County, Indiana. The project would involve widening the roadway to include 12-foot wide travel lanes with 3-foot wide shoulders. Roadside ditches would be constructed along both sides of the roadway, where existing conditions allow, to provide positive drainage away from the roadway and adjacent properties. The existing 4-foot diameter corrugated metal pipe (CMP) located approximately 225 feet east of Cicero Creek would be replaced (the culvert is not inventoried and does not have a culvert number assigned). Any small drainage pipes (12 to 15 inches in diameter) present along the roadway and driveways would also be analyzed and replaced if needed. The bridges over Cicero Creek (Structure # 29-00064) and Weasel Creek (Structure # 29-00066) would be excepted/excluded from the project.

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) not available / structure not inventoried
Proposed right of way: Temporary ☒ # Acres to be determined (TBD), Permanent ☒ # Acres TBD, Not Applicable ☐
Type and proposed depth of excavation: General excavation for the roadway widening, roadside ditch construction, and small drainage pipe replacements is not expected to exceed 5 feet below ground surface (bgs). Excavation is not expected to exceed 10 feet bgs for the replacement of the 4-foot diameter CMP.
Maintenance of traffic (MOT): The MOT would involve shifting lane closures and detours. Local roads would be utilized while sections of the roadway are constructed. Access to affected property owners will be maintained at all times during construction.

Work in waterway: Yes ☒ No ☐ Below ordinary high water mark: Yes ☒ No ☐
State Project: ☐ LPA: ☒
Any other factors influencing recommendations:

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	**1***	Recreational Facilities	**N/A**
Airports[1]	**N/A**	Pipelines	**2**
Cemeteries	**N/A**	Railroads	**1**
Hospitals	**N/A**	Trails	**2**
Schools	**N/A**	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:

Religious Facilities*: One (1) unmapped religious facility is located within the 0.5 mile search radius. The Omega Christian Church is adjacent to the east end of the project area. Coordination with the Omega Christian Church will occur.

Pipelines: Two (2) pipeline segments are located within the 0.5 mile search radius. One (1) pipeline segment, Buckeye Pipe Line Co., crosses the project area. Coordination with Buckeye Pipe Line Co. will occur.

Railroads: One (1) railroad segment is located within the 0.5 mile search radius. The railroad segment, Hoosier Heritage PA, is located approximately 0.10 mile west of the project area. No impact is expected.

Trails: Two (2) trail segments are located within the 0.5 mile search radius. One (1) potential trail segment is located in the project area. Coordination with the Hamilton County Plan Commission will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	**N/A**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**12**
Canal Structures – Historic	**N/A**	Lakes	**4***
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**3**
NWI-Lines	**2**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**5**	Sinkhole Areas	**N/A**
Rivers and Streams	**13**	Sinking-Stream Basins	**N/A**

Explanation:

National Wetlands Inventory (NWI) – Lines: Two (2) NWI line segments are located within the 0.5 mile search radius. One (1) NWI line segment is located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with the appropriate agency, if applicable, will occur.

Indiana Department of Environmental Management (IDEM) 303d Listed Streams and Lakes (Impaired): Five (5) 303d listed stream segments and lakes are located within the 0.5 mile search radius. Cicero Creek and Weasel Creek are located within the project area. Cicero Creek and Weasel Creek are both listed as impaired for *Escherichia coli* (E. coli). Workers who are working in or near water with E. coli should take care to wear appropriate Personal Protective Equipment (PPE), observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

Rivers and Streams: Thirteen (13) stream segments are located within the 0.5 mile search radius. Two (2) stream segments, Cicero Creek and Weasel Creek, are located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with the appropriate agency, if applicable, will occur.

NWI – Wetlands: Twelve (12) wetlands are located within the 0.5 mile search radius. Two (2) wetlands are located within the project area. A Waters of the US Report is recommended based on mapped features, and coordination with the appropriate agency, if applicable, will occur.

Lakes*: Four (4) lakes, three (3) mapped and one (1) unmapped, are located within the 0.5 mile search radius. The nearest lake (unmapped) is located 0.06 mile north of the project area. No impact is expected.

Floodplain – Digital Flood Insurance Rate Map (DFIRM): Three (3) floodplain polygons are located within the 0.5 mile search radius. The project is located within two (2) of the floodplain polygons. Coordination with the appropriate agency will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	**8**	Mineral Resources	**N/A**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation:

Petroleum Wells: Eight (8) petroleum wells are located within the 0.5 mile search radius. One (1) petroleum well is located adjacent to the project area. Coordination with the Indiana Department of Natural Resources (IDNR) Oil and Gas Division 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	**1**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**N/A**	NPDES Facilities	**N/A**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**N/A**
Leaking Underground Storage Tank (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

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

Explanation:

UST Sites: One (1) UST site is located within the 0.5 mile search radius. Jerry & Roy Rulon, 10701 East 281st Street, Al ID 18511, is located within the project area. According to the Intent to Close letter dated June 23, 1993, IDEM approved the property owner's request to permanently close the underground storage tank system beginning on July 3, 1993. According to the Underground Storage Tank Removal report dated September 27, 1993, which accompanied the Intent to Close letter, two (2) USTs were removed from the site on September 16, 1993 and were registered with IDEM. The USTs removed from the site included one (1) 10,000 gallon tank and one (1) 550 gallon tank and were previously used for the storage of leaded and unleaded petroleum utilized solely for farming operations. No groundwater was encountered or impacted during removal of the USTs and the soil samples collected during removal of the USTs did not indicate elevated levels of petroleum contaminants of concern in soils. All backfill material was returned to the UST excavation pit and clean fill from off site was utilized to return the excavation pit to grade. An eight inch stone covering was used to cap the excavation site. No other files were available in VFC indicating that a release ever occurred at the site. No impact is expected.

ECOLOGICAL INFORMATION SUMMARY

The Hamilton 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_hamilton.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. Coordination with the US Fish and Wildlife Service (USFWS) and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields and residential properties. The 4-foot

diameter CMP to be replaced east of Cicero Creek is not inventoried and does not have a culvert number; therefore, there is no inspection report available for the culvert. Additional investigation to confirm the presence or absence of bats in the culvert will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

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

INFRASTRUCTURE:
Religious Facilities: One (1) unmapped religious facility, Omega Christian Church, is adjacent to the east end of the project area. Coordination with the Omega Christian Church will occur.

Pipelines: One (1) pipeline segment, Buckeye Pipe Line Co., crosses the project area. Coordination with Buckeye Pipe Line Co. will occur.

Trails: One (1) potential trail segment is located in the project area. Coordination with the Hamilton County Plan Commission will occur.

WATER RESOURCES:
A Waters of the US Report is recommended based on mapped features and coordination with the appropriate agency, if applicable, will occur for the following features:

- One (1) NWI line segment is located within the project area.
- Two (2) stream segments, Cicero Creek and Weasel Creek, are located within the project area.
- Two (2) wetlands are located within the project area.
- The project is located within two (2) floodplain polygons (coordination only).

IDEM 303d Listed Streams and Lakes (Impaired): Cicero Creek and Weasel Creek are located within the project area. Cicero Creek and Weasel Creek are both listed as impaired for E. coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

MINING/MINERAL EXPLORATION:
Petroleum Wells: One (1) petroleum well is located adjacent to the project area. Coordination with the IDNR Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS: N/A

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

INDOT ESD concurrence: Dariane Davis Digitally signed by Dariane Davis Date: 2023.06.27 11:09:03 -04'00' (Signature)

Prepared by:

Aaron Lawson
Project Manager
Environmental Department
RQAW Corporation

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

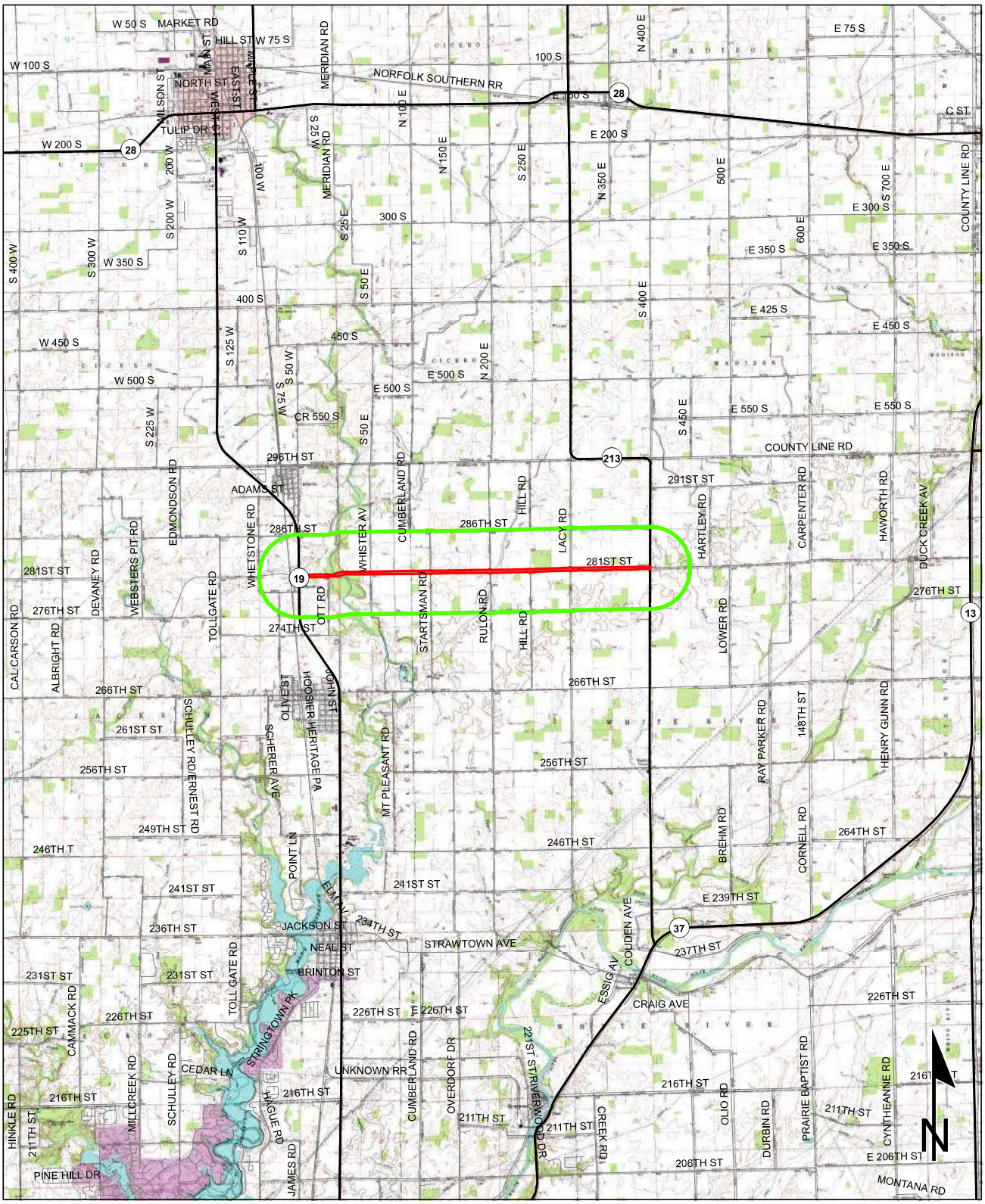
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZARDOUS MATERIAL CONCERNS: YES

Red Flag Investigation - Site Location
281st Street, From SR 19 to SR 213
Des. No. 2003031, Road Rehabilitation
Hamilton County, Indiana



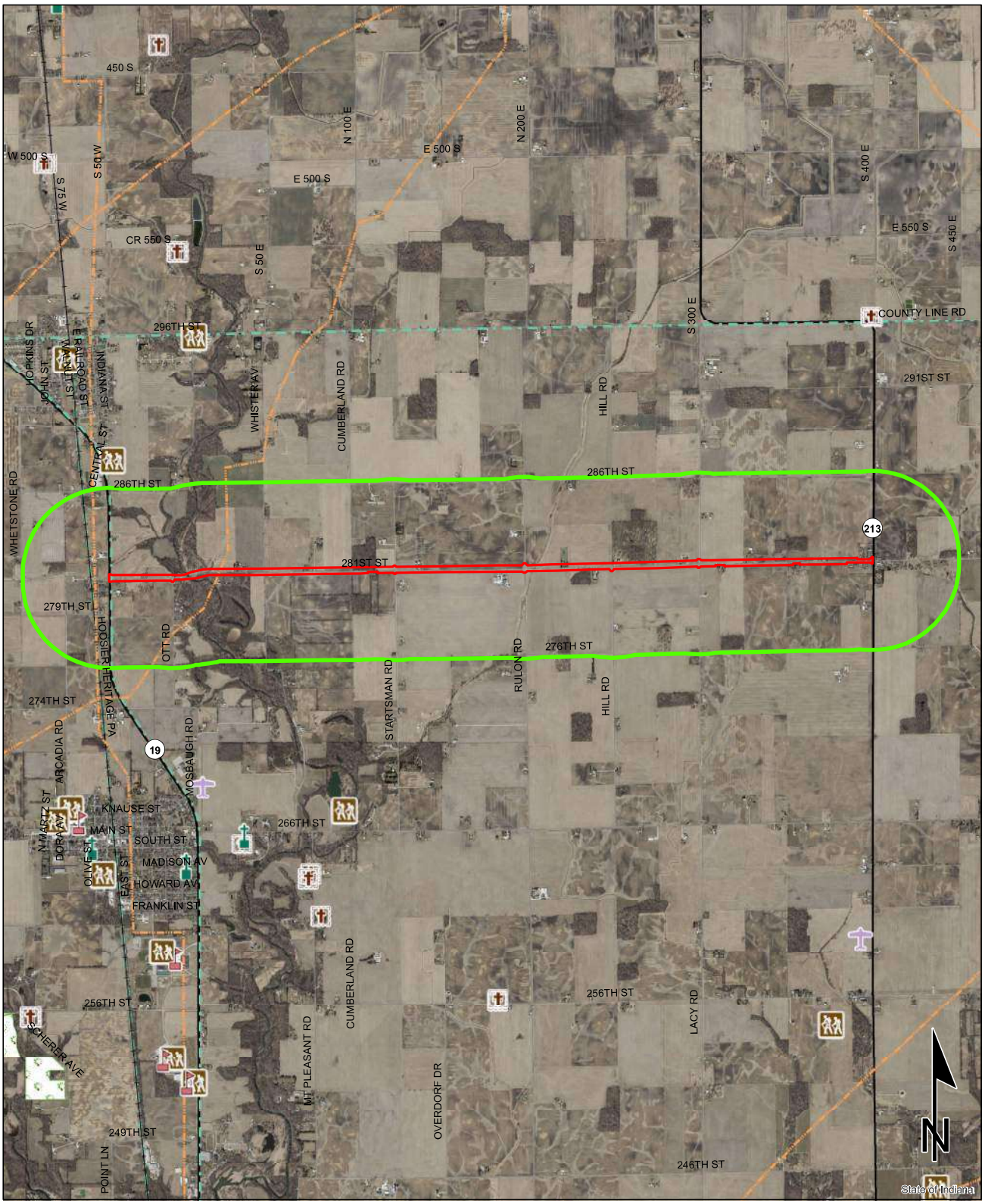
Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

1.5 0.75 0 1.5 Miles

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

ARCADIA & OMEGA QUADRANGLES
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
281st Street, From SR 19 to SR 213
Des. No. 2003031, Road Rehabilitation
Hamilton County, Indiana



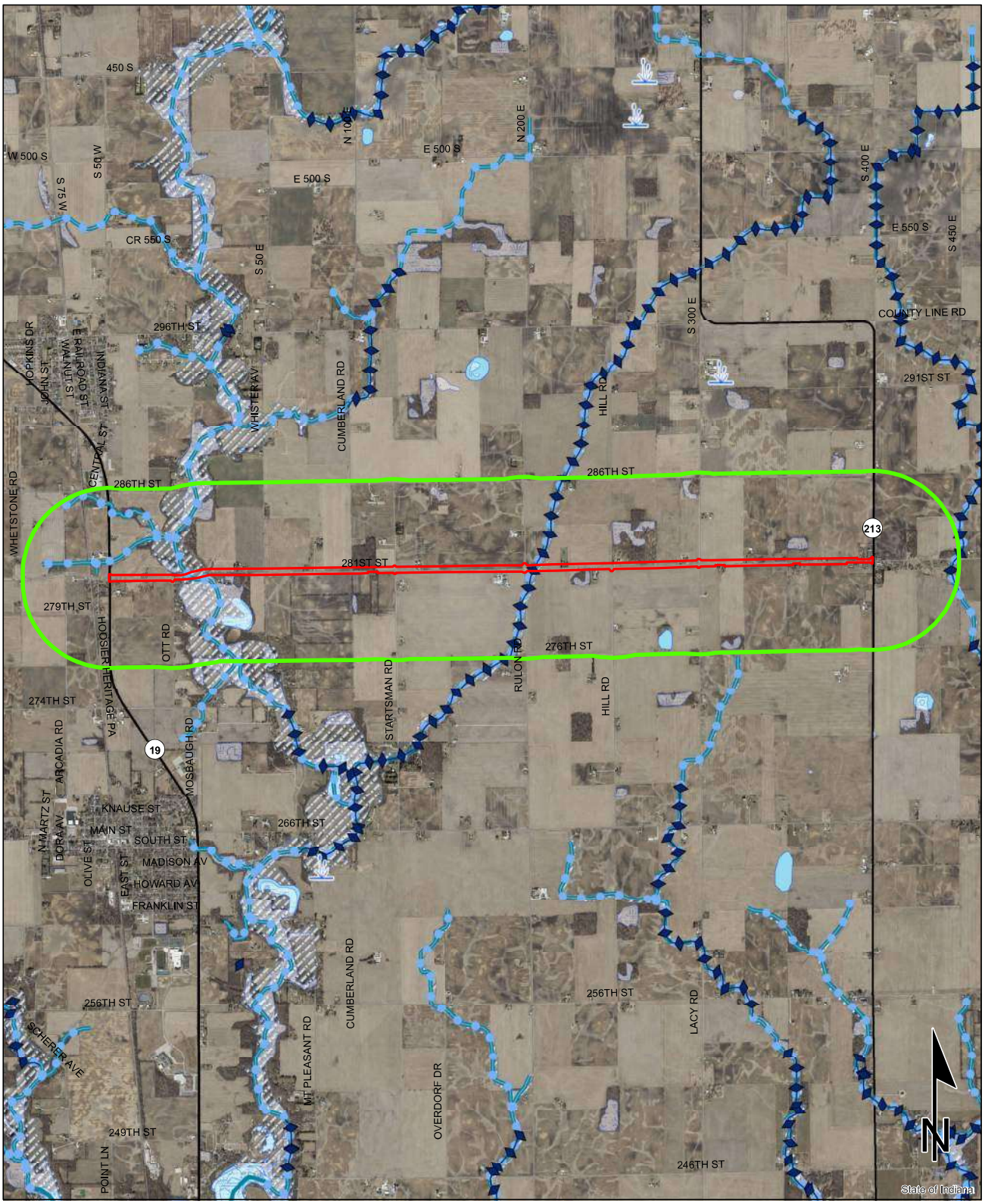
0.7 0.35 0 0.7 Miles

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 - Water Resources
281st Street, From SR 19 to SR 213
Des. No. 2003031, Road Rehabilitation
Hamilton County, Indiana



0.7 0.35 0 0.7 Miles

Sources:

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

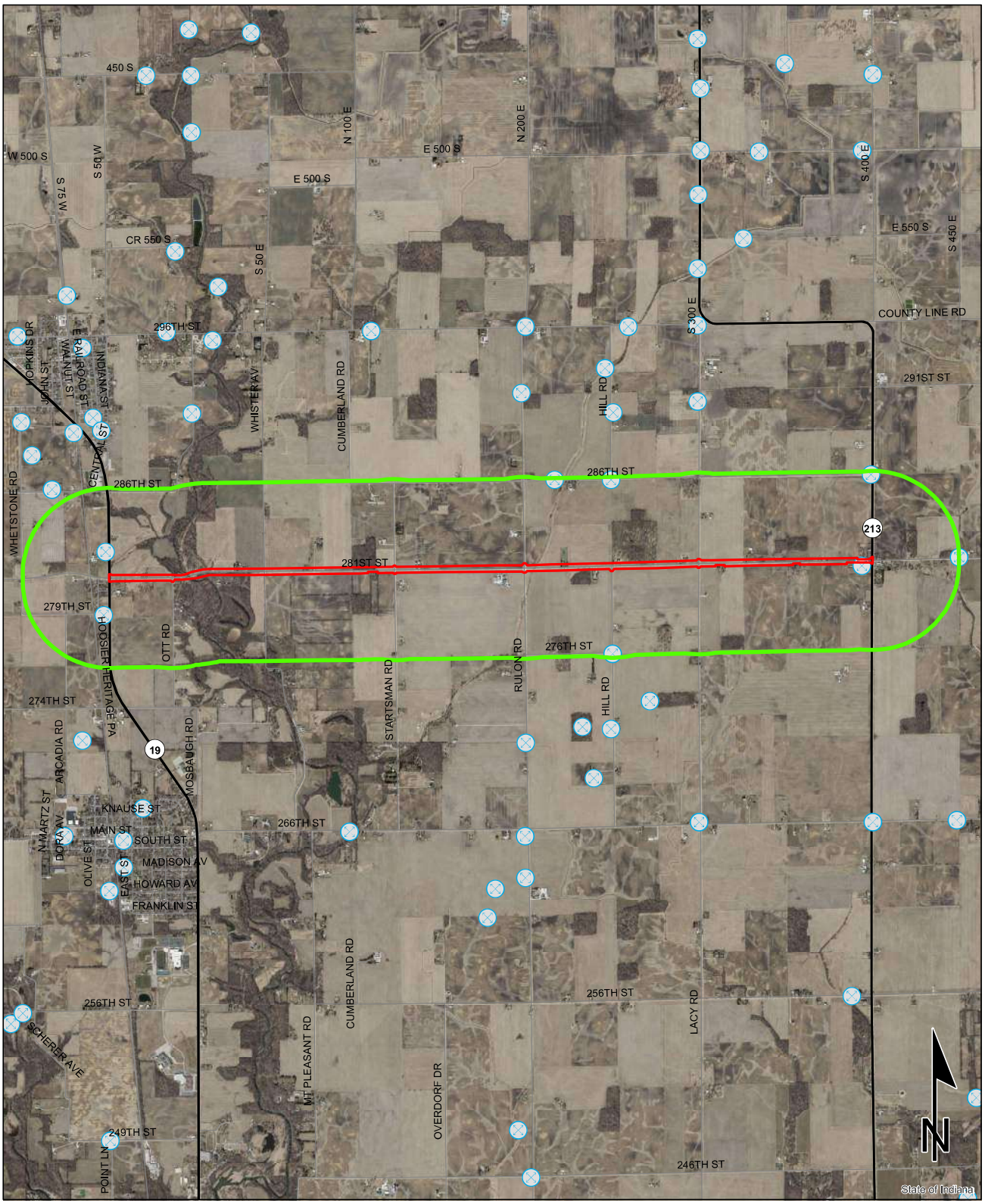
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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/Mineral Exploration
281st Street, From SR 19 to SR 213
Des. No. 2003031, Road Rehabilitation
Hamilton County, Indiana



0.7 0.35 0 0.7 Miles

Sources:

Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

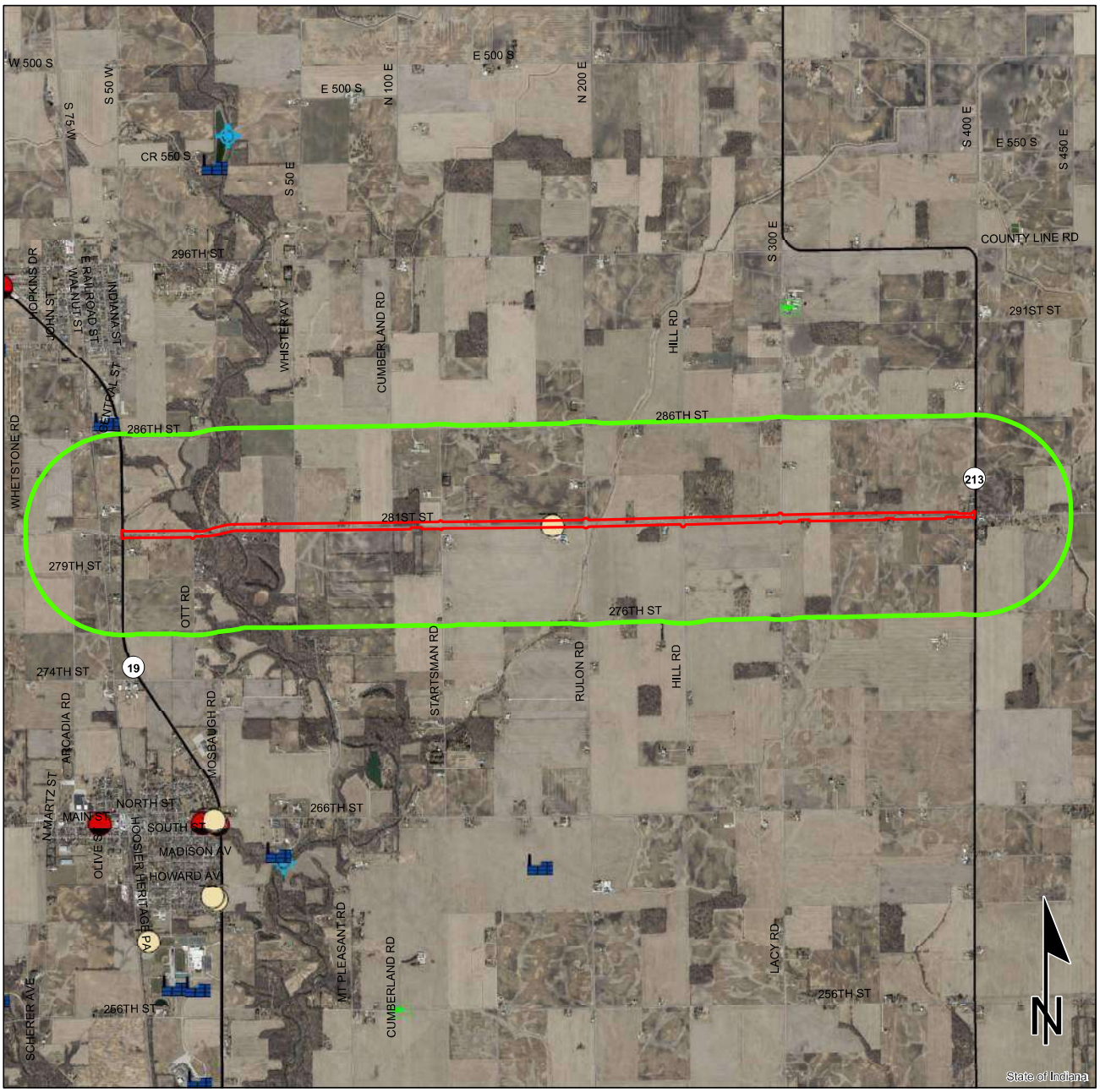
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

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
281st Street, From SR 19 to SR 213
Des. No. 2003031, Road Rehabilitation
Hamilton 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

0.7 0.35 0 0.7 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

Categorical Exclusion

Appendix F

Water Resources

Fishers, IN - Corporate
8770 North St., Ste. 110
Fishers, IN 46038
317.588.1798

Waters of the US Determination
281st Street Reconstruction
Hamilton County, Indiana
Des. No. 2003031
Prepared by: Jenna Garrison, RQAW Corporation
Completed Date: November 30, 2023

Dates of Waters Field Investigation:
A field investigation was conducted on August 8, 2023, by RQAW Corporation to evaluate the presence of *Waters of the United States* for the proposed reconstruction project on along 281st Street in Hamilton County, Indiana.

Location:
281st Street, between SR 19 and SR 213
Sections: 7, 8, 12, Township: 20-N, Range: 4-E & 5-E
Arcadia and Omega US Geological Survey (USGS) Quadrangles
Hamilton County, Indiana

West Coordinates		**East Coordinates**
Latitude:	40.19781° N	40.19846° N
Longitude:	-86.02244° W	-85.93922° W

Project Description
Hamilton County, with funding from the Federal Highway Administration (FHWA), proposes to proceed with a roadway project in Hamilton County, Indiana (Des. No. 2003031). The project will include widening 281st street to meet current Indiana Department of Transportation (INDOT) standards. Small structures will be replaced as needed and a curb and gutter with storm sewer inlets will be installed near the Town of Omega.

National Wetlands Inventory (NWI) Wetlands:
According to the U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) data available through IndianaMap (http://www.indianamap.org/), three NWI polygons are located within the investigation area. Of these, one polygon is identified as R2UBH (Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded) wetland, which transects the investigation area, and surrounds the channel of Cicero Creek The second polygon is identified as PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded) wetland, which enters the investigation area adjacent to Cicero Creek and overlaps with the delineated Wetland C. The remaining NWI polygon was identified as being a R2UBHx (Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated) wetland and is confined to the channel of Weasel Creek. A map showing the NWI layer turned on is provided in the attachments (Pages A15- A-17).

National Geological Survey (USGS) National Hydrography Dataset (NHD):
According to the United States National Geological Survey (USGS) National Hydrography Dataset (NHD), there is are 17 NHD lines within the investigation area. One NHD line is classified as an Artificial Path, one is classified as a Canal/Ditch and 15 are classified as a Stream/River. The line classified as an Artificial Path was verified during a field investigation as Cicero Creek. One Stream/River was verified as UNT 1 to Cicero Creek and another as Weasel Creek. The Canal/Ditch was verified as Roadside ditch (RSD 8). Further information about verified streams can be found in the streams section of this report. A map showing the NHD flowline layer turned on is provided in the attachments (Pages A15- A-17).

Soils:
According to the Soil Survey Geographic (SSURGO) Database for Hamilton County, Indiana the investigation area contains five soil areas with nationally listed hydric soil (Pages A9-A11)

Table 1: NRCS SSURGO Mapped Soil Units

Soil Unit Name	Symbol	NRCS Flooding Frequency	NRCS Drainage Class	SSURGO Hydric Rating
Brookston silty clay loam, 0-2% slopes	Br	None	Poorly drained	95% Predominantly hydric
Crosby silt loam, fine-loamy, 0-2% slopes	CrA	None	Somewhat poorly drained	2% Predominantly non-hydric
Miami silt loam, 2-6% slopes, eroded	MnB2	None	Moderately well drained	6% Predominantly non-hydric
Patton silty clay loam, 0-2 % slopes	Pn	None	Poorly drained	90% Predominantly hydric
Shoals silt loam, 0-2% slopes, frequently flooded, brief duration	Sh	Frequent	Somewhat poorly drained	4% Predominantly non-hydric

Attachments:
Removed to avoid duplication
~~Project Location and Topographic Maps……A1 – A8~~
Natural Resources Conservation Service (NRCS) Soil Survey Maps……A9 – A11
StreamStats ……A12 – A14
NWI Map & NHD Maps……A15 – A17
IDNR FARA Reports……A18 – A19
Water Resources Map……A20 – A26
Photograph Location Maps and Photographs……A27 – A149
Wetland Determination Forms……A150 – A165
Pre-Jurisdictional Determination Form……A166 – A169

Streams:
According to the hydrology data available through IndianaMap (http://www.indianamap.org/) Aradian & Omega USGS topographic map (1:24,000 scale), eight USGS blueline stream is mapped within the investigation area. Upon the field investigation the presence of three streams, Cicero Creek, unnamed tributary (UNT) 1 to Cicero Creek and Weasel Creek were verified.

Table 2: Stream Summary Table

Stream Name	Lat/Long	Photo Map Page(s) Photo Log Page(s) Photo Number(s)	USGS Blueline?	Upstream Drainage Area (sq mi)	Flow Regime	Length in Study Area (ft)	OHWM Width (ft) Depth (ft)	Riffles/ Pools?	Substrate	Quality	Likely Waters of U.S.?
Cicero Creek	40.19770 N, -86.01371 W	**Map:** A22-A23 **Log:** A31 **Nos.:** 38-48	Yes	121.234	PER	271	W: 58 D: 2.5	Yes Yes	Silt, Cobble, Gravel	Average	Yes
UNT 1 to Cicero Creek	40.19763 N, -86.01269 W	**Map: A23-A24** **Log:** A31 **Nos.:** 72-74	Yes	0.001	INT	40	W: 3.2 D: 0.5	No No	Silt, Cobble	Poor	Yes
Weasel Creek	40.19802 N, -85.976053W	**Map:** A26 **Log:** A50 **Nos.:** 127-128, 133-134	Yes	6.004	INT	287	W: 9.5 D: 1.25	No No	Silt, Cobble	Poor	Yes

12 Digit HUC:
Weasel Creek-Cicero Creek: HUC-051202010606
Lamberson Ditch-Duck Creek: HUC-051202010505
Bear Creek: HUC-051202010504

Cicero Creek flows in a northwest to southeast direction and flows under 281st St. via a bridge (Structure 29-00064). Approximately 271 feet (0.36 acre), in total, of Cicero Creek is within the investigation area. Cicero Creek is a perennial stream with average quality and exhibited a downstream Ordinary High Water Mark (OHWM) of 58 feet wide and 2.5 feet deep. Cicero Creek is classified as a USGS perennial blue line stream and an Artificial Path NHD line.

Cicero Creek exhibited average quality due to the low turbidity in the water, the presence of aquatic fauna and riffle/ pool complexes. Cicero Creek flows into Morse Reservoir and continues until it reaches the White River, which is a traditional navigable waterway (TNW). Based in its contribution of perennial flow to a TNW, Cicero Creek is likely considered a *Water of the United States.* Please refer to Table 2 for detailed information about Cicero Creek.

UNT 1 to Cicero Creek flows in a north to south direction and begins at the outlet of an unclassified corrugated metal pipe (CMP) structure which carries 281st St. Approximately 40 feet (0.003 acre), in total, of UNT 1 to Cicero Creek is within the investigation area. UNT 1 to Cicero Creek is an intermittent stream with poor quality and exhibited a OHWM of 3.2 feet wide and 0.5 feet deep. UNT 1 to Cicero Creek is classified as a USGS perennial blue line stream and a Stream/River NHD line.

UNT 1 to Cicero Creek exhibited poor quality due to the low volume and infrequent duration of flow and lack of riffle and pool complex. UNT 1 to Cicero Creek flows into Cicero Creek, which flows into Morse Reservoir, which flows into the White River, a TNW. Based in its contribution of flow to a TNW, UNT 1 to Cicero Creek is likely considered a Water of the United States. Please refer to Table 2 for detailed information about UNT 1 Cicero Creek.

Weasel Creek flows in a northeast to southwest direction and flows under 281st St. via a bridge (Structure 29-00066). Approximately 287 feet (0.06 acre), in total, of Weasel Creek is within the investigation area. Weasel Creek is an intermittent stream with poor quality and exhibited a downstream OHWM of 9.5 feet wide and 1.25 feet deep and is classified as a USGS perennial blue line stream and a Stream/River NHD line.

Weasel Creel exhibited poor quality due to the low volume, lack of riffle and pool complete and the influence of road and agricultural runoff. Weasel Creek flows into Cicero Creek, which flows into Morse Reservoir, which flows into the White River, a TNW. Based in its contribution of flow to a TNW, Weasel Creek is likely considered a Water of the United States. Please refer to Table 2 for detailed information about Weasel Creek.

Table 3: Wetland Summary Table

Wetland Name	Lat/ Long	Photo Map Page(s) Photo Log Page(s) Photo Number(s)	Hydric Soil Indicators	Hydrology Indicators (Primary/ Secondary)	Type	Total Area (ac)	Quality	Likely Waters of U.S.?
Wetland A	40.19746N, -86.01942W	**Map:** A21 **Log:** A28 **Nos.: 5-15**	F3	A3 D2, D5	PEM	**0.05**	Poor	Yes
Wetland B	39.69263N, -86.66535W	**Map:** A23-A24 **Log:** A31-A32 **Nos.:** 56-71	F3	A3 D2, D5	SS	**0.5**	Average	Yes
Wetland C	39.75121N, -86.65090W	**Map:** A23-A24 **Log:** A31-A32 **Nos.: 72-91**	A11, F3	A3, B1, B8 D5	PFO	**0.2**	Average	Yes

Wetlands:
Three wetlands (Wetland A Wetland B and Wetland C) were identified within the investigation area during the field inspection. A discussion of this wetland is provided below as well as Table 3: Wetland Summary Table and Table 4: Data Point Summary Table for detailed information.

Wetland A is a palustrine emergent (PEM) wetland located just south of 281st St. This wetland would likely be considered poor quality due to its small size, low species diversity and disturbance from the roadway. Wetland A has a direct surface drainage connection to a likely jurisdictional river, therefore, is most likely a *Waters of the US.*

Data point A1 was taken within Wetland A. The dominant vegetation observed within the herb stratum was Creeping-Jenny (*Lysimiachia nummularia)* (FACW) and White Panicle American Aster (S*ymphyotrichum lanceolatum*) (FAC). Data point A1 met all three criteria to be considered within a wetland. Please refer to Data Sheet A1 (Pages A150-A151) and Table 3 for more detailed information.

Data point A2 was taken approximately 45 feet southwest of data point A1. The dominant vegetation observed within the herb stratum was Red Fescue (*Festuca rubra*) (FACU). This data point failed to meet all three criteria to be considered within a wetland. Please refer to Data Sheet A2 (Pages A152-A153) for more detailed information.

Wetland B is a scrub shrub (SS) wetland located just north of 281st St. This wetland would likely be considered average quality due to its small size, species diversity and disturbance from the roadway. Wetland B has a direct surface drainage connection to a likely jurisdictional river, therefore, is most likely a *Waters of the US.*

Data point B1 was taken within Wetland B. The dominant vegetation observed within the tree stratum was Black Willow (*Salix nigra*) (OBL) and Green Ash (*Fraxinus pennsylvanica)* (FACW). The dominant species in the sapling/shrub stratum was Green Ash (*Fraxinus pennsylvanica)* (FACW). The dominant species in the herb stratum was Reed Canary Grass (*Phalaris arundinacea*) (FACW). Data point B1 met all three criteria to be considered within a wetland. Please refer to Data Sheet B1 (Pages A154-A155) and Table 3 for more detailed information.

Data point B2 was taken approximately 75 feet northwest of data point B1. The dominant species in the sapling/shrub stratum was Green Ash (*Fraxinus pennsylvanica)* (FACW). The dominant vegetation observed within the herb stratum was Green-Head Coneflower (*Rudbekia laciniata*) (UPL), was Reed Canary Grass (*Phalaris arundinacea*) (FACW), Giant Ironweed (*Vernonia gigantea*) (FAC), Canadian Goldenrod (*Solidago canadensis)* (FACU). This data point failed to meet all three criteria to be considered within a wetland. Please refer to Data Sheet B2 (Pages A156-A157) for more detailed information.

Wetland C is a palustrine forested (PFO) wetland located just south of 281st St. This wetland would likely be considered average quality due to its small size, species diversity and disturbance from the roadway. Wetland B has a direct surface drainage connection to a likely jurisdictional river, therefore, is most likely a *Waters of the US.*

Data point C1 was taken within Wetland C. The dominant vegetation observed within the tree stratum was Green Ash (*Fraxinus pennsylvanica)* (FACW) and Ash-leaf Maple (*Acer negundo*) (FAC). The dominant species in the herb stratum was Canadian Clearweed (*Pilea pumila*) and Creeping-Jenny (*Lysimiachia nummularia)* (FACW). Data point C1 met all three criteria to be considered within a wetland. Please refer to Data Sheet C1 (Pages A158-A159) and Table 3 for more detailed information.

Data point C2 was taken approximately 90 feet east of data point C1. The dominant species in the tree stratum was Red Maple (*Acer rubrum*) (FAC). The dominant species in the sapling/shrub stratum was Ohio Buckeye (*Aesculus glabra*) (FAC). The dominant vegetation observed within the herb stratum was Red Fescue (Festuca rubra) (FACU), Woodland Lettuce (*Lactuca floridana*) (FACU) and Canadian Wild Ginger (*Asarum canadense*) (FACU). This data point failed to meet all three criteria to be considered within a wetland. Please refer to Data Sheet C2 (Pages A160-A161) for more detailed information.

Upland (UP) Data Point:
Two upland data points (UP1, UP2) were taken to confirm the absence of wetlands. A discussion of these data points is provided below.

UP1 is in the northeast side of Structure 29-00064 just north of 281st St. The dominant vegetation within the tree stratum was Boxelder Maple (*Acer negundo*) (FAC). The dominant species in the sapling/shrub layer was Green Ash (*Fraxinus pennsylvanica)* (FACW). The dominant species in the herb stratum was Reed Canary Grass *(Phalaris arundinacea)* (FACW*)*. The dominant species in the woody vine stratum was River Grape (*Vitis riparia*) (FACW). The data point did exhibit hydrophytic vegetation but did not exhibit hydric soils or wetland hydrology. This data point failed to meet all three criteria to be considered within a wetland. Please refer to Data Sheet UP1 (Pages A162-A163) for more detailed information.

UP2 is located just south of 281st St and taken in a drainage area where an NHD River/Stream line is present on the NHD GIS layer (Page A). The dominant species observed in the herb stratum was Reed Canary Grass (*Phalaris arundinacea)* (FACW*)* and Canadian Thistle *(Cirsium arvense*) (FACU). The data point did exhibit hydrophytic vegetation but did not exhibit hydric soils or wetland hydrology. This data point failed to meet all three criteria to be considered within a wetland. Please refer to Data Sheet UP2 (Pages A164-A165) for more detailed information.

Table 4: Wetland Data Point Summary Table

Data Point	Vegetation?	Hydric Soil?	Wetland Hydrology?	Wetland?
A1	Yes	Yes	Yes	Yes
A2	No	No	No	No
B1	Yes	Yes	Yes	Yes
B2	Yes	No	No	No
C1	Yes	Yes	Yes	Yes
C2	No	No	No	No
UP1	Yes	No	No	No
UP2	Yes	No	No	No

Roadside Ditches:
Eleven roadside ditches (RSD) were identified within the investigation area (RSD 1- RSD 11). All RSDs lacked an OHWM and wetland characteristics; therefore, were not considered to be a wetland or a stream. RSD 1- RSD 11 locations are shown in the attachments (Pages A20-A26) and below in Tabel 5.

Table 5: Roadside Ditch Summary Table

RSD No.	Location (North/south of 281st)	Length (ft)	Flow Direction	Lat (°N) / Long (°W) (Center Point)
RSD 1	South	68	S	40.19735, -86.02226
RSD 2	North	95	S	40.19776, -86.02227
RSD 3	South	102	E	40.19749, -86.01519
RSD 4	North	46	E	40.19761, -86.01528
RSD 5	South	270	E	40.19752, -86.01439
RSD 6	North	76	E	40.19768, -86.01426
RSD 7	South	105	W	40.19794, -86.01171
RSD 8	North	234	E	40.19813, -85.97639
RSD 9	West	182	E	40.19792, -85.97650
RSD 10	North	250	W	40.19812, -85.97539
RSD 11	South	254	W	40.19794, -85.97558

Open Water:
No open water features were identified to be within the investigation area.

Conclusions:
A field investigation was conducted on August 8, 2023, by RQAW Corporation to evaluate the presence of *Waters of the United States* for the 281st St Rehabilitation in Hamilton County, Indiana. Field observations identified one perennial stream, Cicero Creek, and two intermittent streams, UNT 1 to Cicero Creek and Weasel Creek in the investigation area. Three wetlands, Wetland A, Wetland B and Wetland C were also identified within the investigation area.

Based on its contribution of perennial and intermittent flows to the White River, a TNW, Cicero Creek, UNT 1 to Cicero Creek and Weasel Creek would likely be considered a *Water of the United States*. Based on their hydrological connection to a TNW, the White River, Wetland A, Wetland B and Wetland C are also likely to be considered *Water of the United States.*

Wildlife Crossings:

Multiple small structure culverts within the investigation area may be potential crossings for wildlife. The larger structures, Structure 29-00064 over Cicero Creek and Structure 29-00066 over Weasel Creek could both be used by larger animals such as dear for crossings. No tracks were seen at the time of the investigation.

Every effort should be taken to avoid and minimize impacts to these waterways. If impacts are necessary, then mitigation may be required. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgement 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 Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

Prepared by:

Jenna Garrison
November 30, 2023
Environmental Scientist
RQAW | Environmental Department
jgarrison@rqaw.com

RQAW

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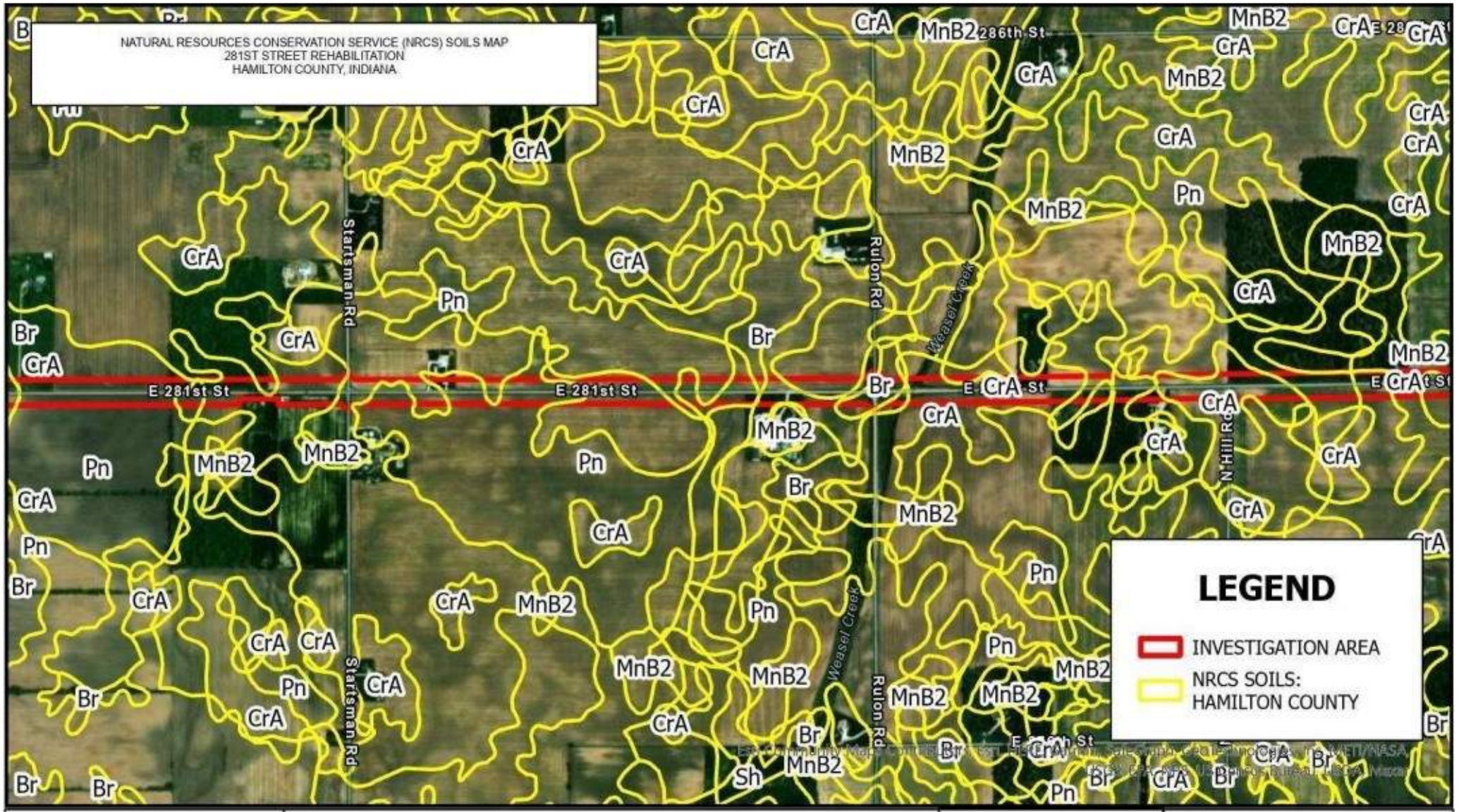
NRCS SOILS MAP	PAGE 1 OF 3	
LOCATION: 281ST ST. FROM SR 19 TO SR 213 DES. NO.: 2003031 COUNTY: HAMILTON	Date: 11/08/2023	



RQAW

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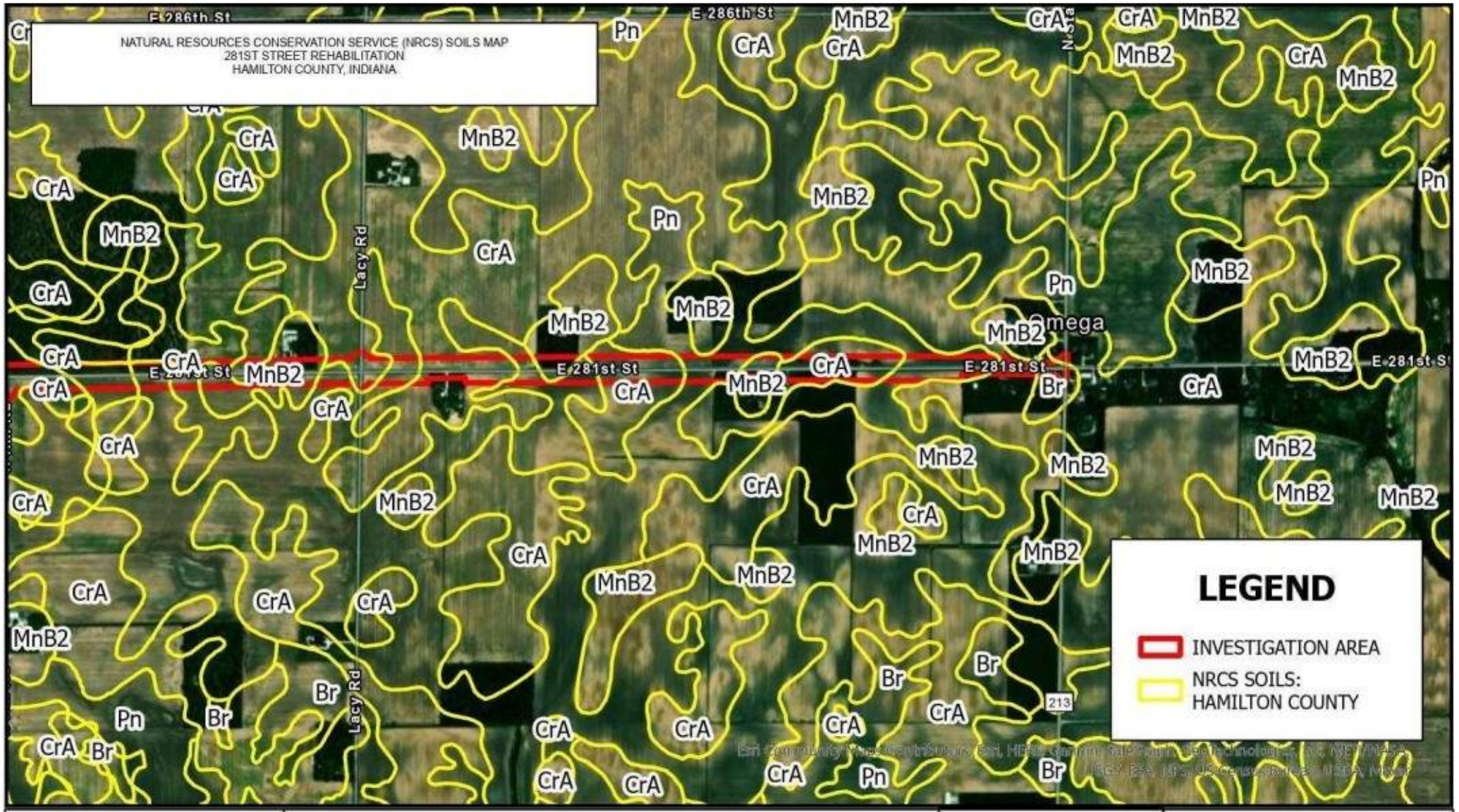
NRCS SOILS MAP	PAGE 2 OF 3	
LOCATION: 281ST ST. FROM SR 19 TO SR 213 DES. NO.: 2003031 COUNTY: HAMILTON	Date: 11/08/2023	



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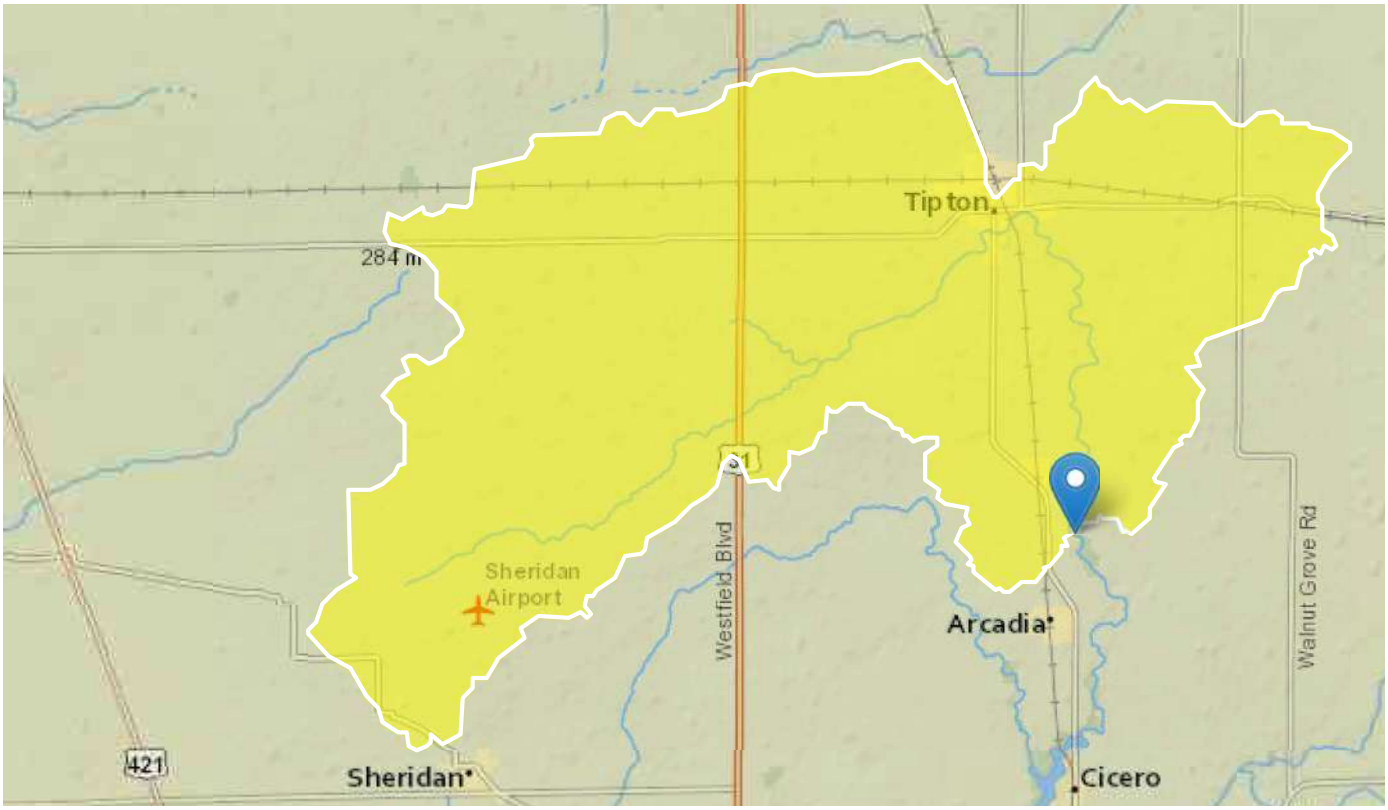
NRCS SOILS MAP	PAGE 3 OF 3	
LOCATION: 281ST ST. FROM SR 19 TO SR 213 DES. NO.: 2003031 COUNTY: HAMILTON	Date: 11/08/2023	

StreamStats Report- Cicero Creek

Region ID: IN
Workspace ID: IN20231116025439088000
Clicked Point (Latitude, Longitude): 40.19771, -86.01353
Time: 2023-11-15 21:54:59 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	121.234	square miles

StreamStats Report-UNT 1 to Cicero Creek

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Workspace ID: IN20231116025917906000
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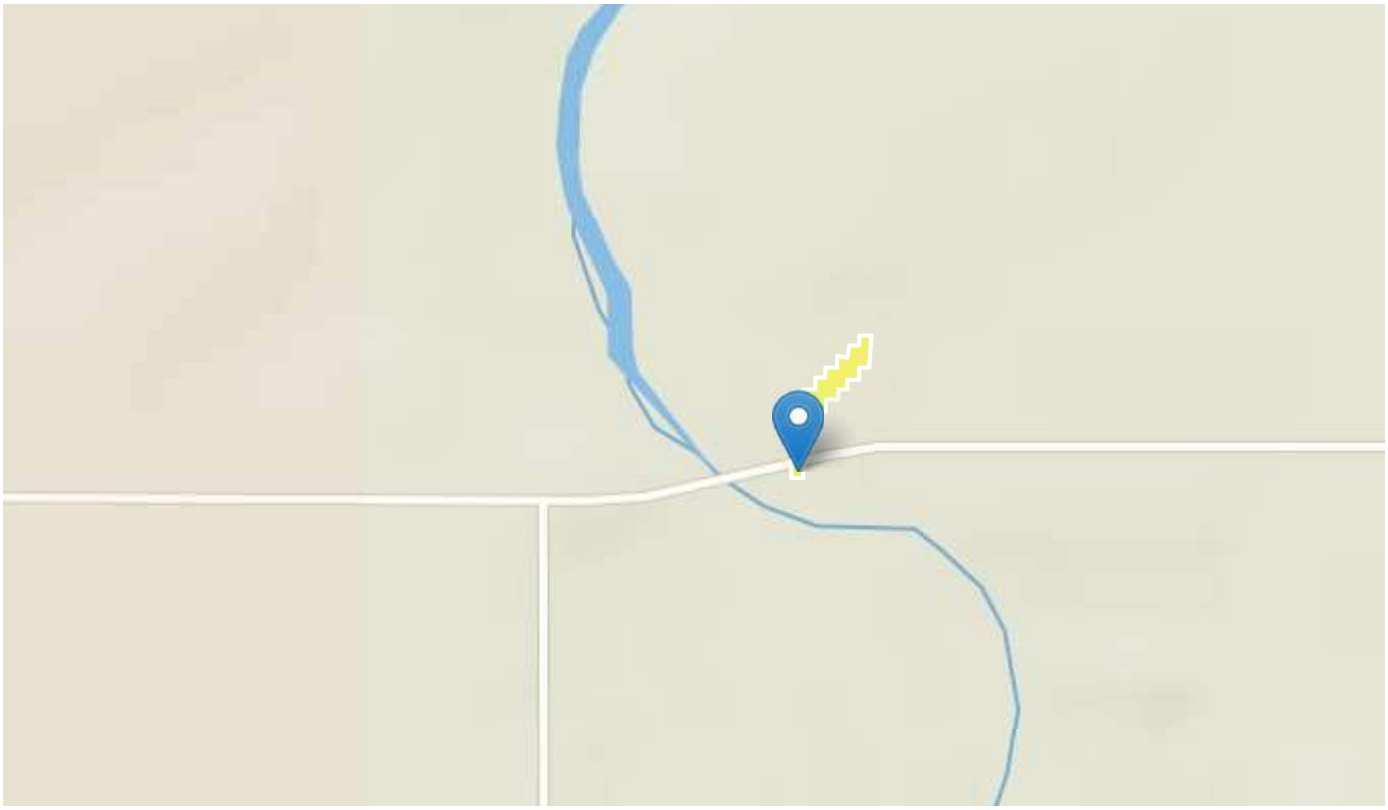

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.001	square miles

StreamStats Report-Weasel Creek

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Workspace ID: IN20231116030321006000
Clicked Point (Latitude, Longitude): 40.19812, -85.97594
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Basin Characteristics

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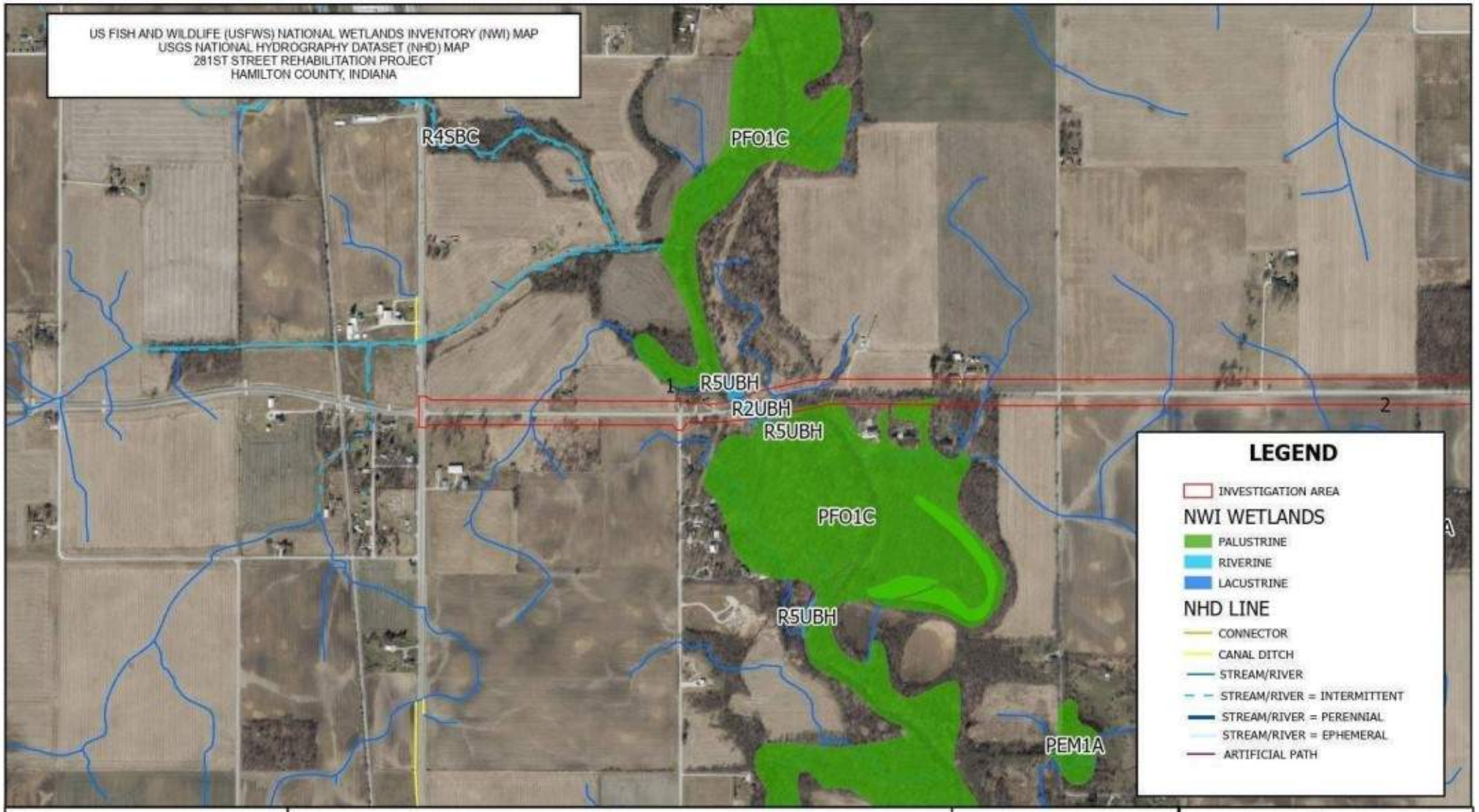


RQAW

DCCM

NWI & NHD MAP

PAGE 1 OF 3

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.23 0.45 Mi

0 1,250 2,500 Feet

RQAW

DCCM

NWI & NHD MAP

PAGE 2 OF 3

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.23 0.45 Mi

0 1,250 2,500 Feet

RQAW

DCCM

NWI & NHD MAP

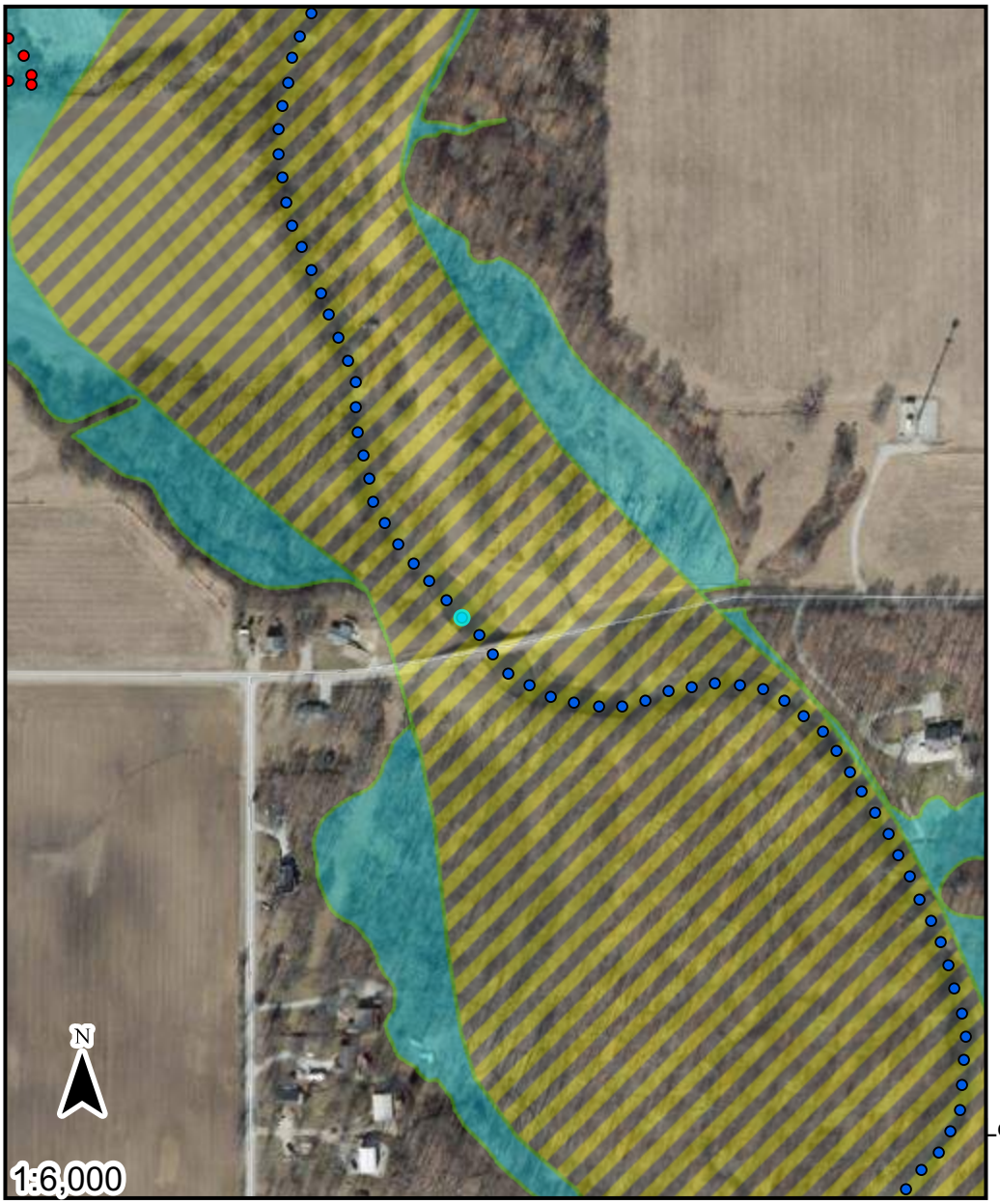
PAGE 3 OF 3

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

VERSION

1.0

1.5

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

DNR Detailed Floodway

FEMA Zone A

Not Mapped

Long: **-86.01370933684994**

Lat: **40.19797711074799**

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

County: **Hamilton**

Stream Name:
Cicero Creek

Approximate Ground Elevation: **832.9 feet (NAVD88)**

Base Flood Elevation: **837.1 Feet (NAVD88)**

Drainage Area: **Not Available**

Best Available Flood Hazard Zone: **DNR DETAILED FLOODWAY**

National Flood Hazard Zone: **Working on script**

Is a Flood Control Act permit from the DNR needed for this location? **yes**

Is a local floodplain permit needed for this location? **yes-**

Floodplain Administrator: **No Floodplain Administrator Name Available**

Community Jurisdiction: **Town Of Atlanta, ETJ**

Phone: **No Phone Number Available**

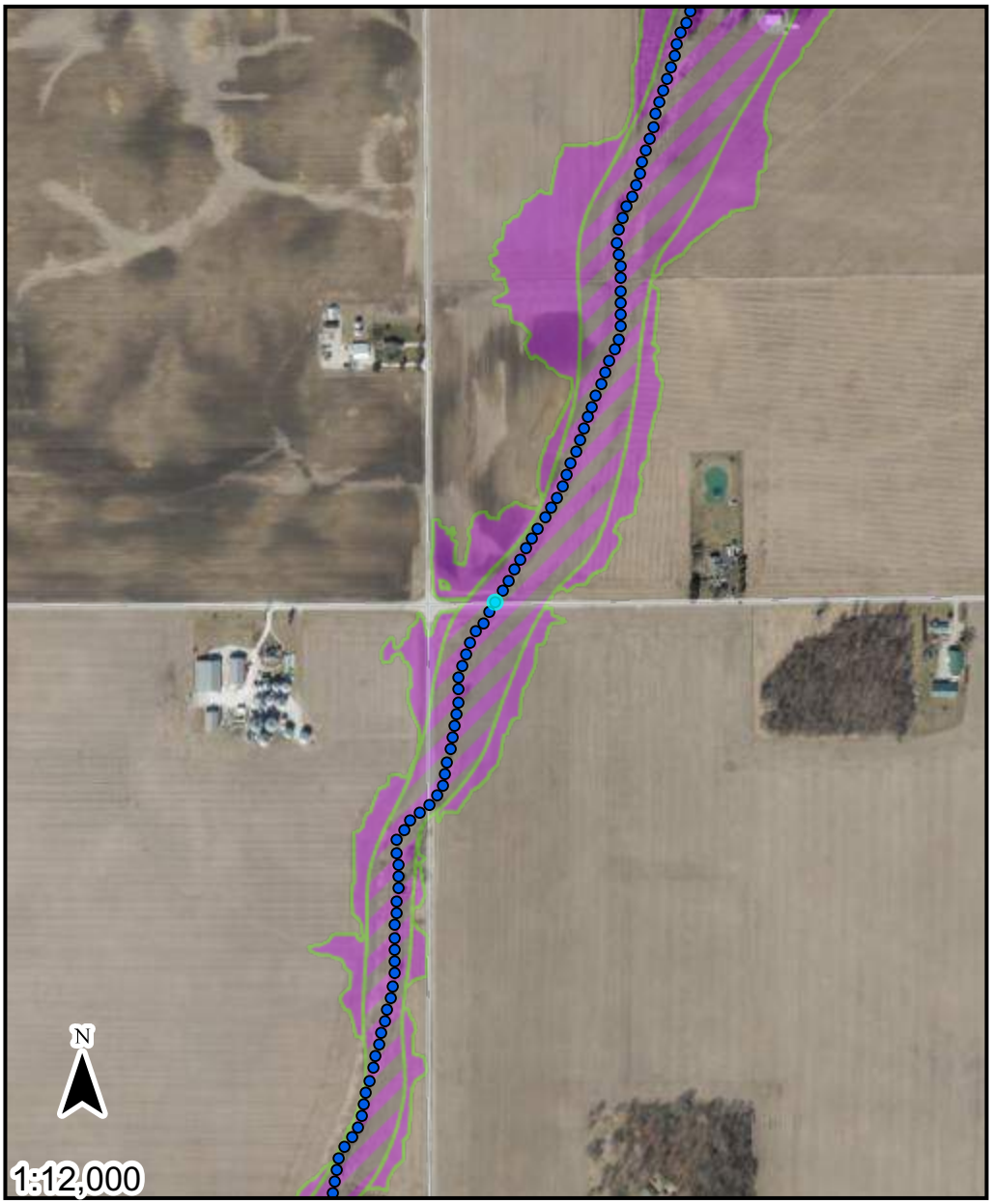
Email: **No Email Address Available**

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

Date Generated: 11/21/2023

Floodplain Analysis & Regulatory Assessment (FARA)

Indiana Department of Natural Resources



Point of Interest

Base Flood Elevation Point

VERSION

1.0

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

DNR Approximate Floodway

DNR Approximate Fringe

Not Mapped

Long: **-85.9759963878719**

Lat: **40.19807106292316**

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

County: **Hamilton**

Stream Name: **Weasel Creek**

Approximate Ground Elevation: **841.6 feet (NAVD88)**

Base Flood Elevation: **848.9 Feet (NAVD88)**

Drainage Area: **Not Available**

Best Available Flood Hazard Zone: **DNR Approximate Floodway**

National Flood Hazard Zone: **Working on script**

Is a Flood Control Act permit from the DNR needed for this location? **yes**

Is a local floodplain permit needed for this location? **yes-**

Floodplain Administrator: **CJ Taylor, Plan Commission Director**

Community Jurisdiction: **Hamilton County, ETJ**

Phone: **(317) 776-8490**

Email: **CJ.Taylor@hamiltoncounty.in.gov**

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

Date Generated: 11/21/2023

RQAW

DCCM

WATER RESOURCES MAP

PAGE 1 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

WATER RESOURCES MAP

PAGE 2 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

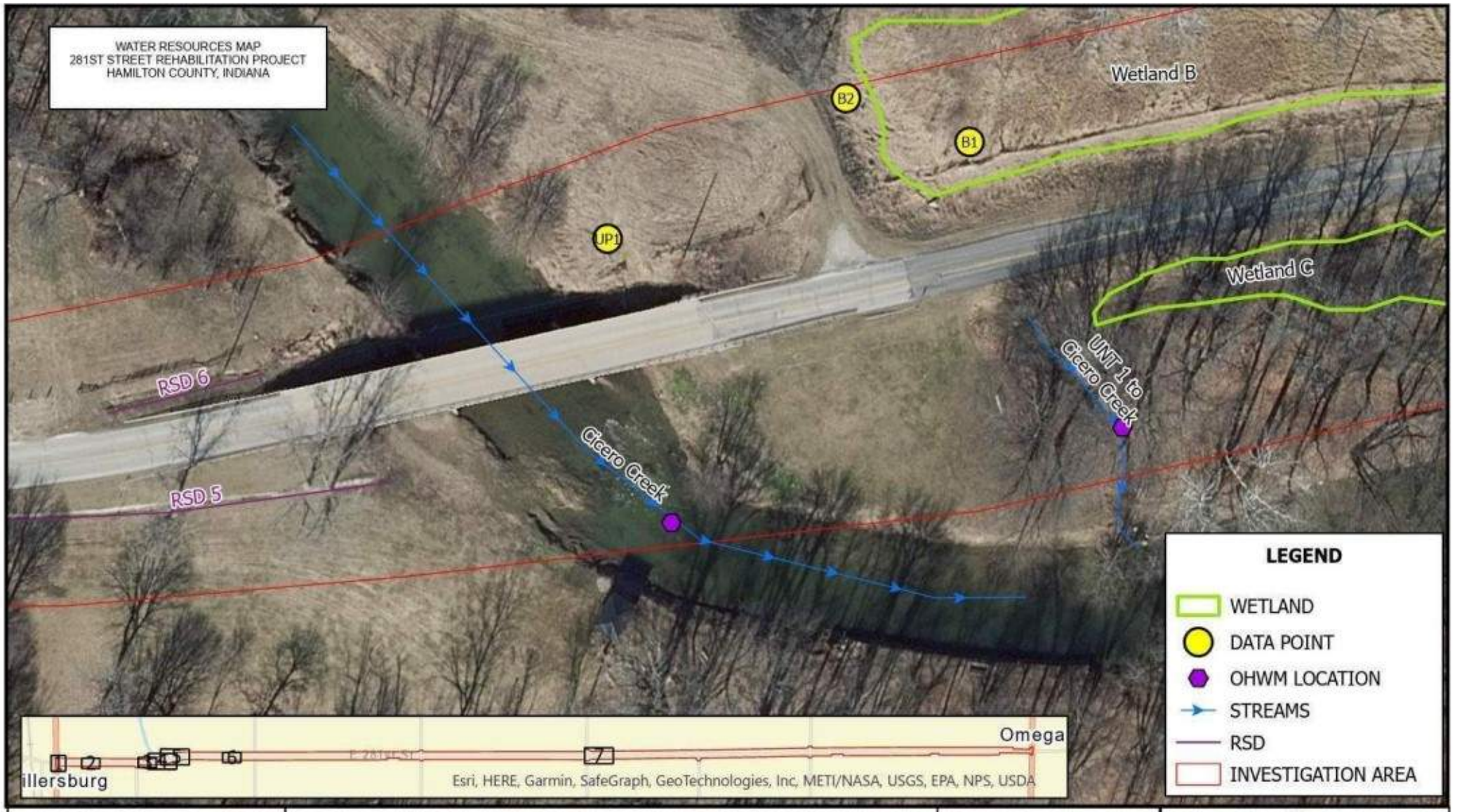
WATER RESOURCES MAP

PAGE 3 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

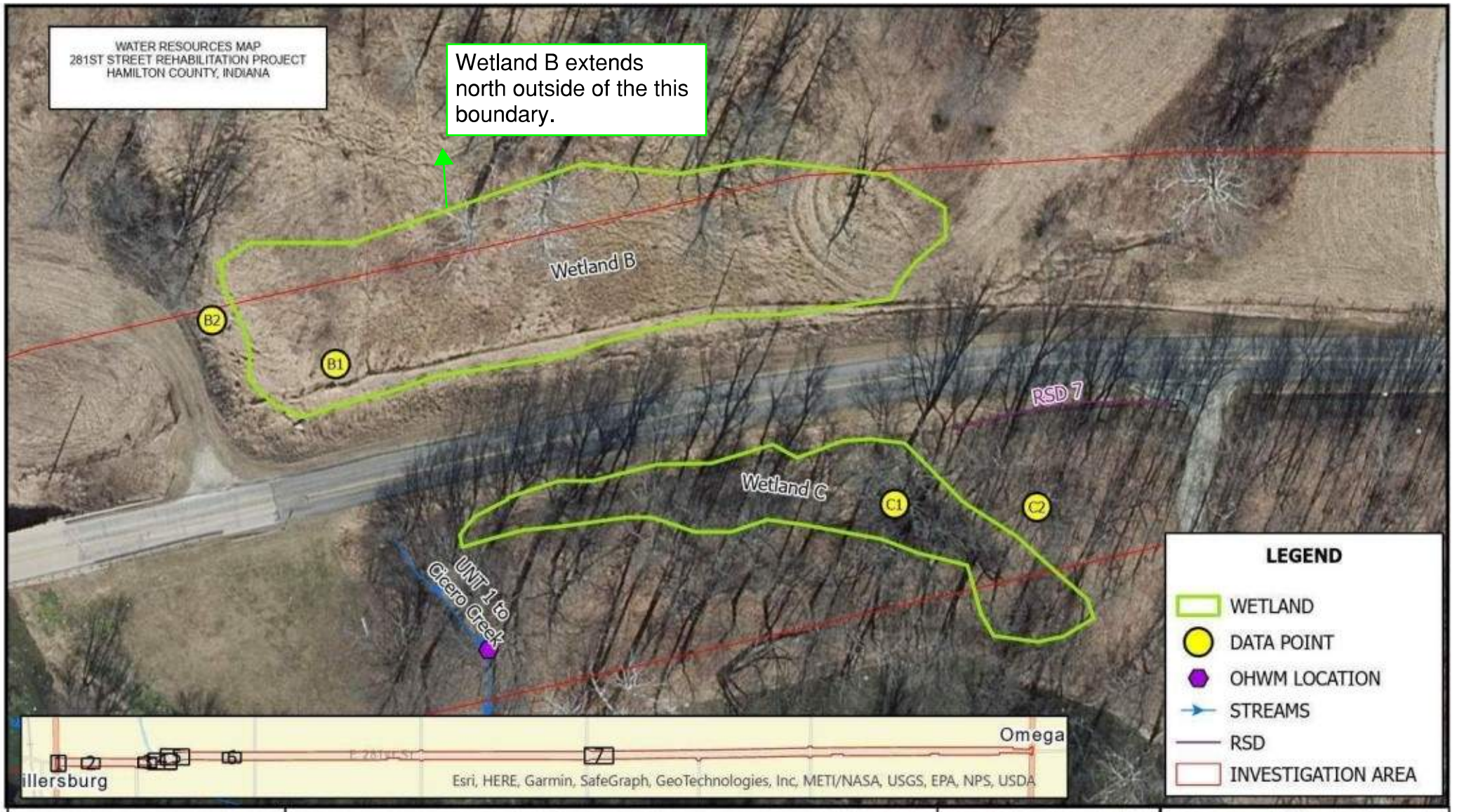
WATER RESOURCES MAP

PAGE 4 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

WATER RESOURCES MAP

PAGE 5 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

WATER RESOURCES MAP

PAGE 6 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

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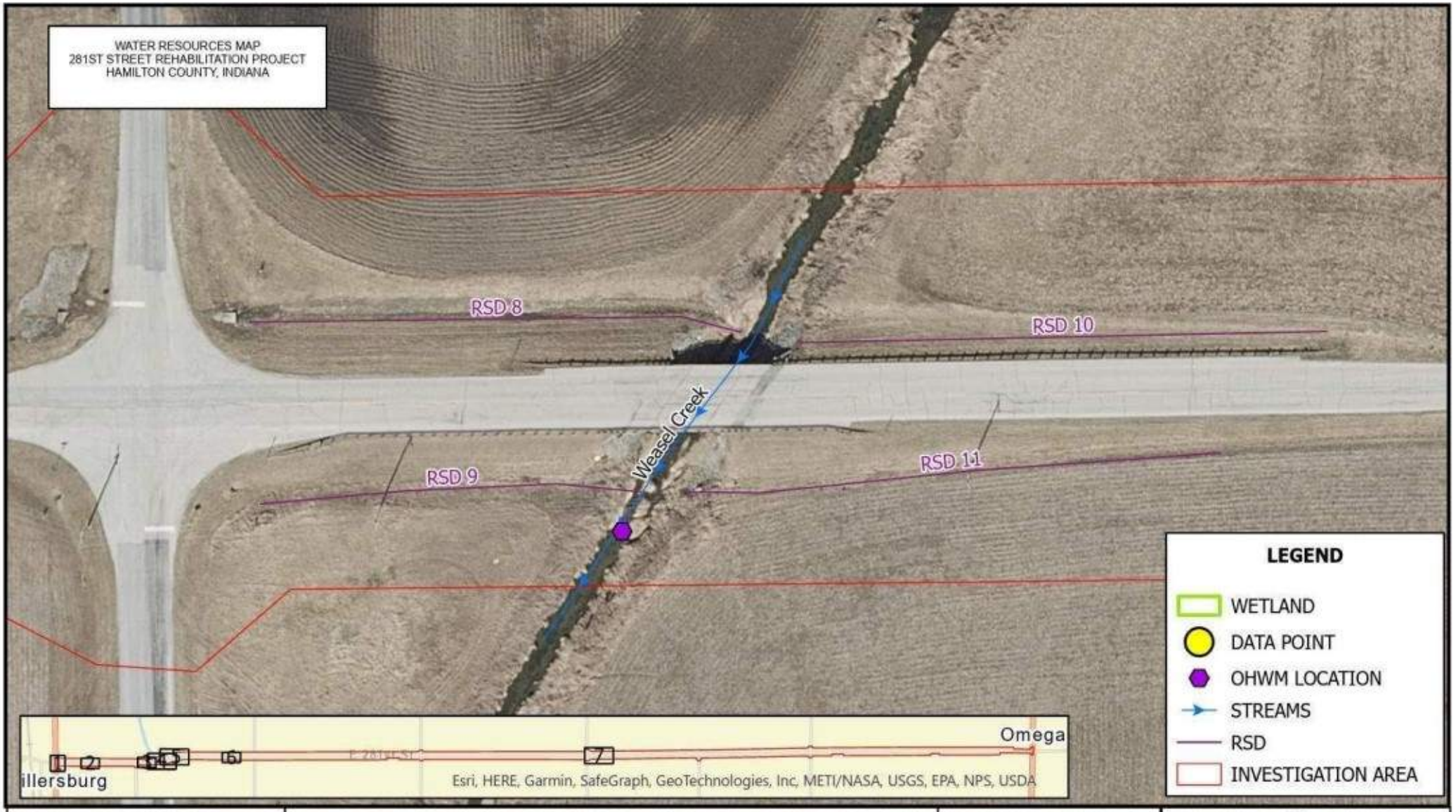

RQAW

DCCM

WATER RESOURCES MAP

PAGE 7 OF 7

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 1 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 2 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

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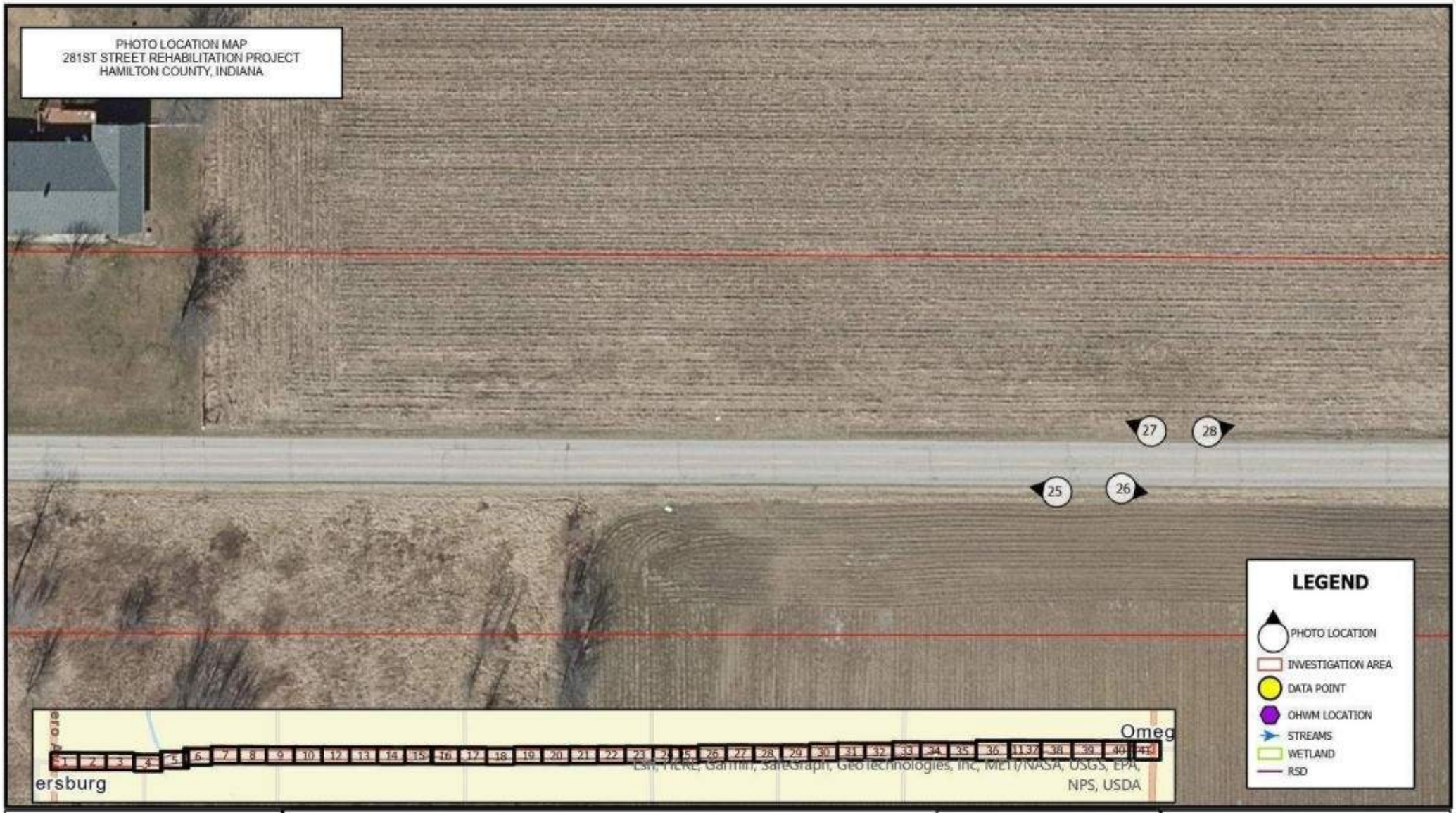


RQAW

DCCM

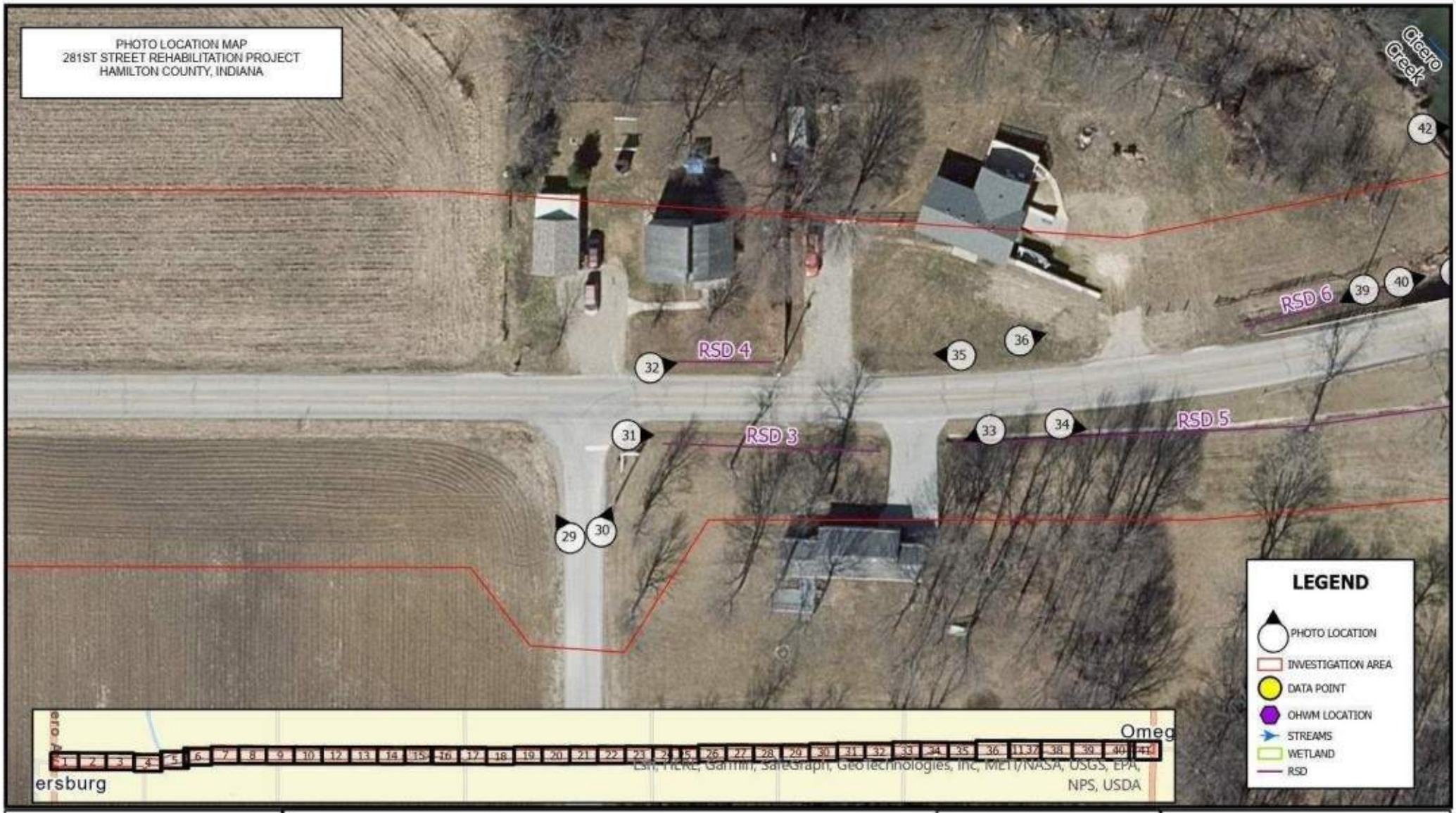
PHOTO LOCATION MAP

PAGE 3 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 4 OF 41

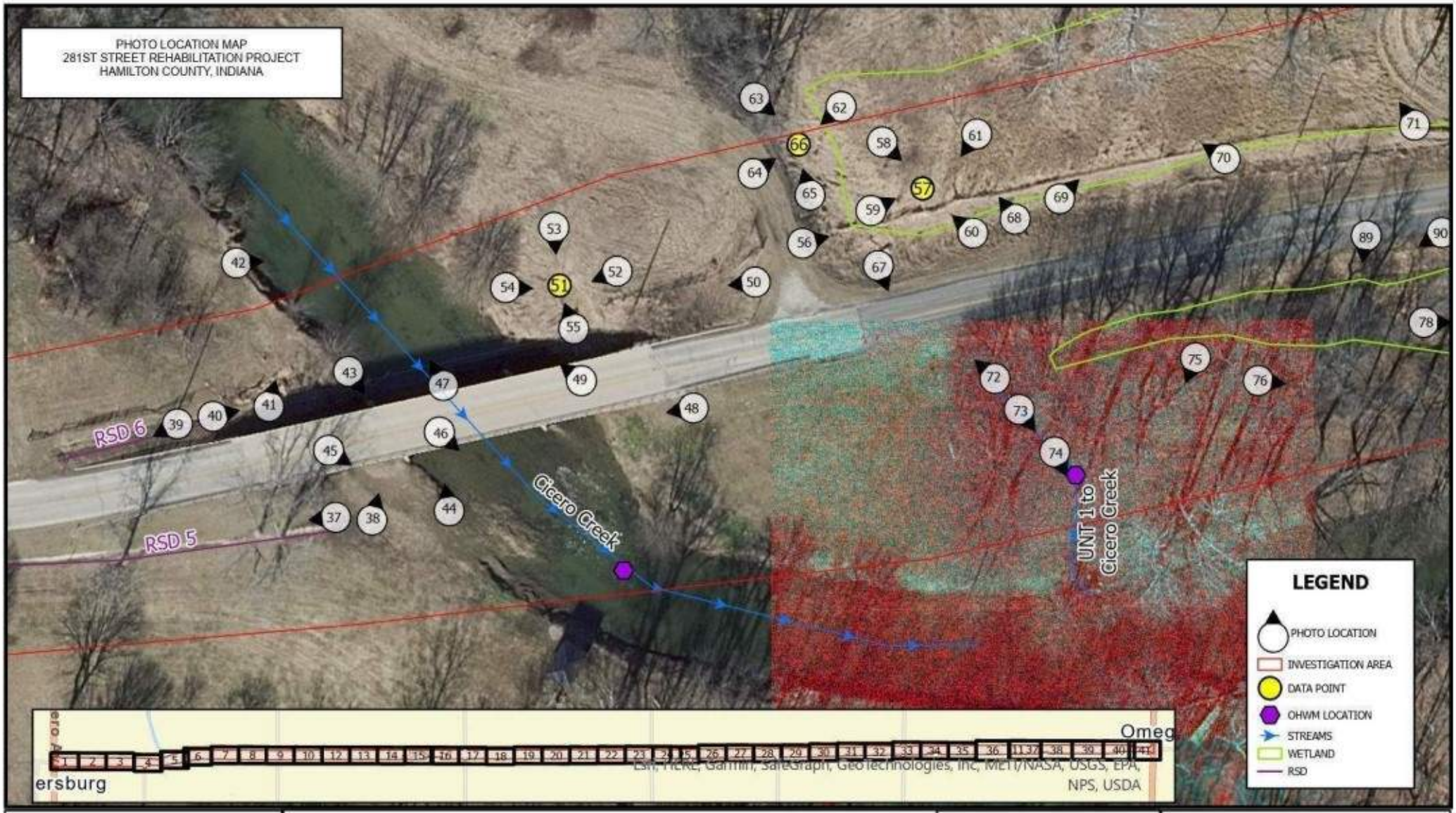
LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.01 0.03 Mi

0 70 140 Feet



RQAW

DCCM

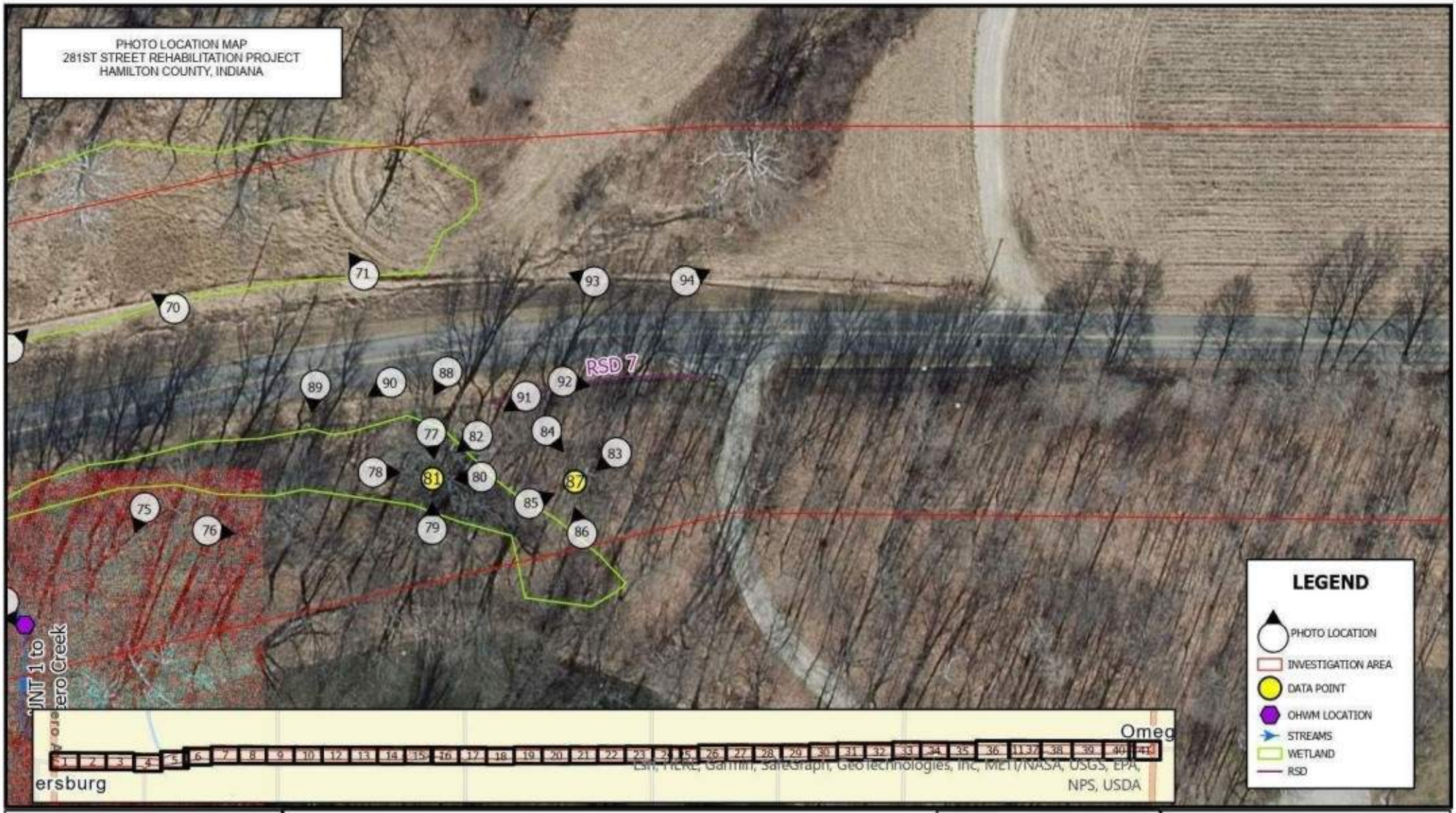
PHOTO LOCATION MAP

PAGE 5 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 6 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 7 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 8 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

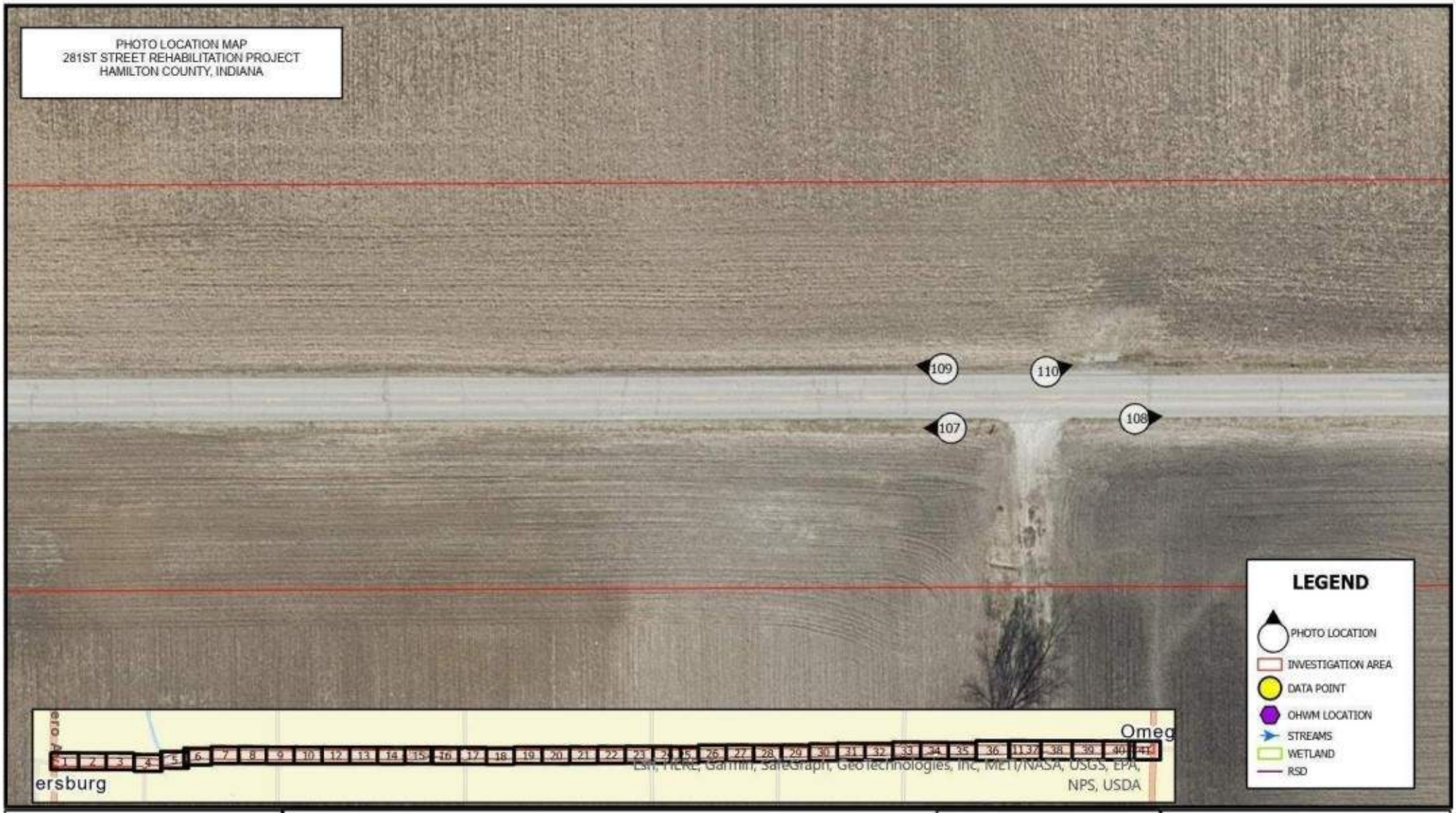
PHOTO LOCATION MAP

PAGE 9 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP	PAGE 10 OF 41	N
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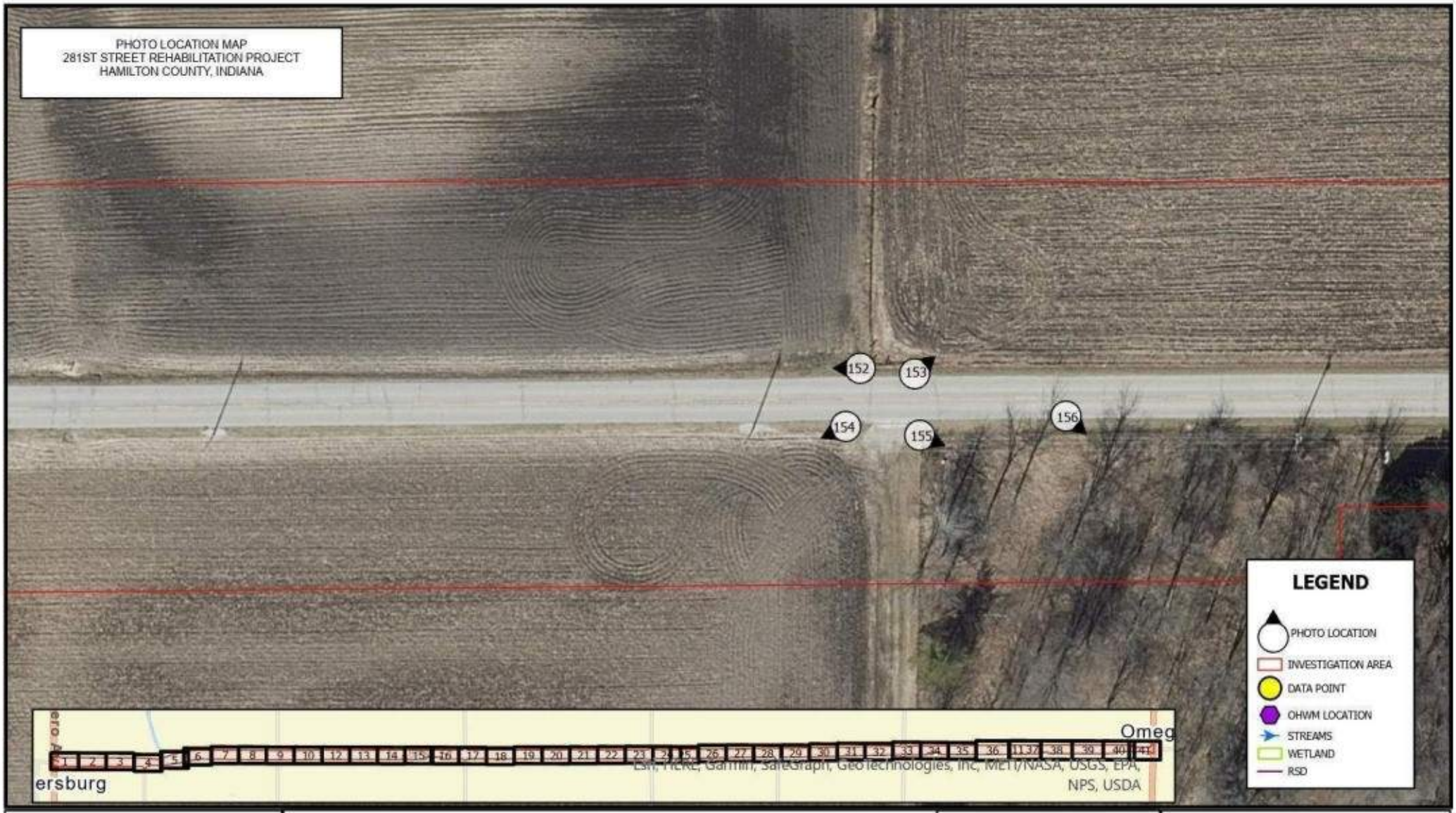


RQAW

DCCM

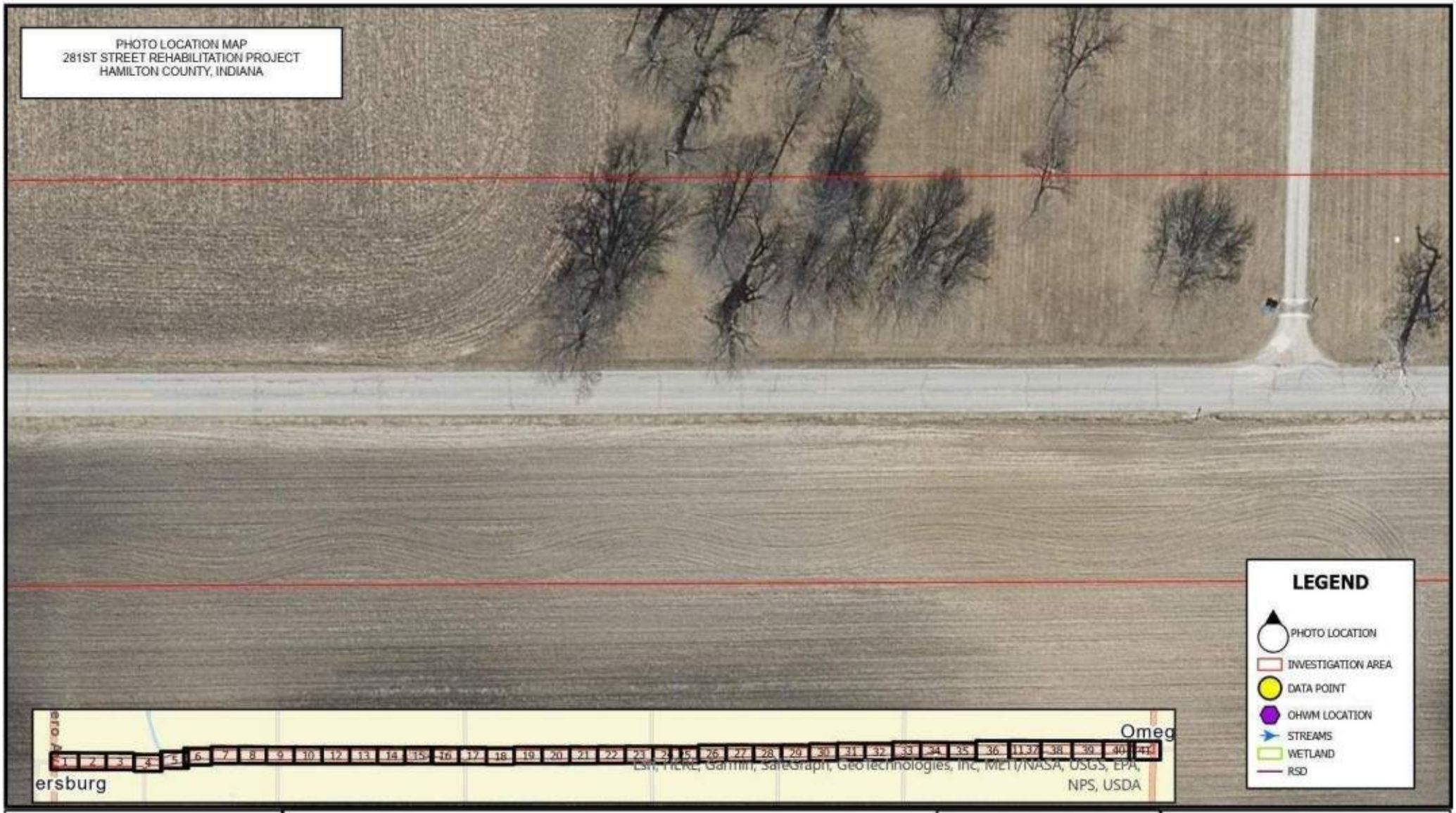
PHOTO LOCATION MAP

PAGE 11 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

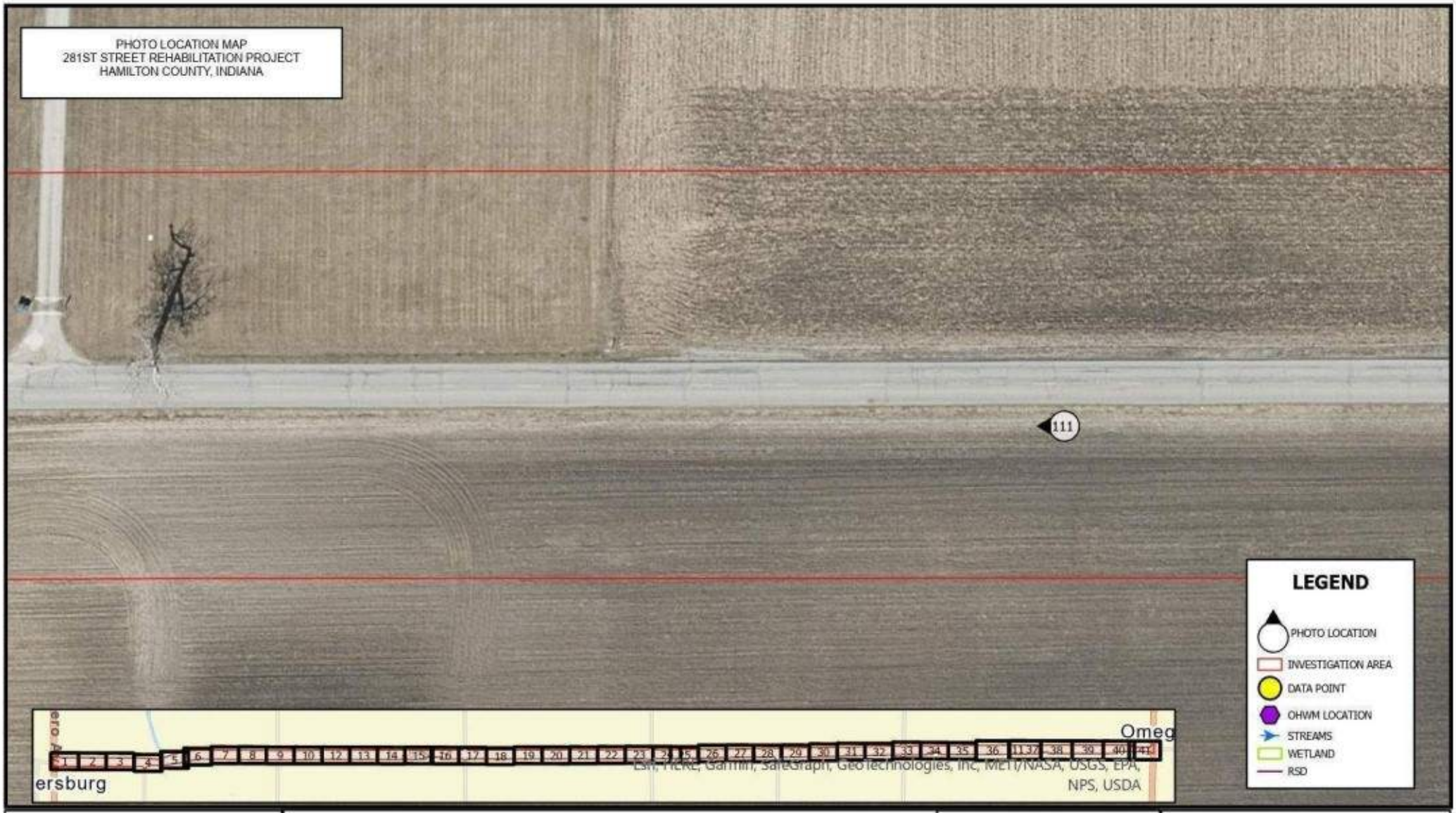
PHOTO LOCATION MAP

PAGE 12 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 13 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 14 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 15 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

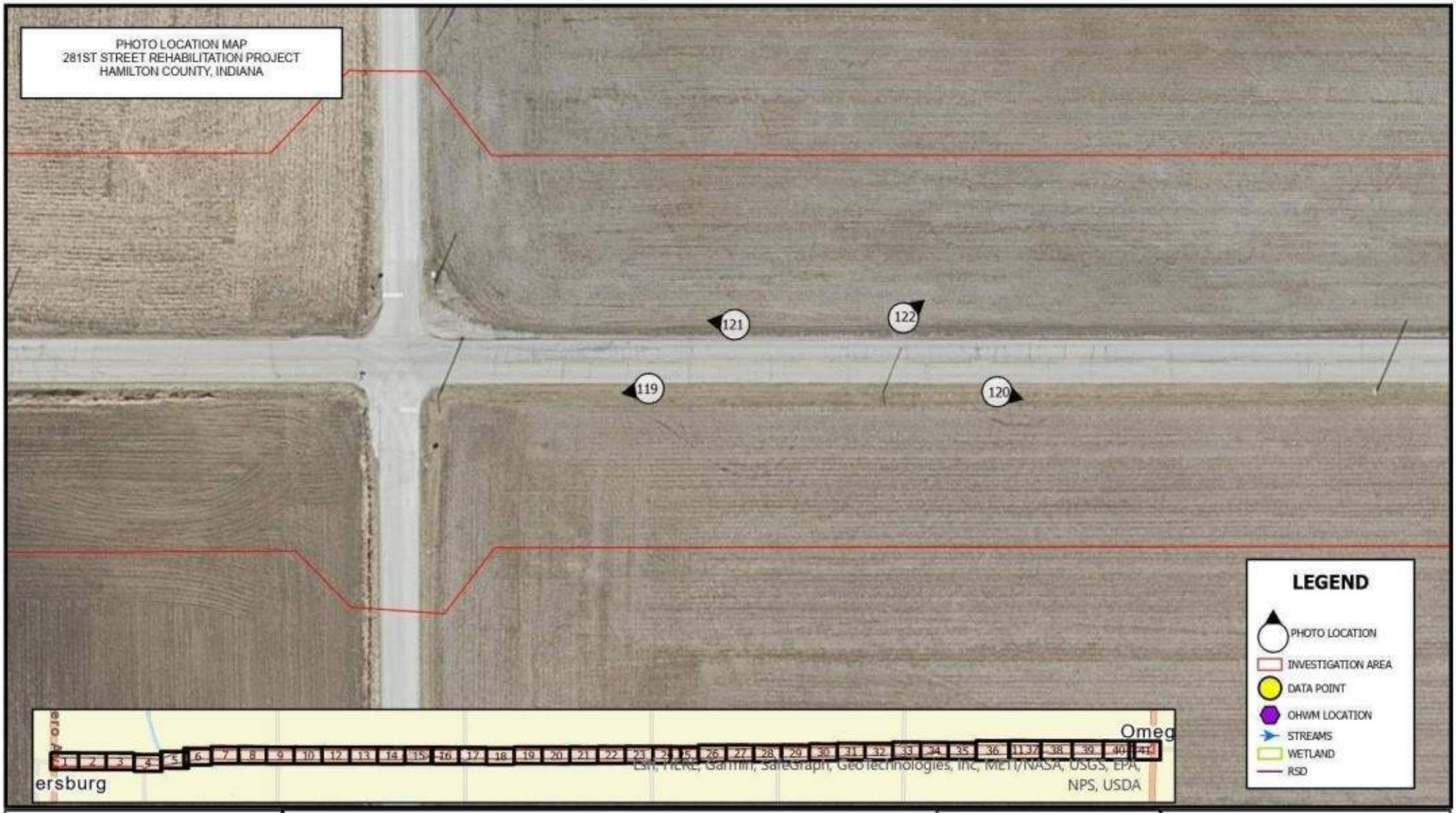
PHOTO LOCATION MAP

PAGE 16 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 17 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 18 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 19 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 20 OF 41

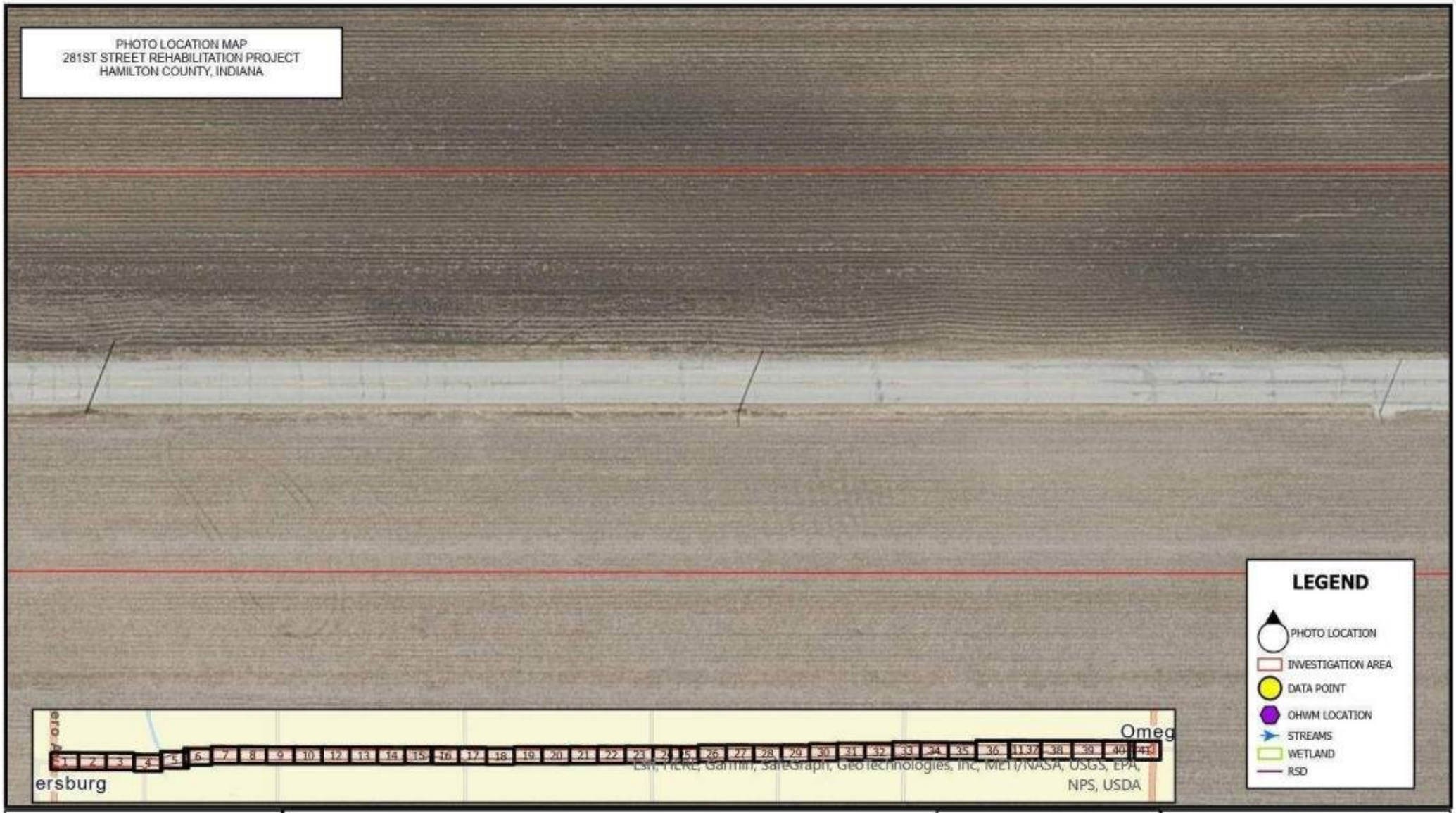
LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.01 0.03 Mi

0 70 140 Feet



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 21 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 22 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 23 OF 41

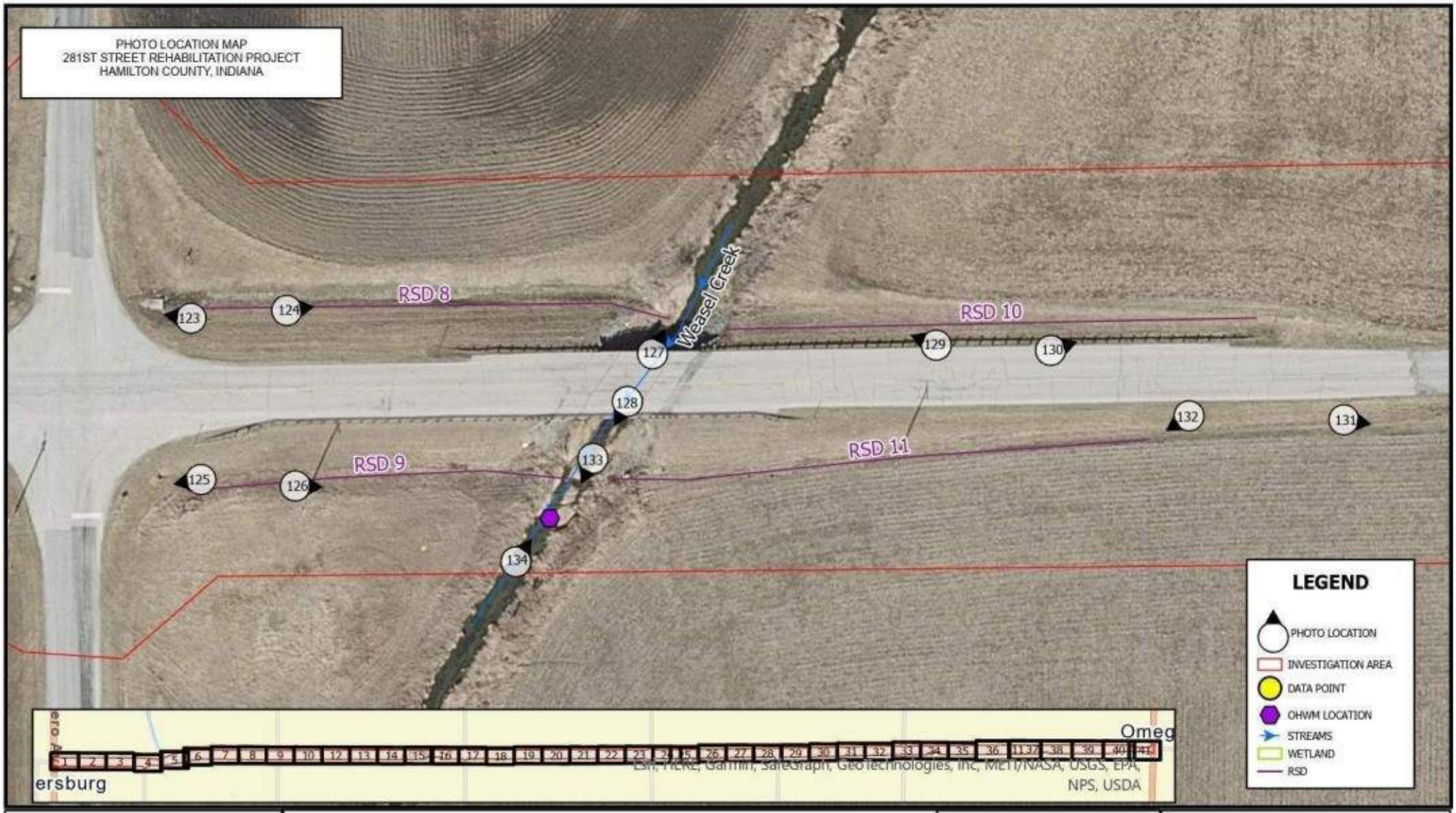
LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.01 0.03 Mi

0 70 140 Feet



RQAW

DCCM

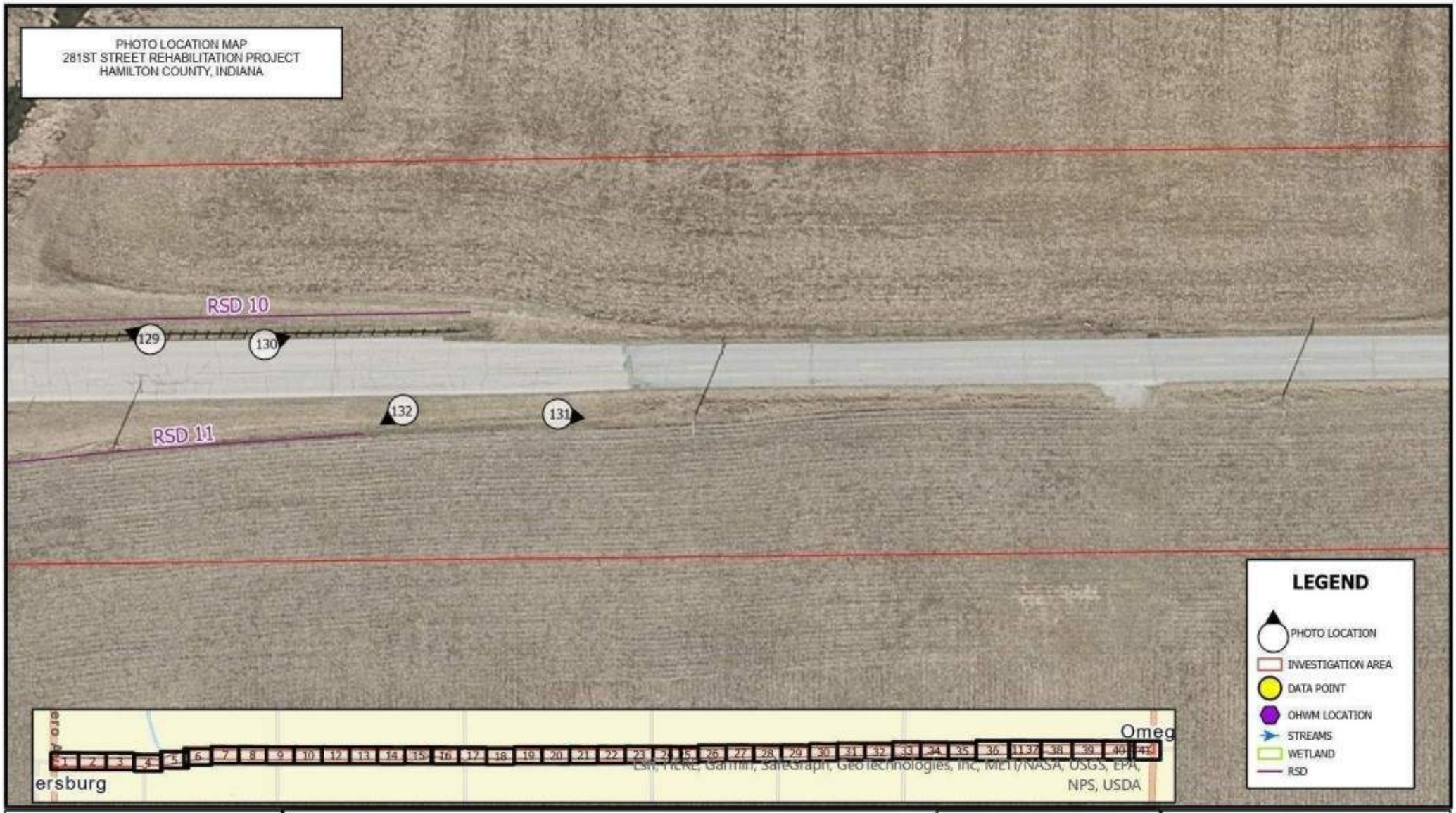
PHOTO LOCATION MAP

PAGE 24 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 25 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

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DCCM

PHOTO LOCATION MAP

PAGE 26 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

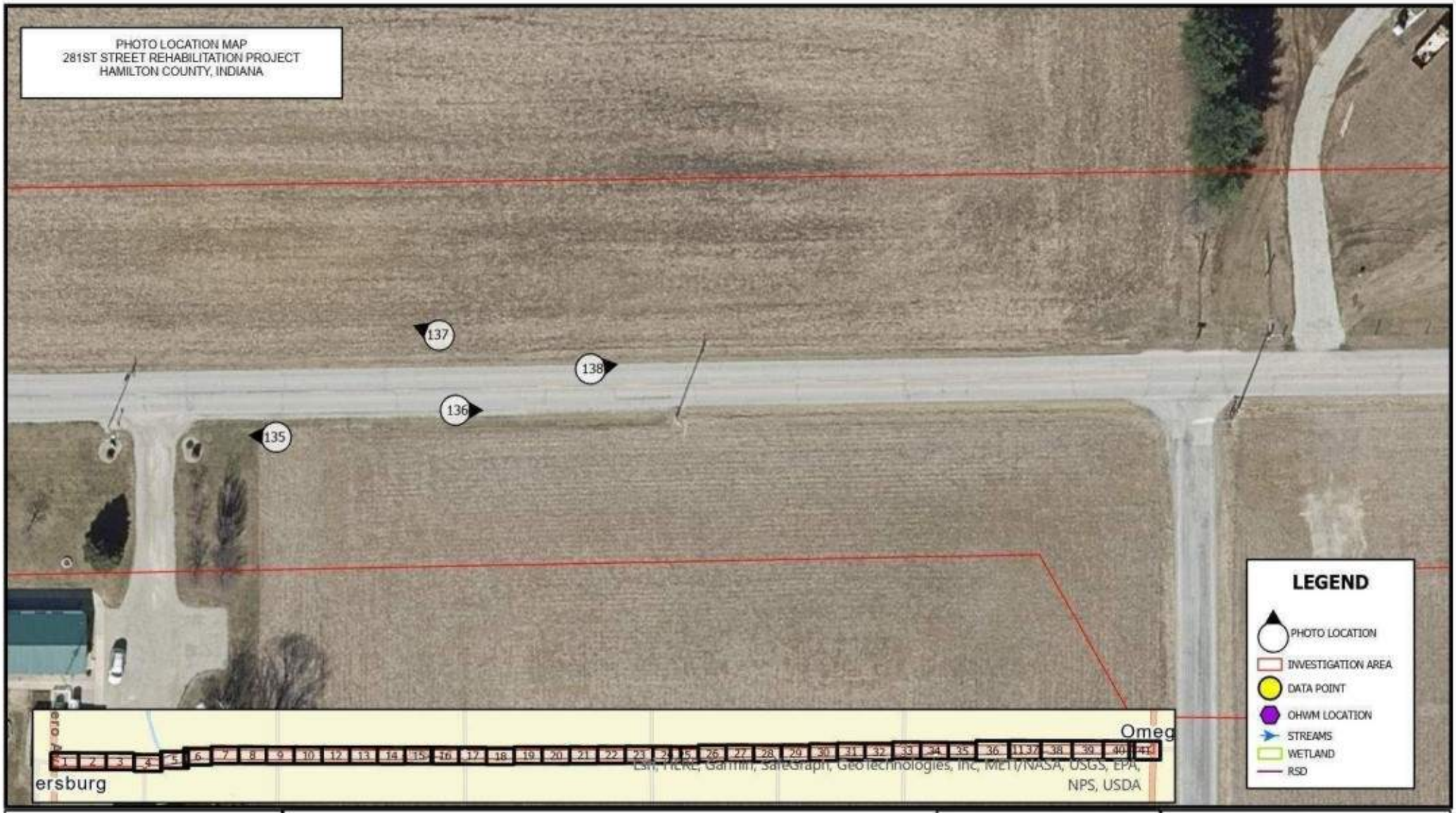
PHOTO LOCATION MAP

PAGE 27 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 28 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

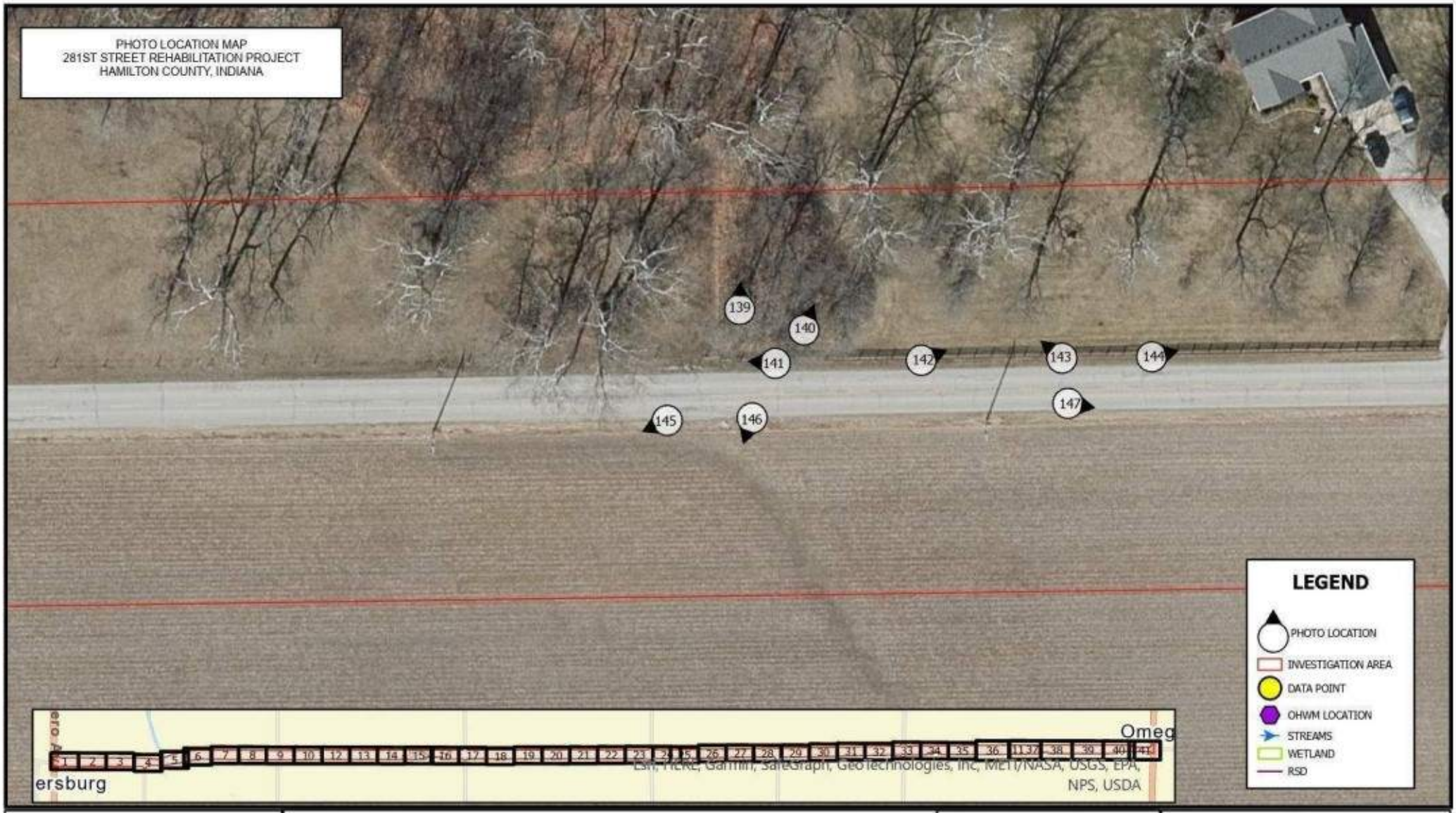
PHOTO LOCATION MAP

PAGE 29 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW / DCCM	PHOTO LOCATION MAP	PAGE 30 OF 41	N
	LOCATION: 281ST ST. FROM SR 19 TO SR 213 DES. NO.: 2003031 COUNTY: HAMILTON	Date: 11/08/2023	0 0.01 0.03 Mi 0 70 140 Feet

RQAW

DCCM

PHOTO LOCATION MAP

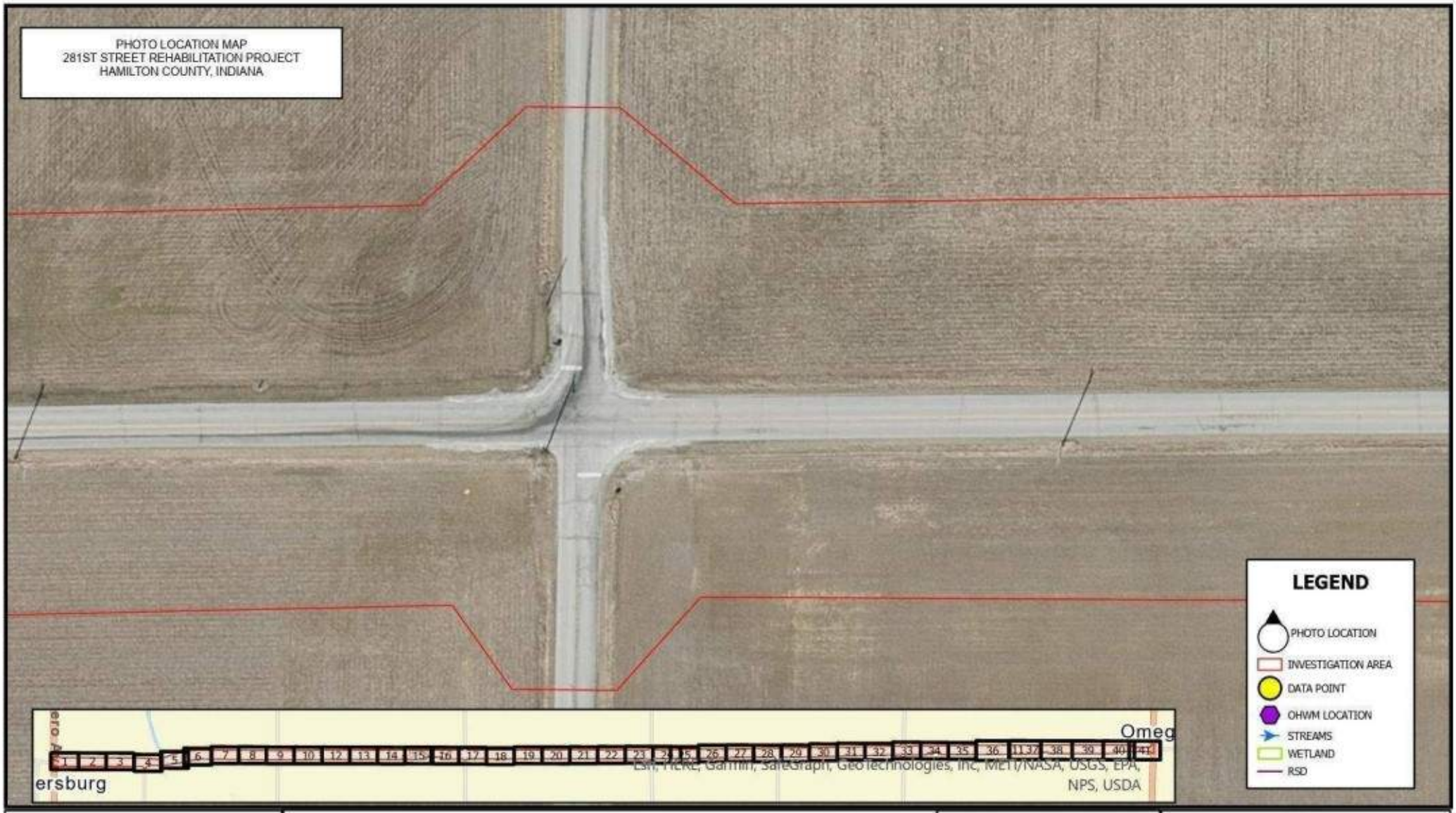
PAGE 31 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW / DCCM	PHOTO LOCATION MAP	PAGE 32 OF 41	N
	LOCATION: 281ST ST. FROM SR 19 TO SR 213 DES. NO.: 2003031 COUNTY: HAMILTON	Date: 11/08/2023	0 0.01 0.03 Mi 0 70 140 Feet



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 33 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

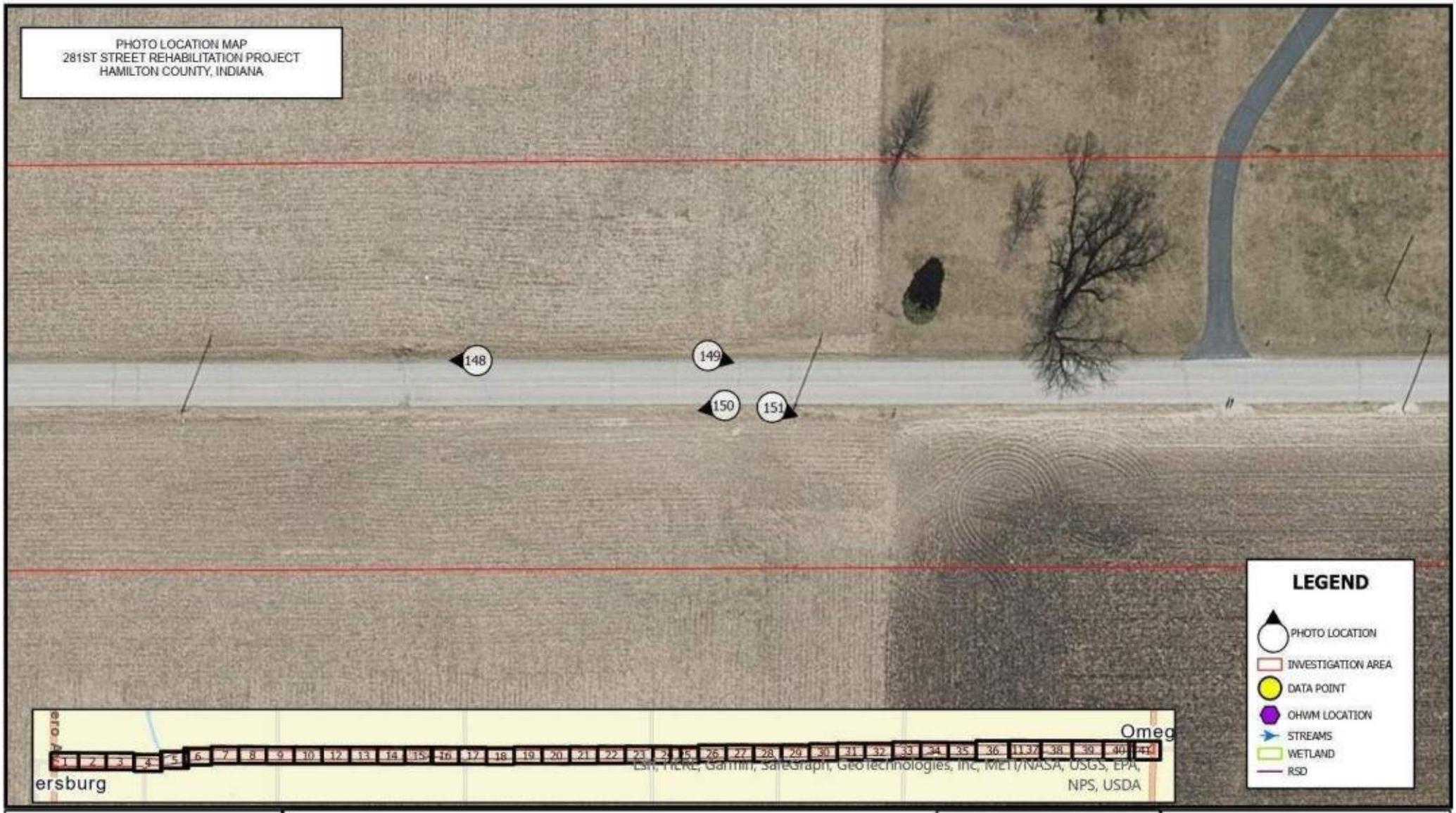
PHOTO LOCATION MAP

PAGE 34 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 35 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 36 OF 41

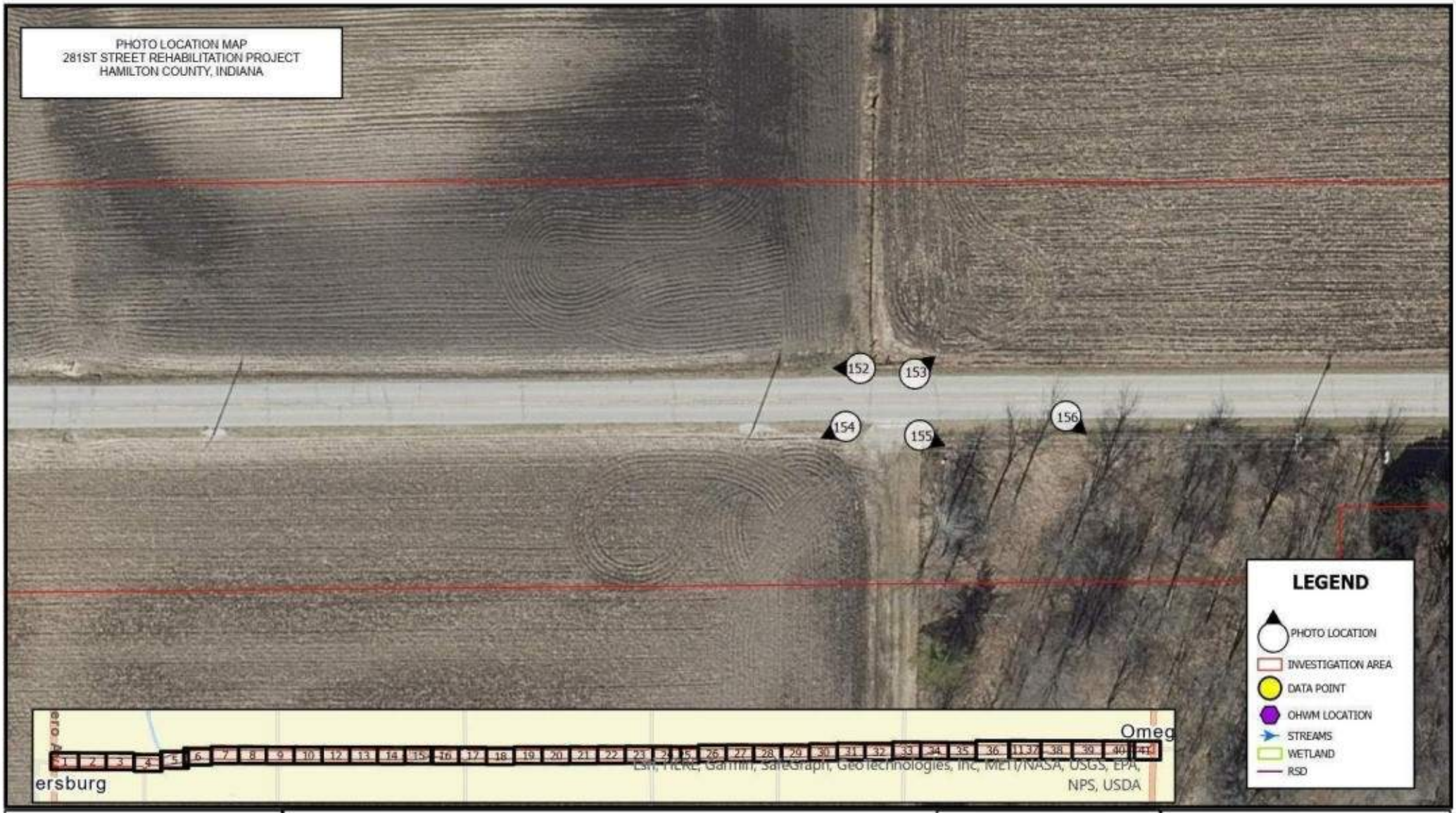
LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.01 0.03 Mi

0 70 140 Feet



RQAW

DCCM

PHOTO LOCATION MAP

PAGE 37 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW DCCM	PHOTO LOCATION MAP	PAGE 38 OF 41	N
	LOCATION: 281ST ST. FROM SR 19 TO SR 213 DES. NO.: 2003031 COUNTY: HAMILTON	Date: 11/08/2023	0 0.01 0.03 Mi 0 70 140 Feet

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 39 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 40 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

0 0.01 0.03 Mi

0 70 140 Feet

RQAW

DCCM

PHOTO LOCATION MAP

PAGE 41 OF 41

LOCATION: 281ST ST. FROM SR 19 TO SR 213
DES. NO.: 2003031
COUNTY: HAMILTON

Date: 11/08/2023

N

1. Facing north just south of 281st St looking at RSD 1 and maintained roadside. Photo taken 08/08/2023.

2. Facing south just south of 281st St looking at maintained roadside and surroundings. Photo taken 08/08/2023.

3. Facing south just north of 281st St looking at agricultural field and souroundings. Photo taken 08/08/2023.

4. Facing south just north of 281st St looking at RSD 2 and surroundings. Photo taken 08/08/2023.

5. Facing southwest just south of 281st St looking at roadside and surroundings. Photo taken 08/08/2023.

6. Facing south just south of 281st St looking at outlet of structure and Wetland A in the background. Photo taken 08/08/2023.

7. Facing southeast just south of 281st St. looking at roadside and Wetland A to the right of the photo. Photo taken 08/08/2023.

8. Looking at soil profile for data point A1 in Wetland A. Photo taken 08/08/2023.

9. Facing south just south of 281st St. looking at data point A1 location in Wetland A. Photo taken 08/08/2023.

10. Facing southeast looking at data point A1 in Wetland A. Photo taken 08/08/2023.

11. Facing north looking at data point A1 location in Wetland A. Photo taken 08/08/2023.

12. Facing west looking at data point A1 location in Wetland A. Photo taken 08/08/2023.

13. Facing northeast just south of 281st St. looking at Wetland A. Photo taken 08/08/2023.

14. Facing southeast south of 281st St. looking at data point A2 location. Photo taken 08/08/2023.

15. Facing north just south of 281st St. looking at data point A2 location. Photo taken 08/08/2023.

16. Facing west just south of 2841st St. looking at data point A2 location. Photo taken 08/08/2023.

17. Facing southwest just south of 281st St. looking at data point A2 location. Photo taken 08/08/2023.

18. Looking at soil profile for data point A2. Photo taken 08/08/2023.

19. Facing northeast just north of 281st St. looking at maintained roadside and surroundings. Photo taken 08/08/2023.

20. Facing north just north of 281st St. looking at open field and surroundings. Photo taken 08/08/2023.

21. Facing west just north of 281st St. looking at roadside and surroundings. Photo taken 08/08/2023. .

22. Facing south just north of 281st St. looking at inlet of structure. Photo taken 08/08/2023. .

23. Facing northeast just north of 281st St. looking at open field and surroundings. Photo taken 08/08/2023.

24. Facing south just north of 281st St. looking at open field and surroundings. Photo taken 08/08/2023.

25. Facing west just south of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

26. Facing east just south of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

27. Facing west just north of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

28. Facing east just north of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

29. Facing northwest just south of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

30. Facing northeast just south of 281st St. looking at maintained roadside. Photo taken 08/08/2023.

31. Facing east just south of 281st St. looking at RSD 3 and maintained roadside. Photo taken 08/08/2023.

32. Facing east just north of 281st St. looking at RDS 4 and maintained roadside. Photo taken 08/08/2023.

33. Facing southwest just south of 281st St. looking at RSD 5 and maintained roadside. Photo taken 08/08/2023.

34. Facing southeast looking at RSD 5 and maintained roadside. Cicero Creek in the background. Photo taken 08/08/2023.

35. Facing west just north of 281st St. looking at maintained roadside and surroundings. Photo taken 08/08/2023

36. Facing east just north of 281st St. looking at maintained roadside and surroundings. Photo taken 08/08/2023.

37. Facing west just south of 281st St. looking at RSD 5. Photo taken 08/08/2023.

38. Facing north just south of 281st St. looking at Structure 29-00064 which carries 281st St. over Cicero Creek. Photo taken 08/08/2023.

39. Facing west just north of 281st St. looking at RSD 6 and roadside. Photo taken 08/08/2023.

40. Facing east looking at Little Cicero Creek under structure NBI: 400046. Photo taken 08/08/2023.

41. Facing northeast just north of 281st St. looking at Cicero Creek and surroundings. Photo taken 08/08/2023.

42. Facing east looking at Cicero Creek upstream of structure NBI: 400046. Photo taken 08/08/2023.

43. Facing southeast just north of 281st St. looking under 281st St. Photo taken 08/08/2023.

44. Facing north just south of 281st St. looking upstream of Cicero Creek. Photo taken 08/08/2023.

45. Facing southeast looking at Cicero Creek from 281st St. Photo taken 08/08/2023.

46. Facing south looking at the location of Cicero Creel OHWM location. Photo taken 08/08/2023.

47. Facing northwest looking at upstream of Cicero Creek from 281st St. Photo taken 08/08/2023.

48. Facing southwest looking at Cicero Creek from 281st St. Photo taken 08/08/2023.

49. Facing northwest looking at Cicero Creek and surroundings from 281st St. Photo taken 08/08/2023.

50. Facing west just south of 281st St. looking at roadside and surroundings. Photo taken 08/08/2023.

51. Looking at soil profile for Upland data point UP1. Photo taken 08/08/2023.

52. Facing west just south of 281st St. looking at UP1 data point location. Photo taken 08/08/2023.

53. Facing south just south of 281st St. looking at UP1 data point location. Photo taken 08/08/2023.

54. Facing east just south of 281st St. looking at UP1 data point location. Photo taken 08/08/2023.

55. Facing north just south of 281st St. looking at UP1 data point location. Photo taken 08/08/2023.

56. Facing east just north of 281st St. looking at Wetland B and surroundings. Photo taken 08/08/2023.

57. Looking at soil profile for data point B1 in Wetland B. Photo taken 08/08/2023.

58. Facing southeast just south of 281st St looking at data point B1 location in Wetland B. Photo taken 08/08/2023.

59. Facing northeast just south of 281st St. looking at data point B1 location in Wetland B. Photo taken 08/08/2023.

60. Facing northwest just north of 281st St. looking at data point B1 location in Wetland B. Photo taken 08/08/2023.

61. Facing southwest just north of 281st St. looking at data point B1 location in Wetland B. Photo taken 08/08/2023.

62. Facing southwest just north of 281st St. looking at data point B2 location. Photo taken 08/08/2023.

63. Facing southeast just north of 281st St. looking at data point B2 location. Photo taken 08/08/2023.

64. Facing northeast just north of 281st St. looking at data point location B2. Photo taken 08/08/2023.

65. Facing north just north of 281st St. looking at data point B2 location. Photo taken 08/08/2023.

66. Looking at soil profile for data point B2. Photo taken 08/08/2023.

67. Facing south just north of 281st St. looking at inlet of structure near Wetland B. Photo taken 08/08/2023.

68. Facing northwest just north of 281St St. looking at Wetland B. Photo taken 08/08/2023.

69. Facing northeast just north of 281st St. looking at Wetland B. Photo taken 08/08/2023.

70. Facing northwest just north of 281st St. looking at Wetland B. Photo taken 08/08/2023.

71. Facing north just north of 281st St. looking at Wetland B and surroundings. Photo taken 08/08/2023.

72. Facing northwest just south of 281st St. looking at UNT 1 to Cicero Creek from outlet of structure under 281st St.

73. Facing southeast just south of 281st St looking at UNT 1 to Cicero Creek and surroundings. Photo taken 08/08/2023.

74. Facing south just south of 281st St. looking at the OHWM of UNT 1 of Cicero Creek. Photo taken 08/08/2023.

75. Facing southwest just south of 281st St. looking at investigation area and surroundings. Photo taken 08/08/2023.

76. Facing east just south of 281st St. looking at the investigation area and Wetland C to the left. Photo taken 08/08/2023.

77. Facing south just south of 281st St. looking at data point C1 location in Wetland C. Photo taken 08/08/2023.

78. Facing east just south of 281st St looking at data point C1 location in Wetland C. Photo taken 08/08/2023.

79. Facing north just south of 281st St. looking at data point C1 location in Wetland C. Photo taken 08/08/2023.

80. Facing west just south of 281st St. looking at data point C1 location in Wetland C. Photo taken 08/08/2023.

81. Looking at data point C1 soil profile in Wetland C. Photo taken 08/08/2023.

82. Facing southwest just south of 281st St. looking at Wetland C and surroundings. Photo taken 08/08/2023.

83. Facing southwest just south of 281st St. looking at data point C2 location. Photo taken 08/08/2023.

84. Facing southeast just south of 281st St. looking at data point C2 location. Photo taken 08/08/2023.

85. Facing northeast just south of 281st St looking at data point C2 location. Photo taken 08/08/2023.

86. Facing north just south of 281st St. looking at data point C2 location. Photo taken 08/08/2023.

87. Looking at data point C2 soil profile. Photo taken 08/08/2023.

88. Facing southwest just south of 281st St. looking at Wetland C from roadside. . Photo taken 08/08/2023.

89. Facing south just south of 281st St looking at Wetland C from roadside. . Photo taken 08/08/2023.

90. Facing southwest just south of 281st St looking at Wetland C and roadside . Photo taken 08/08/2023.

91. Facing southwest just south of 281st St. looking at RSD 7 with Wetland C in the background. . Photo taken 08/08/2023.

92. Facing east just south of 281st St. looking at RDS 7. . Photo taken 08/08/2023.

93. Facing northwest just north of 281st St. looking at maintained roadside and Wetland B in the background. . Photo taken 08/08/2023.

94. Facing northeast just north of 281st St. looking at maintained roadside and surroundings. . Photo taken 08/08/2023.

95. Facing southeast just south of 281st St. looking at NWI polygon area. Photo taken 08/08/2023.

96. Facing south just south of 281st St. looking at cleared drainage area. Photo taken 08/08/2023.

97. Facing north just south of 281st St. looking at drainage outlet of structure. Photo taken 08/08/2023.

98. Looking at soil profile for data point UP2. Photo taken 08/08/2023.

99. Facing west just south of 281st St looking at data point location UP2 . Photo taken 08/08/2023.

100. Facing south just south of 281st St. looking at data point location for UP2 . Photo taken 08/08/2023.

101. Facing east just south of 281st St. looking at data point location UP2 . Photo taken 08/08/2023.

102. Facing northeast just south of 281st St. looking at data point location for UP2 . Photo taken 08/08/2023.

103. Facing southwest just south of 281st St. looking at roadside and surroundings. . Photo taken 08/08/2023.

104. Facing east just south of 281st St looking at maintained roadside and agricultural fields. Photo taken 08/08/2023.

105. Facing west just north of 281st St. looking at maintained roadside and surroundings. Photo taken 08/08/2023.

106. Facing east just north of 281st St. looking at maintained roadside and agricultural fields. Photo taken 08/08/2023.

107. Facing west just south of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

108. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

109. Facing west just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

110. Facing east just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

111. Facing west just south of 281st St. looking at agricultural field and maintained roadside.

112.Facing east just south of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

113. Facing west just north of 281st St. looking at maintained roadside and wooded area. Photo taken 08/08/2023.

114. Facing east just north of 281st St. looking at maintained roadside and wooded area. Photo taken 08/08/2023.

115. Facing northeast just north of 281st St. looking in wooded area inside investigation area. Photo taken 08/08/2023.

116. Facing west just north of 281st St. looking at wooded area inside investigation area. Photo taken 08/08/2023.

117. Facing north just north of 281st St. looking at wooded area inside investigation area. Photo taken 08/08/2023.

118. Facing northwest just north of 281st St. looking at wooded area inside investigation area. Photo taken 08/08/2023..

119. Facing west just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

120. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

121. Facing west just north of 281st St. looking at agricultural field and maintained roadside. Photo taken 08/08/2023.

122. Facing northeast just north of 281st St. looking at agricultural field. Photo taken 08/08/2023.

123. Facing west just north of 281st St. looking at drainage structure and RSD 8. Photo taken 08/08/2023.

124. Facing east just north of 281st St. looking at RSD 8 and maintained roadside. Photo taken 08/08/2023.

125. Facing west just south of 281st St. looking at drainage structure and RSD 9. Photo taken 08/08/2023.

126. Facing east just south of 281st St. looking at RSD 9 and maintained roadside. Photo taken 08/08/2023.

127. Facing north from 281st St looking upstream of Weasel Creek. Photo taken 08/08/2023.

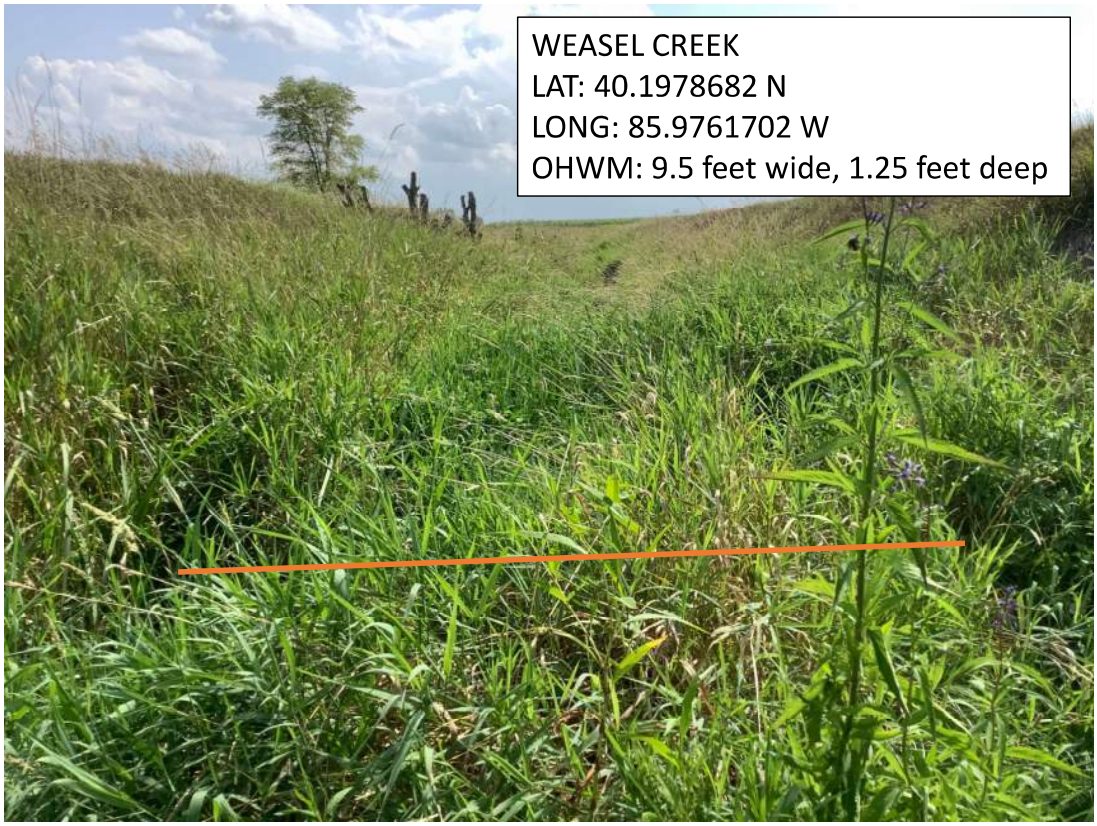
128. Facing south from 281st St. looking downstream of Weasel Creek. Photo taken 08/08/2023.

129. Facing west just north of 281st St. looking at RSD 10 and agricultural fields. Photo taken 08/08/2023

130. Facing east just north of 281st St. looking at RSD 10 and agricultural fields. Photo taken 08/08/2023

131. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023

132. Facing southwest just south of 281st St. looking at RSD 11 and agricultural fields. Photo taken 08/08/2023.



133. Facing southwest just south of 281st St looking at the OHWM for Weasel Creek location. Photo taken 08/08/2023.

134. Facing northeast just south of 281st St. looking at Weasel Creek and Structure 29-00066 which carries 281st St. over Weasel Creek. Photo taken 08/08/2023.

135. Facing west just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

136. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

137. Facing west just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

138. Facing east just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

139. Facing north just north of 281st St. looking at wooded area inside the investigation area. Photo taken 08/08/2023.

140. Facing northeast just north of 281st St. looking at wooded area inside the investigation area. Photo taken 08/08/2023

141. Facing west just north of 281st St looking at maintained roadside and surroundings. Photo taken 08/08/2023.

142. Facing east just north of 281st St. looking at maintained roadside and surroundings. Photo taken 08/08/2023.

143. Facing northwest just north of 281st St. looking at edge of wooded area inside investigation area. Photo taken 08/08/2023.

144. Facing east just north of 281st St. looking at maintained roadside and surroundings. Photo taken 08/08/2023.

145. Facing west just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

146. Facing southwest just south of 281st St. looking at agricultural field. Photo taken 08/08/2023.

147. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

148. Facing west just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

149. Facing east just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

150. Facing west just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

151. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

152. Facing west just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

153. Facing west just north of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

154. Facing west just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

155. Facing east just south of 281st St. looking at agricultural fields and maintained roadside. Photo taken 08/08/2023.

156. Facing southwest just south of 281st St. looking at wooded area inside of investigation area. Photo taken on 08/08/2023.

157. Facing west just north of 281st St. looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

158. Facing east just north of 281st St. looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

159. Facing west just south of 281st St. looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

160. Facing east just south of 281st St. looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

161. Facing west just north of 281st St. from the project termini looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

162. Facing north just north of 281st St. looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

163. Facing west just south of 281st St. from the project termini looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

164. Facing south just south of 281st St. from the project termini looking at maintained roadside and surroundings. Photo taken on 08/08/2023.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: A1
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S:12, T: 20 N, R:4 E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave
Slope(%): Lat: 40.19751 Long: -86.01948 Datum: NAD 83
Soil Map Unit Name: Crosby silt loam, fine-loamy subsoil, 0-2 % slopes NWI classification: Palustrine Emergent
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology 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:
This data point exhibited all three criteria and is considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5-ft)			
1. *Lysimachia nummularia*	75	Yes	FACW
2. *Symphyotrichum lanceolatum*	50	Yes	FAC
3. *Convolvulus arvensis*	10	No	UPL
4. *Carex frankii*	5	No	OBL
5. *Carex molesta*	5	No	FAC
6. *Amaranthus retroflexus*	1	No	FACU
7. *Ambrosia artemisiifolia*	1	No	FACU
8.			
9.			
10.			
	147	= Total Cover	

Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
	0	= 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	5	x 1 =	5
FACW species	75	x 2 =	150
FAC species	55	x 3 =	165
FACU species	2	x 4 =	8
UPL species	10	x 5 =	50
Column Totals:	147 (A)		378 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: A1

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
0-10	10YR 4/2	100					Silt Loam	
10-20	10YR 4/2	95	10YR 5/6	5	C	PL	Silt Loam	

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did exhibit Hydric Soils.

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 along 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)
- 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): 6

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This data point did exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: A2
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: This data point did exhibit hydrophytic vegetation.
Landform (hillslope, terrace, etc): Hillside Local relief (concave, convex, none): convex
Slope(%): 5 Lat: 40.19741 Long: -86.01953 Datum: NAD 83
Soil Map Unit Name: Crosby silt loam, fine-loamy subsoil, 0-2 % slopes 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 ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ 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	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks:
This data point did not exhibit all three criteria and is not considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Festuca rubra*	90	Yes	FACU
2. *Plantago major*	5	No	FAC
3. *Symphyotrichum pilosum*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
	0	= 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	5	x 3 =	15
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	100 (A)		395 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: A2

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
0-20	10YR 4/2	100						

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did not exhibit Hydric Soils.

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 along 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 X No _____ Depth (inches): 20

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This data point did not exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: B1
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S: 7, T: 20N, R 5-E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave
Slope(%): Lat: 40.19801 Long: -86.01314 Datum: NAD 83
Soil Map Unit Name: Shoals silt loam NWI classification: Scrub Shrub
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology 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:
This data point exhibited all three criteria and is considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	10	Yes	OBL
2. *Fraxinus pennsylvanica*	5	Yes	FACW
3.			
4.			
5.			
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fraxinus pennsylvanica*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	

Herb Stratum (Plot size: 5-ft)			
1. *Phalaris arundinacea*	70	Yes	FACW
2. *Impatiens capensis*	10	No	FACW
3. *Cirsium arvense*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (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	10	x 1 =	10
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	115 (A)		230 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: B1

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
0-5	10YR 4/2	90	10YR 5/6	10	C	M	Silt Loam	
5-20	10YR 4/2	85	10YR 5/6	15	C	M	Slty Clay Loam	

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did exhibit Hydric Soils.

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 along 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)
- 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): 5

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This data point did exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: B2
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S: 7, T: 20N, R 5-E
Landform (hillslope, terrace, etc): Hillside Local relief (concave, convex, none): convex
Slope(%): 2 Lat: 40.19802 Long: -86.01302 Datum: NAD 83
Soil Map Unit Name: Shoals silt loam 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 ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ 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		No	X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes		No	X	

Remarks:
This data point did not exhibit all three criteria and is not considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Rudbeckia laciniata var. laciniata*	20	Yes	UPL
2. *Phalaris arundinacea*	10	Yes	FACW
3. *Vernonia gigantea*	10	Yes	FAC
4. *Solidago canadensis*	10	Yes	FACU
5. *Verbesina alternifolia*	10	Yes	FACW
6. *Urtica dioica*	5	No	FACW
7.			
8.			
9.			
10.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 6 (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	45	x 2 =	90
FAC species	10	x 3 =	30
FACU species	10	x 4 =	40
UPL species	20	x 5 =	100
Column Totals:	85 (A)		260 (B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: B2

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
0-8	10YR 3/3	100					Sandy Loam	
8-20	10YR 3/2	85	10YR 5/6	15	C	M	Sandy Loam	

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did not exhibit Hydric Soils.

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 along 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)
- 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:

This data point did not exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: C1
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S: 7, T: 20N, R 5-E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): concave
Slope(%): Lat: 40.19783 Long: -86.01203 Datum: NAD 83
Soil Map Unit Name: Shoals silt loam NWI classification: Palustrine Forested
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology 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:
This data point exhibited all three criteria and is considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	40	Yes	FACW
2. *Acer negundo*	20	Yes	FAC
3.			
4.			
5.			
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5-ft)			
1. *Pilea pumila*	15	Yes	FACW
2. *Lysimachia nummularia*	10	Yes	FACW
3. *Carex lupulina*	5	No	OBL
4. *Symphyotrichum lateriflorum var. angustifolium*	5	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
	35	= Total Cover	

Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (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	65	x 2 =	130
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	95 (A)		220 (B)

Prevalence Index = B/A = 2.32

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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

Remarks: (Include photo numbers here or on a separate sheet.)
This data point did exhibit hydrophytic vegetation.

SOIL

Sampling Point: C1

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
0-10	10YR 3/2	90	10YR 5/6	10		M		
10-20	10YR 3/3	90	10YR 5/6	10	C	M		

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point exhibited Hydric Soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X 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)
- ___ Oxidized Rhizospheres along 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)
- 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): 7

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This data point did exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: C2
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S: 7, T: 20N, R 5-E
Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): convex
Slope(%): 10 Lat: 40.19784 Long: -86.01185 Datum: NAD 83
Soil Map Unit Name: Shoals silt loam 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 ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ 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
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
This data point did not exhibit all three criteria and is not considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Aesculus glabra*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Festuca rubra*	5	Yes	FACU
2. *Lactuca floridana*	5	Yes	FACU
3. *Asarum canadense*	3	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	13	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1. *Parthenocissus quinquefolia*	10	Yes	FACU
2.			
	10	= 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: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	23	x 4 =	92
UPL species	0	x 5 =	0
Column Totals:	38 (A)		137 (B)

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did not exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: C2

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
0-9	10YR 3/2	100					Sandy Loam	
9-20	10YR 3/2	95	10YR 5/6	5	C	M		

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did not exhibit Hydric Soils.

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 along 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:

This data point did not exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: UP1
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S: 7, T: 20N, R 5-E
Landform (hillslope, terrace, etc): Hillside Local relief (concave, convex, none): convex
Slope(%): 2 Lat: 40.19787 Long: -86.01358 Datum: NAD 83
Soil Map Unit Name: Shoals silt loam 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 ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ 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 ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
This data point did not exhibit all three criteria and is not considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	2	Yes	FAC
2.			
3.			
4.			
5.			
	2	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1. *Fraxinus pennsylvanica*	2	Yes	FACW
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Phalaris arundinacea*	70	Yes	FACW
2. *Urtica dioica*	5	No	FACW
3. *Oenothera elata*	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	77	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1. *Vitis riparia*	10	Yes	FACW
2.			
	10	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (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	0	x 1 =	0
FACW species	89	x 2 =	178
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	91 (A)		184 (B)

Prevalence Index = B/A = 2.02

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: UP1

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
0-20	10YR 3/3	100					Loamy Sand	

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did not exhibit Hydric Soils.

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 along 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)
- 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 _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This data point did not exhibit Wetland Hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: 281St Street Rehab Project Des. 2003031 City/County: Hamilton County Sampling Date: 08/08/2023
Applicant/Owner: Hamilton County State: Indiana Sampling Point: UP2
Investigator(s): Jenna Garrison, Joe Dabkowski Section, Township, Range: S: 7, T: 20N, R 5-E
Landform (hillslope, terrace, etc): Local relief (concave, convex, none): concave
Slope(%): Lat: 40.19791 Long: -86.00752 Datum: NAD 83
Soil Map Unit Name: Brookston silty clay loam 0-2 % slopes 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 , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology 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		No	X	**Is the Sampled Area within a Wetland?** Yes No X
Wetland Hydrology Present?	Yes		No	X	

Remarks:
This data point did not exhibit all three criteria and is not considered within a wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30-ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15-ft)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5-ft)			
1. *Phalaris arundinacea*	50	Yes	FACW
2. *Cirsium arvense*	20	Yes	FACU
3. *Verbena urticifolia*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: 30-ft)			
1.			
2.			
	0	= 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	50	x 2 =	100
FAC species	5	x 3 =	15
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	75 (A)		195 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ 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.)
This data point did exhibit Hydrophytic Vegetation.

SOIL

Sampling Point: UP2

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
0-7	10YR 3/2	100						
7-20	10YR 4/2	95	10YR 5/6		C	PL		

[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)
- ___ 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)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (TF12)
- ___ 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 point did not exhibit Hydric Soils.

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 along 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:

This data point did not exhibit Wetland Hydrology.

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: November 30, 2023

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Jenna Garrison, RQAW Corporation, 8770 North Street, Suite 110, Fishers, IN. 46038

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: Des. No. 2003031

Hamilton County, with funding from the Federal Highway Administration (FHWA), proposes to proceed with a roadway project in Hamilton County, Indiana (Des. No. 2003031). The project will include widening 281st street to meet current Indiana Department of Transportation (INDOT) standards. Small structures will be replaced as needed and a curb and gutter with storm sewer inlets will be installed near the Town of Omega.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Indiana County/parish/borough: Hamilton City: Arcadia/ Omega, IN

Center coordinates of site (lat/long in degree decimal format):

	West Coordinates	**East Coordinates**
Latitude:	40.19781° N	40.19846° N
Longitude:	-86.02244° W	-85.93922° W

Universal Transverse Mercator:
West- 16T 583203 4450170 East- 16T 590286 4450324

Name of nearest waterbody: Cicero Creek, UNT 1 to Cicero Creek and Weasel Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s): 08/08/2023

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Cicero Creek	40.19770 N	-86.01371 W	271 linear feet (0.36 acre)	Non-wetland	Non Section 10/Section404
UNT 1 to Cicero Creek	40.19763 N	-86.01269 W	26 linear feet (0.002 acre)	Non-wetland	Non Section 10/Section404
Weasel Creek	40.19802 N	-85.976053W	287 linear feet (0.06 acre)	Non-wetland	Non Section 10/Section404
Wetland A	40.19746N	-86.01942W	0.05 acre	Wetland	Non Section 10/Section404
Wetland B	39.69263N	-86.66535W	0.5 acre	Wetland	Non Section 10/Section404
Wetland C	39.75121N,	-86.65090W	0.2 acre	Wetland	Non Section 10/Section404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Maps: Indiana GIO Library, IndianaMap, USGS, NWI

■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report. Rationale:_____.

☐ Data sheets prepared by the Corps:_____.

☐ Corps navigable waters' study:_____.

■ U.S. Geological Survey Hydrologic Atlas: USGS TNM-NHD: Data Refreshed October, 2020.
■ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.

■ U.S. Geological Survey map(s). Cite scale & quad name: Arcadia and Omega / 1:24,000.

■ Natural Resources Conservation Service Soil Survey. Citation: NRCS Web Soil Survey: Hamilton County.

■ National wetlands inventory map(s). Cite name: USFWS NWI data: Hamilton County.

☐ State/local wetland inventory map(s):_____.

■ FEMA/FIRM maps: FEMA/FIRM HamiltonCounty, Indiana.

☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)

■ Photographs: ■ Aerial (Name & Date): Ohio County / NAIP Imagery 2016.
or ■ Other (Name & Date): Photos taken: August 8, 2023.

☐ Previous determination(s). File no. and date of response letter:_____.

☐ Other information (please specify):_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

11/30/2023

Signature and date of
Regulatory staff member
completing PJD

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

Categorical Exclusion

Appendix G

Public Involvement

RQAW
INTENTIONAL INNOVATION

Fishers, IN - Corporate
8770 North St., Ste 110
Fishers, IN 46038
317.588.1798

Example Survey Letter
Sent July 5, 2023

RE: Property located along 281st Street.

Des No. 2003031 Road Rehabilitation for 281st Street in Millersburg.

Our information indicates that you own or occupy property near a proposed roadway improvement 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 8-23-7-6. 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, the project will have on your property. If it is determined later that your property is involved, someone 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 work may also include the identification and mapping of wetlands and historic resources, archaeological investigations (which may involve the survey, testing, or excavation of identified archaeological sites) and various other environmental studies. The survey and investigation are needed for the proper planning and design of this improvement project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do occur, please contact our field crew or contact me at the telephone number or address shown above.

Sincerely,
RQAW Corporation

Ryan D. Perry, PS
Director of Land Survey

Categorical Exclusion

Appendix H

Other Information

									CON	FY 2026	STATE	$37,594,000	$5,500,000	17%	$23,375,660	73%	$8,718,340	27%	$42,646,000	$42,646,000
									CON	FY 2026	STATE	$32,112,340	$1,019,340	3%	$23,375,660	73%	$8,718,340	27%	$42,646,000	$42,646,000
Hamilton County	2003031		Greenfield	Hamilton Co.	281st Street	The project will widen 281st Street, from SR 19 to Rulon Road. The pavement will be widened to 12' lanes with an improved shoulder and improved drainage. Dist:2.50	Roadway Reconstruction	Y	CE	FY 2026	STP4RM	$689,000	$551,200	80%	$137,800	20%	$0	0%	$7,726,364	$7,726,364
									CON	FY 2026	STP4RM	$5,510,000	$4,408,000	80%	$1,102,000	20%	$0	0%	$7,726,364	$7,726,364
									PE/PL	FY 2022	STP4RM	$887,364	$709,891	80%	$177,473	20%	$0	0%	$7,726,364	$7,726,364
									PE/PL	FY 2026	STP4RM	$390,000	$312,000	80%	$78,000	20%	$0	0%	$7,726,364	$7,726,364
									ROW	FY 2024	STP4RM	$250,000	$200,000	80%	$50,000	20%	$0	0%	$7,726,364	$7,726,364
Hancock County	2003034		Greenfield	Hancock Co.	CR 300 N	This project is the widening of CR 300 N between CR 700 W and CR 600 W (Mount Comfort Road) to include a two-way left-turn lane, and right-turn lanes and RAB as needed. This project will adjoin to other segments already widened, or planned for widening in the near future, to ultimately create a five-lane east-west corridor, improving traffic flow along this developing corridor northwest of Greenfield in Hancock County. This portion of CR 300 N is a key route serving Tsuda USA Corp., Mount Comfort Elementary School, and Buck Creek Township Fire Station 71. All of these entities, as well as potential residential and commercial entities, will benefit from increased capacity and level of service along this corridor. The existing CR 300 N roadway is too narrow. As development occurs along this corridor, through traffic will be greatly affected by turning movements. This project would not only improve traffic flow and provide safer turning movements with dedicated turning lanes, but bring travel lane and shoulder widths to current design and	Existing Roadway Widening	N	CE	FY 2026	STP4RM	$1,035,000	$828,000	80%	$207,000	20%	$0	0%	$9,580,380	$9,580,380
									CON	FY 2025	STP4RM	$100,000	$80,000	80%	$20,000	20%	$0	0%	$9,580,380	$9,580,380
									CON	FY 2026	STP4RM	$6,900,000	$5,520,000	80%	$1,380,000	20%	$0	0%	$9,580,380	$9,580,380
									PE/PL	FY 2023	STP4RM	$945,380	$756,304	80%	$189,076	20%	$0	0%	$9,580,380	$9,580,380
									ROW	FY 2024	STP4RM	$600,000	$480,000	80%	$120,000	20%	$0	0%	$9,580,380	$9,580,380
Hancock County	1902783		Greenfield	Hancock Co.	Stinemyer Rd	Extending Stinemyer Rd. from 500 W to 550 W Dist:.5	New Road Construction	N	CE	FY 2025	STP4RM	$365,000	$292,000	80%	$73,000	20%	$0	0%	$3,164,750	$3,164,750
									CON	FY 2025	STP4RM	$2,437,500	$1,950,000	80%	$487,500	20%	$0	0%	$3,164,750	$3,164,750
									PE/PL	FY 2022	STP4RM	$287,250	$229,800	80%	$57,450	20%	$0	0%	$3,164,750	$3,164,750
									ROW	FY 2023	STP4RM	$75,000	$60,000	80%	$15,000	20%	$0	0%	$3,164,750	$3,164,750
Hancock County	2002460		Greenfield	Hancock Co.	VARIES	Countywide Bridge inspection. Dist:N/A	Bridge - Other	Y	PE/PL	FY 2023	LOCBR	$133,143	$106,515	80%	$26,628	20%	$0	0%	$252,143	$252,143
									PE/PL	FY 2024	LOCBR	$119,000	$95,000	80%	$24,000	20%	$0	0%	$252,143	$252,143
Hancock County	1802940		Greenfield	Hancock Co.	600W	Reconstruction, turn lanes and Roundabouts added. Dist:N/A	Roadway Reconstruction	Y	CE	FY 2024	STP4RM	$892,500	$714,000	80%	$178,500	20%	$0	0%	$8,180,000	$8,180,000
									CON	FY 2023	STP4RM	$400,000	$300,000	75%	$100,000	25%	$0	0%	$8,180,000	$8,180,000
									CON	FY 2024	STP4RM	$5,950,000	$4,760,000	80%	$1,190,000	20%	$0	0%	$8,180,000	$8,180,000
									PE/PL	FY 2022	STP4RM	$437,500	$350,000	80%	$87,500	20%	$0	0%	$8,180,000	$8,180,000
									ROW	FY 2022	STP4RM	$500,000	$400,000	80%	$100,000	20%	$0	0%	$8,180,000	$8,180,000
Hancock County	1902796		Greenfield	Hancock Co.	100S	Reconstruction of Bridge 95 Dist:N/A	Bridge Replacement	Y	CE	FY 2024	LOCBR	$130,000	$104,000	80%	$26,000	20%	$0	0%	$1,326,020	$1,326,020
									CON	FY 2024	LOCBR	$885,000	$708,000	80%	$177,000	20%	$0	0%	$1,326,020	$1,326,020
									PE/PL	FY 2021	LOCBR	$211,020	$160,000	76%	$51,020	24%	$0	0%	$1,326,020	$1,326,020
									ROW	FY 2023	LOCBR	$100,000	$40,000	40%	$60,000	60%	$0	0%	$1,326,020	$1,326,020
Hancock County	1902793		Greenfield	Hancock Co.	700E	Replace Bridge 36 Dist:N/A	Bridge Replacement	Y	CE	FY 2024	LOCBR	$130,000	$104,000	80%	$26,000	20%	$0	0%	$1,207,305	$1,207,305
									CON	FY 2024	LOCBR	$850,000	$680,000	80%	$170,000	20%	$0	0%	$1,207,305	$1,207,305
									PE/PL	FY 2021	LOCBR	$187,305	$140,000	75%	$47,305	25%	$0	0%	$1,207,305	$1,207,305
									ROW	FY 2023	LOCBR	$40,000	$32,000	80%	$8,000	20%	$0	0%	$1,207,305	$1,207,305
Hancock County	2003044	2003044	Greenfield	Hancock Co.	CR400S	Replace Bridge 85 (400S over sugar Creek) Dist:N/A	Bridge Replacement	Y	CE	FY 2026	LOCBR	$237,000	$189,600	80%	$47,400	20%	$0	0%	$2,287,905	$2,287,905
									CON	FY 2026	LOCBR	$1,580,000	$1,264,000	80%	$316,000	20%	$0	0%	$2,287,905	$2,287,905
									PE/PL	FY 2023	LOCBR	$345,905	$276,724	80%	$69,181	20%	$0	0%	$2,287,905	$2,287,905
									ROW	FY 2024	LOCBR	$100,000	$80,000	80%	$20,000	20%	$0	0%	$2,287,905	$2,287,905
Hancock County	2003043	2003043	Greenfield	Hancock Co.	CR300S	Replace Bridge 146 over 300S Doe Creek Dist:N/A	Bridge Replacement	Y	CE	FY 2026	LOCBR	$120,000	$96,000	80%	$24,000	20%	$0	0%	$1,216,110	$1,216,110
									CON	FY 2026	LOCBR	$800,000	$600,000	75%	$200,000	25%	$0	0%	$1,216,110	$1,216,110
									PE/PL	FY 2023	LOCBR	$221,110	$176,888	80%	$44,222	20%	$0	0%	$1,216,110	$1,216,110
									ROW	FY 2024	LOCBR	$50,000	$40,000	80%	$10,000	20%	$0	0%	$1,216,110	$1,216,110
Hancock County	2101745		Greenfield	Hancock Co.	700W	The scope of work for Hancock County Bridge 67 includes replacement of the existing bridge with a three-span, continuous reinforced concrete slab bridge with a total structure span of 100 feet. Safety Improvements will include the installation of side-mounted thrie-beam guardrail with transitions, approach rail, and end treatments that are in compliance with current design standards. Three drives to the north and three drives to the south will be reconstructed to tie-in with the proposed profile grade. It is anticipated that the aerial utilities will require relocation as a part of this project. Dist:N/A	Bridge Replacement	Y	CE	FY 2026	STP4RM	$187,500	$150,000	80%	$37,500	20%	$0	0%	$1,737,500	$1,737,500
									CON	FY 2026	STP4RM	$1,250,000	$1,000,000	80%	$250,000	20%	$0	0%	$1,737,500	$1,737,500
									PE/PL	FY 2024	STP4RM	$200,000	$160,000	80%	$40,000	20%	$0	0%	$1,737,500	$1,737,500
									PE/PL	FY 2025	STP4RM	$50,000	$40,000	80%	$10,000	20%	$0	0%	$1,737,500	$1,737,500
									ROW	FY 2025	STP4RM	$50,000	$40,000	80%	$10,000	20%	$0	0%	$1,737,500	$1,737,500
Hancock County	2101742		Greenfield	Hancock Co.	450W	This project will include replacement of the existing bridge over Sugar Creek with a three-span, continuous, spread box beam structure with a concrete deck. The proposed structure is anticipated to be approximately 150 feet in length. Approximately 200 feet of roadway reconstruction will be required to the north and south of the bridge to tie in with the proposed structure profile grade. Safety improvements will include the installation of side-mounted thrie-beam guardrail with transitions, approach rail, and end treatments that are in compliance with current design standards. One driveway to the north and one to the south will be reconstructed to tie in with the proposed profile grade. Dist:N/A	Bridge Replacement	Y	CE	FY 2027	STP4RM	$249,000	$199,200	80%	$49,800	20%	$0	0%	$2,249,000	$2,249,000
									CON	FY 2027	STP4RM	$1,650,000	$1,320,000	80%	$330,000	20%	$0	0%	$2,249,000	$2,249,000
									PE/PL	FY 2024	STP4RM	$250,000	$200,000	80%	$50,000	20%	$0	0%	$2,249,000	$2,249,000
									PE/PL	FY 2025	STP4RM	$50,000	$40,000	80%	$10,000	20%	$0	0%	$2,249,000	$2,249,000
									ROW	FY 2025	STP4RM	$50,000	$40,000	80%	$10,000	20%	$0	0%	$2,249,000	$2,249,000

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-Executive Office
Indianapolis, Indiana 46204

PHONE: (855) 463-6848

Eric Holcomb, Governor
Michael Smith, Commissioner

August 28, 2023

Mr. Jermaine R. Hannon, Division Administrator
FHWA Indiana Division
575 North Pennsylvania St., Room 254
Indianapolis, IN 46204

Ms. Kelley Brookins, Regional Administrator
FTA Region 5
200 West Adams St.
Suite 320
Chicago, IL 60606-5253

Dear Mr. Hannon /Ms. Brookins:

The Indiana Department of Transportation is pleased to submit its FY 2024-2028 Statewide Transportation Improvement Program (STIP) for review and approval by your offices.

Included in the final submitted document is a listing of the state's expansion/preservation and local small urban and rural and rural transit projects. The following Metropolitan Planning Organization TIPs will be included in the FY 2024-2028 STIP by reference.

Area Plan Commission of Tippecanoe County (APCTC) FY 2024-2028
- https://www.tippecanoe.in.gov/DocumentCenter/View/40728/FY-2024-2028-TIP-including-0-amendments

Bloomington-Monroe County Metropolitan Planning Organization (BMCMPO) FY 2024-2028
- https://bloomington.in.gov/sites/default/files/2023-08/BMCMPO%20FY%202024%20-%202028%20TIP%20-%2006-30-23%20-%20ADOPTED%20FINAL.pdf

Columbus Area Metropolitan Planning Organization (CAMPO) FY 2024-2028
- https://www.columbus.in.gov/planning/tip/

Delaware-Muncie Metropolitan Plan Commission (DMMPC) FY 2022-2025
- *Including Amendments/modifications through 2/14/23*
- https://www.co.delaware.in.us/egov/documents/1692987897_47263.pdf

Evansville Metropolitan Planning Organization (EMPO) FY 2024-2028
- http://www.evansvillempo.com/Docs/TIP/TIP_2024-2028/TIP_2024-2028.pdf

Kokomo-Howard County Governmental Coordinating Council (KHCGCC) FY 2022-2026
- *Including Amendments/modification through 7/28/23*
- https://www.kokomompo.com/project/tip-2020-2024/

Kentuckiana Regional Planning and Development Agency (KIPDA) FY 2023-2026
- https://www.kipda.org/wp-content/uploads/2023/05/FY2023-TIP-FINAL-5-25.pdf

Indianapolis Metropolitan Planning Organization (IMPO) FY 2024-2027
- https://www.indympo.org/whats-underway/irtip

Michiana Area Council of Governments (MACOG) FY 2024-2028
- http://www.macog.com/docs/transportation/tip/approved/fy2028tip_projects.pdf

Madison County Council of Governments (MCCOG) FY 2022-2026
- *Including Amendments/modifications through 7/28/23*
- https://irp.cdn-website.com/65a760a0/files/uploaded/TIP%202022-2026%20-%20updated%205-1-23.pdf

Northeastern Indiana Regional Coordinating Council (NIRCC) FY 2024-2028
- https://www.nircc.com/uploads/1/2/9/8/129837621/final_2024-2028_tip_5-25-23.pdf

Northwestern Indiana Regional Planning Commission (NIRPC) FY 2022-2026
- *Including Amendments/modifications through 7/25/23*
- https://nirpc.org/2040-plan/mobility/transportation-improvement-program/

Ohio-Kentucky-Indiana Regional Council of Governments (OKI) FY 2024-2027
- https://www.oki.org/transportation-planning/transportation-improvement-program-tip/

Terre Haute Area Metropolitan Planning Organization (THAMPO) FY 2024-2028
- https://www.terrehautempo.com/images/THAMPO_2024_2028_AdoptionTIP.pdf

In addition, INDOT has expanded our public involvement process by taking advantage of virtual meeting techniques and allowing accessibility to online documents, materials, virtual meeting registration, recorded virtual meetings, and comment forms. INDOT also leveraged our planning partner contacts (MPOs, RPOs, LTAP), social media, and notifications sent to local libraries, housing authorities, senior aging centers, and local newspapers across the state.

We greatly appreciate FHWA/FTA support in the development of the STIP 2024-2028 and look forward to working together to achieve our mutual goals. Should you have any questions pertaining to this amendment, please contact April Leckie, STIP Administration at 317-232-5466 or at aleckie@indot.in.gov.

Sincerely,

Michael Smith, Commissioner
Indiana Department of Transportation

cc: (w/enclosure): Angelica Salgado, FTA
Cecilia Crenshaw, FTA
Erica Tait, FHWA
Lyndsay Quist, INDOT
Kristin Brier, INDOT
Kathy Eaton-McKalip, INDOT
Louis Feagans, INDOT
April Leckie, INDOT
Roy Nunnally, INDOT
Larry Buckel, INDOT
Jay Mitchell, INDOT
Jason Casteel, INDOT
Michael McNeil, INDOT

Federal Transit Administration
Region V
200 West Adams St., Suite 320
Chicago, IL 60606-5253

U.S. Department of Transportation

Federal Highway Administration
Indiana Division
575 N. Pennsylvania St., Rm 254
Indianapolis, IN 46204-1576

September 1, 2023

Mr. Michael Smith
Commissioner
Indiana Department of Transportation
100 N Senate Ave. N955
Indianapolis, IN 46204

SUBJECT: Indiana FY2024-2028 STIP Approval and Associated Federal Planning Finding

Dear Mr. Smith:

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have completed our review of the FY2024-2028 Indiana Statewide Transportation Improvement Program (INSTIP), which was submitted by the Indiana Department of Transportation (INDOT) request letter dated August 23, 2023.

Based on our review of the information provided, certifications of the Statewide and Metropolitan transportation planning processes for and within the state of Indiana, and our participation in those transportation planning processes (including planning certification reviews conducted in Transportation Management Areas), FHWA and FTA are jointly approving the FY2024-2028 STIP, including the Metropolitan Planning Organization (MPO) Transportation Improvement Programs (TIPs) incorporated into the STIP by reference, subject to the corrective actions identified in the attached Federal Planning Finding (FPF) report. FHWA and FTA consider the projects in the 5th year for informational purposes only, and our approval does not exceed four years per 23 CFR 450.220(c).

FHWA and FTA are required under 23 CFR 450.220(b) to document and issue an FPF in conjunction with the approval of the FY2024-2028 STIP. At a minimum, the FPF verifies that the development of the STIP is consistent with the provisions of both the Statewide and Metropolitan transportation planning requirements. FHWA and FTA find that the Indiana FY2024-2028 STIP substantially meets the transportation planning requirements and are approving the STIP subject to the corrective actions outlined in the FPF. This approval is effective September 1, 2023 and is given with the understanding that an eligibility determination of individual projects for funding must be met, and INDOT must ensure the satisfaction of all administrative and statutory requirements, as well as address the corrective actions outlined in the attached report.

If you have questions or need additional information concerning our approval and the FPF, please contact Ms. Erica Tait of the FHWA Indiana Division at (317) 226-7481, or by email at erica.tait@dot.gov, or Mr. Tony Greep of the FTA Region 5 Office at (312) 353-1646, or by email at anthony.greep@dot.gov.

Sincerely,

KELLEY BROOKINS
Digitally signed by KELLEY BROOKINS
Date: 2023.08.31 17:33:15 -05'00'

Kelley Brookins
Regional Administrator
FTA Region V

Sincerely,

JERMAINE R HANNON
Digitally signed by JERMAINE R HANNON
Date: 2023.09.01 11:46:31 -04'00'

Jermaine R. Hannon
Division Administrator
FHWA Indiana Division

Categorical Exclusion

Appendix I

Additional Studies

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

ProjectNumber	SubProjectCode	County	Property
1800017	1800017	Hamilton	Forest Park & Trail, White River Access Site
1800058	1800058	Hamilton	Forest Park & Trail, White River Access Site
1800128	1800128	Hamilton	Morse Park & Beach
1800198	1800198	Hamilton	Cicero Community Park
1800236	1800236	Hamilton	Forest Park & Trail, White River Access Site
1800493	1800493	Hamilton	Flowing Well Park
1800502	1800502	Hamilton	Cool Creek County Park
1800519	1800519	Hamilton	Taylor Property
1800551	1800551	Hamilton	MacGregor Park
1800581	1800581	Hamilton	MacGregor Park

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

Abbreviated Engineer's Report

281st Street Rehabilitation

Des. No. 2003031

May 2023

Prepared for:

Hamilton County Highway Department

Noblesville, IN

Prepared by:

8770 North St., Ste. 110

Fishers, IN 46038

TABLE OF CONTENTS

APPENDICES

Des No.:	2003031
Type of Work:	Rehabilitation (Widening and Roadside Drainage Improvements)
Route:	281st Street
Functional Classification:	Major Collector
County:	Hamilton County
Posted Speed Limit:	50 mph

PROJECT LOCATION

The 281st Street Rehabilitation project is located from the east leg of the intersection of 281st Street and SR 19, Cicero Road, to approximately 100' from the center of the intersection of 281st Street and Rulon Road. The project is located in Hamilton County in Section 12 of Township 20 North, Range 4 East and Sections 7 and 8 of Township 20 North, Range 5 East. The project transitions from Jackson Township to White River Township approximately 1.39 miles from the intersection of SR 19 and 281st Street. The project is located within INDOT's Greenfield District.

The 281st Street project corridor intersects the following roads:

1. SR 19
2. Ott Road
3. Crooked Creek Avenue
4. Startsman Road

PROJECT NEED AND PURPOSE

This project is needed to address substandard existing asphalt conditions, existing travel lane widths, and roadway drainage.

The purpose of this project is to provide connectivity across this portion of Hamilton County with a safe and efficient route from SR 19 to US 31 as well as accommodate the expected increase in traffic volume.

EXISTING FACILITY

The existing roadway facility is classified as a Major Collector and is not part of the US National Highway System (NHS). The roadway is not on the National Truck Network. The posted speed limit at the project location is 50 mph.

The existing lanes are 9' to 10' wide with 0' to 4' wide gravel shoulders. The existing roadway consists of 2 travel lanes, one in the west direction and another in the east direction.

A design exclusion will be included at the bridge over Big Cicero Creek with the County Highway Department addressing any design issues at a later date. This exclusion includes guardrail located prior to the bridge, on the bridge, and after the bridge.

Drainage along 281st Street from SR 19 to Rulon Road consists of sheet flow from the existing roadway to adjacent farm fields. Sheet flow moves towards Big Cicero Creek at the west end of the project limits, with Big

Cicero Creek located approximately 650' east of Ott Road. Roadside ditches are minimal or nonexistent along the project corridor.

An existing 4' diameter metal corrugated pipe is located approximately 225' east of Big Cicero Creek that transports water beneath 281st Street.

No pedestrian facilities are located within the existing project limits. No signalized intersections are located within the project limits.

The existing right-of-way for the majority of the project is set at the edge of pavement. The existing right-of-way expands to 35' from the centerline of the roadway at the bridge over Big Cicero Creek.

CRASH DATA

Below is a summary of the recorded crashes from the intersection of 281st Street and SR 19 to 281st Street and Rulon Road. Thirteen crashes were recorded from January 2020 to January 2023 with the majority being collisions with animals. Two crashes resulted in incapacitated motorists but no fatalities were recorded. All thirteen crashes created property damage of varying sums.

Based on an alaysis of recorded narratives provided by the investigating officer, all recorded crashes were the result of either collisions with animals or distracted motorists.

The crash data can be found in Appendix C.

Location	Type of Crash											
	Rear End	Ran Off Road	Right Angle	Same Direction Sideswipe	Backing	Collision with Animal	Left Turn	Head On	Opposite Direction Sideswipe	Right Turn	Collision with Object in Road	Other
281st from SR 19 to Rulon Road	-	3	4	-	-	5	1	-	-	-	-	-
Total	-	3	4	-	-	5	1	-	-	-	-	-
Total	13											

Location	Type of Injury			
	Fatal	Incapacitated	Non-Incapacitated	Property Damage
281st from SR 19 to Rulon Road	-	2	11	13
Total	-	2	11	13
Total	13			

GEMETRIC CRITERIA

Name of Roadway	281st Street
Design Speed	50 mph
Design Criteria	3R Non-Freeway
Functional Classification	Major Collector
Rural / Urban	Rural
Access Control	None

IDENTIFICATION OF ALTERNATIVES

1. Alternative No. 1 – No Build (Existing Conditions Remain)
   This alternative consists of leaving the existing roadway as is and providing no improvements. Alternative number 1 will result in the corridor not being able to accommodate additional traffic volumes and does not meet the need nor achieve the purpose of the project. This alternative should not be considered futher.

2. Alternative No. 2 *(Preferred)* – Roadway Rehabilitation and Roadside Drainage Improvements
   This alternative widens the roadway and provides roadside drainage to reduce drainage concerns. The roadway will be widened from the existing width to 12' travel lanes and 3' shoulders. Full depth reconstruction is anticipated west of the bridge over Cicero Creek for approximately 600' to correct substandard superelevation. Full depth reconstruction will also be included at the each approach to correct the crown and create a consistent 2% cross slope along 281st Street.

   The profile will follow the existing condition in the majority of the corridor with the exception west of the bridge over Cicero Creek. Drives and approaches will be reconstructed to match the proposed roadway width.

   Roadside ditches will be construted on both sides of the roadway, where existing conditions allow, to provide positive drainage away from the roadway and adjacent properties. The bridge over Cicero

Creek will be excepted from the project. The existing pipe crossing below 281st Street approximately 100' north of the bridge over Cicero Creek will be evaluated and replaced.

PRELIMINARY ESTIMATED COSTS

The table below summarizes the estimated costs associated with Des No. 2003031 – 281st Street Rehabilitation.

Phase	Year	Estimated Cost
Roadway Construction	2026	$5,510,000.00
Right of Way	2025	$250,000.00
Utility Relocations	2026	$390,000.00
Prelminary Engineering	2023	$887,364.00
	SUM	$7,037,364.00

ENVIRONMENTAL CONCERNS

Based on the proposed scope of work, the environmental impacts for this project are moderate and are listed below:

1. Permanent right-of-way is anticipated from up to 28 parcels
2. Impacts to streams are anticipated at the Big Cicero Creek
    a. A Waters Report will be created to evaluate stream and wetland impacts within the project limits
3. Tree clearing in several locations within the project limits
    a. Field investigations will be conducted to check for bat habitat and other protected species

A CE-3 is anticipated for Des No. 2003031 – 281st Street Rehabilitation. In addition to the investigations listed above, historical and archeological investigations will be conducted within the project limits.

A public hearing is anticipated for this project and all comments received during said hearing will be incorporated in the CE-3 document.

RIGHT OF WAY IMPACTS

The land use within the project limits consist of residential and agricultural areas. The proposed work will require temporary and permanent right-of-way from approximately 28 parcels.

UTILITIES AND RAILROAD

Utilities are anticipated to be impacted by this project. Coordination will be completed per the Utility Coordination process with listed utilities below:

1. AEP
2. Clay County Rural Telecom DBA Endeavor Communications
3. Frontier
4. Duke Energy
5. Buckeye
6. Comcast

7. Centerpoint Energy
8. Town of Atlanta Utilities

No Railroad facilities are located within the project corridor.

MAINTENANCE OF TRAFFIC

This project is proposed to be completed with shifting traffic closures and detours. Due to the LPA status of this project, local roads will be utilized for shorter detours while sections of the roadway are constructed. During construction of this project, access to property owners must be maintained at all time.

PERMITS

The following permits are anticipated to be required for this project:

1. IDEM Section 401 IP
2. IDEM Section 404 RGP
3. Legal Drain Permit
    a. Big Cicero Creek
4. IDNR Construction in a Floodway, CIF, Permit
5. IDEM Construction Stormwater General Permit

ADJACENT PROJECTS

No known projects are anticipated near or within the project limits of the proposed work for Des No. 2003031 – 281st Street Rehabilitation. If projects arise in the future, the designer shall coordinate construction and maintenance of traffic activities with the adjacent projects as necessary.

CONCLUSIONS

The Directed Alternative meets the Purpose and Need set forth in this report. It is the recommendation of this report to move forward with the Directed Alternative. The project shall be designed using current INDOT standards for 3R – Non Freeway projects.

CHANGES TO ENGINEER'S REPORT

The Hamilton County Highway Department shall be contracted if alterations from this document are deemed necessary during a later phase of project development. All changes shall be justified and estimated.

CONCURRENCE

_____ Date: 05.04.2023

Nicholas Hoevener, PE
Project Manager
RQAW

_____ Date: _____

Joel Thurman, PE
Project Manager
Hamilton County Highway Department

Traffic Analysis

281st St

Insert information from TCDS

Year	AADT	DHV	K	PA	%	BC	%
2012	3308						
2013	3331						
2014	3364						
2015	3110	293	9	2498	80%	611	20%
2016	3126						
2017	3110						
2018	3168	313	10	2817	89%	351	11%

Growth Rate =	-4.23%	Actual Growth Rate
Assumed GR =	1.00%	Assumed Growth Rate
P.CURRENT =	920	Current AADT from TCDS
F.CURRENT.YEAR =	2023	Build Year
F.BUILD =	948	AADT in Build Year [Calculated]
F.BUILD.YEAR =	2026	Design Year
F.DESIGN =	1157	AADT in Design Year [Calculated]
F.DESIGN.YEAR =	2046	See IDM For Design Period
K =	10%	Adj. Factor (% of ADT during Design Hour) [Range is from 8-12%]
DHV =	116	Design Hourly Volume
% TRUCKS =	11%	% fo AADT of Trucks
K.TRUCKS =	6%	Assumed K Value for Trucks
%DHV.TRUCKS =		

$F = P*(1+ GR/100)^{(FY-PY)}$

$DHV = k*F$


WHITE
CASS
MIAMI
WELLS
ADAMS
BENTON
CARROLL
GRANT
HOWARD
BLACKFORD
JAY
TIPPECANOE
WARREN
CLINTON
TIPTON
Approximate Project Area
DELAWARE
COC
MADISON
RANDOLPH
FOUNTAIN
HAMILTON
BOONE
MONTGOMERY
INDIANA
HENRY
WAYNE
HANCOCK
MARION
HENDRICKS
PARKE
PUTNAM
RUSH
FAYETTE
UNION
SHELBY

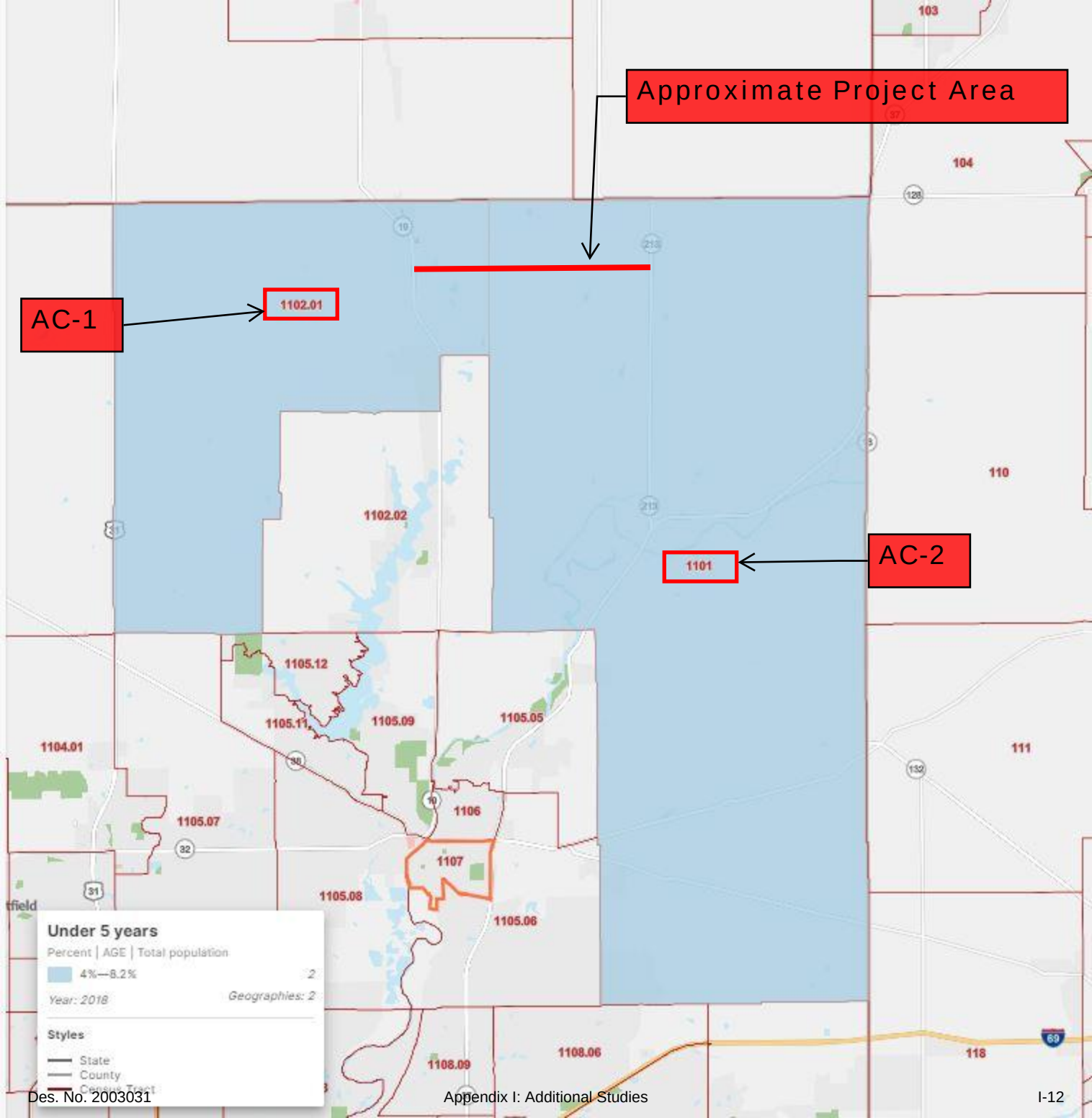

Approximate Project Area
AC-1
AC-2
1102.01
1102.02
1101
1105.12
1105.11
1105.09
1105.05
1104.01
1105.07
1106
1107
1105.08
1105.06
1108.09
1108.06
103
104
110
111
118
Under 5 years
Percent | AGE | Total population
4%—8.2%
2
Year: 2018
Geographies: 2
Styles
State
County

Table: ACSDT5Y2020.B17001

COC AC-1 AC-2

	Hamilton County, Indiana		Census Tract 1102.01, Hamilton County, Indiana		Census Tract 1101, Hamilton County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	328,349	±458	4,794	±254	3,972	±619
Income in the past 12 months below poverty level:	14,406	±1,830	408	±143	257	±245
Male:	6,201	±842	187	±71	201	±187
Under 5 years	613	±203	5	±7	0	±12
5 years	211	±151	0	±12	0	±12
6 to 11 years	1,092	±310	24	±26	59	±62
12 to 14 years	355	±150	16	±18	59	±62
15 years	173	±103	6	±10	0	±12
16 and 17 years	179	±115	3	±6	0	±12
18 to 24 years	603	±304	12	±19	22	±35
25 to 34 years	553	±223	8	±11	0	±12
35 to 44 years	559	±236	11	±15	0	±12
45 to 54 years	804	±249	33	±32	61	±63
55 to 64 years	528	±199	22	±16	0	±12
65 to 74 years	334	±132	10	±12	0	±12
75 years and over	197	±104	37	±40	0	±12
Female:	8,205	±1,232	221	±87	56	±59
Under 5 years	414	±197	8	±9	0	±12
5 years	97	±70	0	±12	0	±12
6 to 11 years	609	±307	14	±17	0	±12
12 to 14 years	463	±201	2	±4	56	±59
15 years	148	±101	7	±10	0	±12
16 and 17 years	289	±143	5	±6	0	±12
18 to 24 years	1,051	±338	22	±20	0	±12
25 to 34 years	1,276	±356	28	±20	0	±12
35 to 44 years	1,153	±337	23	±19	0	±12
45 to 54 years	731	±212	32	±25	0	±12
55 to 64 years	1,027	±321	14	±14	0	±12
65 to 74 years	404	±164	20	±20	0	±12
75 years and over	543	±184	46	±47	0	±12
Income in the past 12 months at or above poverty level:	313,943	±1,884	4,386	±296	3,715	±651
Male:	154,126	±869	2,189	±252	2,050	±400
Under 5 years	10,169	±216	61	±30	47	±77
5 years	2,016	±328	55	±44	113	±133
6 to 11 years	14,742	±580	206	±143	102	±75
12 to 14 years	7,619	±539	75	±38	37	±58
15 years	2,980	±520	21	±20	25	±37
16 and 17 years	4,746	±515	224	±242	126	±71
18 to 24 years	12,305	±333	168	±79	163	±105
25 to 34 years	18,246	±239	170	±81	121	±114
35 to 44 years	23,193	±243	234	±84	237	±86
45 to 54 years	22,869	±245	458	±168	376	±116
55 to 64 years	18,057	±219	221	±69	353	±252
65 to 74 years	11,160	±188	160	±60	202	±112
75 years and over	6,024	±151	136	±56	148	±181
Female:	159,817	±1,271	2,197	±247	1,665	±348
Under 5 years	10,122	±192	55	±40	25	±51
5 years	2,036	±371	6	±6	25	±43
6 to 11 years	13,551	±811	149	±57	102	±91
12 to 14 years	8,253	±708	47	±26	114	±78
15 years	2,698	±391	50	±30	0	±12
16 and 17 years	4,690	±405	188	±121	18	±33
18 to 24 years	11,351	±347	276	±158	130	±96
25 to 34 years	18,973	±349	260	±121	83	±90
35 to 44 years	24,364	±348	295	±142	243	±79
45 to 54 years	23,597	±229	318	±142	246	±88
55 to 64 years	18,872	±339	291	±82	439	±276
65 to 74 years	12,808	±196	145	±49	61	±68
75 years and over	8,502	±249	117	±44	179	±158

Table: ACSDT5Y2021.B03002

COC AC-1 AC-2

	Hamilton County, Indiana		Census Tract 1102.01, Hamilton County, Indiana		Census Tract 1101, Hamilton County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	341,616	*****	4,723	±265	4,200	±678
Not Hispanic or Latino:	326,985	*****	4,435	±374	4,015	±702
White alone	280,770	±549	4,299	±403	3,866	±736
Black or African American alone	13,244	±1,092	29	±34	0	±12
American Indian and Alaska Native alone	290	±127	0	±12	0	±12
Asian alone	21,235	±755	7	±7	0	±12
Native Hawaiian and Other Pacific Islander alone	145	±47	0	±12	22	±39
Some other race alone	1,342	±567	0	±12	0	±12
Two or more races:	9,959	±1,357	100	±94	127	±150
Two races including Some other race	1,296	±604	66	±87	0	±12
Two races excluding Some other race, and three or more races	8,663	±1,200	34	±40	127	±150
Hispanic or Latino:	14,631	*****	288	±328	185	±188
White alone	8,832	±1,000	34	±29	185	±188
Black or African American alone	133	±90	0	±12	0	±12
American Indian and Alaska Native alone	0	±29	0	±12	0	±12
Asian alone	116	±137	0	±12	0	±12
Native Hawaiian and Other Pacific Islander alone	0	±29	0	±12	0	±12
Some other race alone	1,923	±627	6	±7	0	±12
Two or more races:	3,627	±839	248	±327	0	±12
Two races including Some other race	2,950	±770	248	±327	0	±12
Two races excluding Some other race, and three or more races	677	±293	0	±12	0	±12

Analysis of Two Census Tracts in Hamilton County, Indiana

		COC	AC-1	AC-2
		Hamilton County, Indiana	Census Tract 1102.01, Hamilton County, Indiana	Census Tract 1101, Hamilton County, Indiana
	LOW-INCOME			
B17001001	Population for whom poverty status is determined: Total	328,349	4,794	3,972
B17001002	Population for whom poverty status is determined: Income in past 12 months below poverty level	14,406	408	257
	Percent Low-income	**4.4%**	**8.5%**	**6.5%**
	125 Percent of COC	**5.5%**	**AC ≥ 125% COC**	**AC ≥ 125% COC**
	Potential Low-income EJ Impact?		**Yes**	**Yes**
	MINORITY			
B03002001	Total population: Total	341,616	4,723	4,200
B03002002	Total population: Not Hispanic or Latino	326,985	4,435	4,015
B03002003	Total population: Not Hispanic or Latino; White alone	280,770	4,299	3,866
B03002004	Total population: Not Hispanic or Latino; Black or African American alone	13244	29	0
B03002005	Total population: Not Hispanic or Latino; American Indian and Alaska Native alone	290	0	0
B03002006	Total population: Not Hispanic or Latino; Asian alone	21235	7	0
B03002007	Total population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	145	0	22
B03002008	Total population: Not Hispanic or Latino; Some other race alone	1342	0	0
B03002009	Total population: Not Hispanic or Latino; Two or more races	9959	100	127
B03002010	Total population: Hispanic or Latino	14631	288	185
B03002011	Total population: Hispanic or Latino; White alone	8832	34	185
B03002012	Total population: Hispanic or Latino; Black or African American alone	133	0	0
B03002013	Total population: Hispanic or Latino; American Indian and Alaska Native alone	0	0	0
B03002014	Total population: Hispanic or Latino; Asian alone	116	0	0
B03002015	Total population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	0	0	0
B03002016	Total population: Hispanic or Latino; Some other race alone	1923	6	0
B03002017	Total population: Hispanic or Latino; Two or more races	3627	248	0
	Number Non-white/minority (B03002001-B03002003)	**60,846**	**424**	**334**
	Percent Non-white/Minority	**17.8%**	**9.0%**	**8.0%**
	125 Percent of COC	**22.3%**	**AC ≤ 125% COC**	**AC ≤ 125% COC**
	Potential Minority EJ Impact?		**No**	**No**

From: Fair, Terri <TFair@indot.IN.gov>
Sent: Wednesday, December 6, 2023 5:11 PM
To: Harlan Ford <hford@rqaw.com>
Cc: Passmore, Andrew D <APassmore@indot.IN.gov>
Subject: FW: EJ Analysis for Des. No. 2003031 (LPA Project)

INDOT-Environmental Services Division (ESD) has reviewed the project information along with the Environmental Justice (EJ) Analysis for the above referenced project. With the information provided, the project may require right-of-way, require no relocations, and would not disrupt community cohesion or create a physical barrier. With the information provided, INDOT-ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further EJ Analysis is required.