APPENDIX F: Water Resources

Waters of the U.S. Report

SR 37 AT CUBA/THIMLER ROADS & NOTESTINE ROAD – INTERSECTION IMPROVEMENT
DES. NO. 1900142
ALLEN COUNTY, INDIANA
January 6, 2023

1. PROJECT INFORMATION

Date of Field Reconnaissance: March 17, 2022, June 1, 2022, & September 4, 2022

1.1 LOCATION

The project is located along SR 37 at the intersection of Notestine Road and the intersection of Cuba/Thimler Roads, approximately 5.00 miles east of I-469.

- Section 3, Township 31 N, Range 14 E; Sections 31 & 32, Township 32 N, Range 14 E
- Grabill Indiana, Quadrangle
- 41.181779, -84.943423 – NAD 1983

1.2 PROJECT DESCRIPTION

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) intend to proceed with a project involving the intersection of SR 37 at Notestine Road and SR 37 at Cuba/Thimler Road in Allen County, Indiana. Proposed project activities include widening SR 37 to include the addition of left turn lanes onto Cuba/Thimler Road. The intersection of SR 37 and Notestine Road would be re-aligned to the south, approximately 360 feet, to eliminate the skew of the intersection.

2. DESKTOP RECONNAISSANCE

Desktop reconnaissance was conducted prior to completing the field evaluation to assess the investigated area for potential Waters of the United States. This research included a review of both historic and recent aerial imagery for any areas with a water signature or sharp change in vegetation. Current and historic United State Geologic Survey (USGS) topographic mapping (Attachment Pages 2-3), Natural Resources Conservation Service (NRCS) mapped soil units (Attachment Pages 8-9), National Wetland Inventory (NWI) mapping (Attachment Page 6), USGS Hydrography data (Attachment Page 7), and Federal Emergency Management Agency (FEMA) Floodplain mapping (Attachment Page 5) were also reviewed during desktop research. Areas that exhibit a water signature or indication of water resources or wetlands during the desktop review were investigated in the field.

2.1 Soil Associations and Series Types

According to the Soil Survey Geographic (SSURGO) Database for Allen County, Indiana, the soil series summarized in Table 1 are found within SR 37 at Cuba/Thimler Roads and Notestine Road project area (Attachment Pages 8-9).

Table 1: Soil Classifications

Soil Name	Symbol	Description	Hydric Soil Category	Hydric Rating
Blount loam	BmA	Very deep, somewhat poorly drained soils that are moderately deep or deep to dense till. Blount soils formed in till and are on wave worked till plains, till plains, and near-shore zones. Slope ranges from 0 to 2 percent.	Predominantly non-hydric	5%
Borrow Pits	Bp	Very deep, poorly drained soils that formed in fine-textured alluvium weathered from extrusive and basic igneous rocks. Pit soils are on floodplains and in basins. Slopes range from 0 to 5 percent.	Non-hydric	0%
Crosby silt loam	CsB2	Very deep, somewhat poorly drained soils that are moderately deep to dense till. Crosby soils formed in as much as 22 inches of loess or other silty material and in the underlying loamy till. Slope ranges from 2 to 6 percent.	Predominantly non-hydric	10%
Whitaker loam	HoA	Very deep, somewhat poorly drained soils formed in stratified silty and loamy outwash on outwash plains, lake plains, till plains, valley trains, and stream terraces. Slope ranges from 0 to 2 percent.	Predominantly non-hydric	10%
Whitaker silt loam	HpA	Very deep, somewhat poorly drained soils formed in stratified silty and loamy outwash on outwash plains, lake plains, till plains, valley trains, and stream terraces. Slope ranges from 0 to 2 percent.	Predominantly non-hydric	10%
Glynwood silt loam	MrB	Very deep, moderately well-drained soils that are moderately deep or deep to dense till. They formed in a thin layer of loess and the underlying till. These soils are on ground moraines and end moraines. Slope ranges from 2 to 6 percent.	Predominantly non-hydric	4%
Oshtemo fine sandy loam	OfB	Very deep, well-drained soils formed in stratified loamy and sandy deposits on outwash plains, valley trains, moraines, and beach ridges. Slope ranges from 2 to 6 percent.	Non-hydric	0%
Pewamo silty clay loam	Pe	Very deep, very poorly drained soils formed in till on moraines, near-shore zones, and lake plains. Slope ranges from 0 to 1 percent.	Predominantly hydric	91%
Rawson loam	RIB2	Very deep, moderately well-drained soils that formed in loamy sediments and till on till plains, outwash plains, and lake plains. They are moderately deep or deep to dense till. Slope ranges from 2 to 6 percent.	Predominantly non-hydric	5%
Rensselaer silty loam	Rs	Very deep, poorly drained, or very poorly drained formed in loamy sediments on till plains, stream terraces, outwash terraces, outwash plains, glacial channels, and lake plains. Slope ranges from 0 to 2 percent.	Hydric	100%

2.2 National Wetlands Inventory

Based on the U.S. Fish and Wildlife National Wetlands Inventory (NWI) data there is one wetland polygon mapped within the investigated area(www.fws.gov/wetlands/Data/State-Downloads.html). This wetland is identified as a riverine (R4SBC) wetland and represents the channel of Amstutz Ditch (Attachment Page 7).

2.3 Hydrology

The 12-digit Hydrologic Unit Code (HUC) for the entirety of the project area is #041000050106 which identifies the Bottern Ditch-Maumee River Watershed (Watersheds HUC12 2009 (indiana.edu).

According to the USGS StreamStats (https://streamstats.usgs.gov/ss/), most of the investigated area is within the watershed of the Maumee River located southeast of the investigated area. Amstutz Ditch has an upstream drainage area of 0.882 square mile from SR 37 to the northwest of the investigated area (Attachment Page 8).

According to the Indiana Floodplain Information Portal, a portion of the project is within a 100-year floodplain and regulatory floodway of Amstutz Ditch (https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=05026dabc2e-8461983e196d56a213c1e). It has a base floodplain elevation of 772.9 at SR 37 and 770.5 at Notestine Road (Attachment Pages 5-6).

2.4 National Hydrography Dataset (NHD) Flowlines

National Hydrography Dataset (NHD) flowline data has been compiled by the USGS and made available for use in GIS. A review of the local-resolution NHD flowlines, current as of January 23, 2018, was completed as part of the desktop review. There are two NHD classified flowlines present within the investigated area (Attachment Page 4). The NHD lines represent Amstutz Ditch.

2.5 Regulated Drains

According to the Allen County Regulated Drains map obtained on the Allen County website (http://www.acimap.us/engineering.html), there is one county-regulated drain, Amstutz Ditch within the investigated area, identified as Amstutz No. 2 Drain (Attachment Page 13).

3. Field Reconnaissance

HNTB Indiana staff performed a field review of the investigated area on March 17, 2022, June 1, 2022, & September 4, 2022. The purpose was to determine the presence of Waters of the U.S. within the investigated area. HNTB Indiana staff collected data during the field reviews to appropriately characterize the investigated area and determine the presence or absence of jurisdictional waters. The field investigated area encompassed the area required for construction and construction access. HNTB staff photographed select features and areas of interest throughout the investigated area. A photo location map and selected photographs are included as Attachment Pages 14-40.

The proposed investigated area was analyzed using the methods outlined in the Routine Determination, On-site Inspection Necessary procedure in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Northeast and Northcentral Region* (US Army Corps of Engineers, 2010). Identification indicator status of plant species utilized the 2020 Northeast and Northcentral Region National Wetland Plant List. Field GIS data was collected using ArcGIS Field Maps utilizing location services from Trimble® R1 GNSS GPS with sub-meter accuracy.

4. WATERS

The March, June, and September 2022 field reconnaissance for the SR 37 intersection improvement project located one potentially jurisdictional feature, Amstutz Ditch. No areas within the investigated area were dominated by hydrophytic vegetation. Information obtained during the field investigation is provided in detail below.

4.1 WETLANDS

No wetlands were observed within the investigated area during the March, June, and September 2022 field reviews. The nearest NWI mapped, noted as a freshwater pond (PUBGx) wetland, is located 0.02 mile north of Notestine Road, outside of the investigated area.

The investigated area consists of mowed and maintained roadway right-of-way, active agricultural land, or residential yards which drain to Amstutz Ditch. The existing local topography includes flat, agricultural, and residential properties. Adjacent agricultural land appears to be tiled and streams have been channelized to enhance drainage. Mapped soils are predominantly non-hydric and predominantly hydric. In areas where the soils were predominantly hydric or hydric, there were no indicators of hydric vegetation or wetland hydrology present indicative of wetlands.

4.2 STREAMS

The investigation resulted in the identification of one likely jurisdictional stream: Amstutz Ditch. Characteristics of Amstutz Ditch are summarized in Table 2.

AMSTUTZ DITCH

Amstutz Ditch is an intermittent stream feature flowing southeast crossing through the investigated area at SR 37 and again at Notestine Road. Amstutz Ditch continues south out of the investigated area where it reaches its confluence with the Maumee River, a traditionally navigable waterway (TNW). Approximately 457 feet of this feature were evaluated as part of this investigation. This stream feature has an excavated channel with riprap on both banks. This stream feature drains stormwater from residential and agricultural properties along SR 37 to the north and south of the small structure. During the field investigation, the channel had flowing water. The substrate consisted of silt, gravel, and cobble. The banks of the channel were dominated by black locust (*Robinia pseudoacacia,* FACU), Canadian goldenrod (*Solidago canadensis,* FACU), reed canary grass (*Phalaris arundinacea,* FACW), and Asian bush honeysuckle (*Lonicera maackii,* FACU).

Amstutz Ditch is noted in Grabill USGS 7.5-Minute Topographic Maps as a channelized intermittent blueline feature (Attachment Pages 2-3). Amstutz Ditch is noted on the National Hydrography layer as a stream. According to the USGS StreamStats website, (https://water.usgs.gov/osw/streamstats/indiana.html), Amstutz Ditch drains approximately 0.882 square mile (Attachment Page 8). Amstutz Ditch is an Allen County Legal Drain.

The OHWM of Amstutz Ditch is 5 feet wide by 1 foot deep and the stream has been dredged and channelized with some sedimentation occurring forming small sediment bars. The OHWM was measured on the ground using a measuring tape, outside of the influence of the structure at four locations. An OHWM measurement was taken upstream (41.184476, -84.940281) and downstream (41.184141, -84.939872) outside of the influence of the SR 37 culvert. Another set of OHWM measurements was taken upstream (41.182503, -84.937719) and downstream (41.182284, -84.937212) outside of the influence of the Thimler Road and Notestine Road culvert. According to the classification codes developed by Cowardin et

al. (1979), this stream feature would be classified as a riverine, intermittent, streambed, seasonally flooded (R4SBC) resource. According to the USGS StreamStats website, (https://water.usgs.gov/osw/streamstats/indiana.html), Based on a qualitative assessment, this resource is a poor-quality feature based on the lack of in channel development, low sinuosity, and low substrate stability.

TABLE 2: STREAM AND WATERWAY SUMMARY TABLE

Stream Name	Photos	Latitude / Longitude	OHWM	Quality	Substrate	Regime	USGS Blue Line?	Riffles / Pools	Waters of U.S.	Length linear feet (LF) / Acreage
Amstutz Ditch	18, 19, 23, 24, 62-65, 74-76	41.184278, -84.940081	5 ft wide 1 ft deep	Poor	Silt, Cobble & Gravel	Intermittent	Yes	No	Yes	457 LF / 0.02 acres

4.3 ROADSIDE DRAINAGE FEATURES

The entire project study area was examined for roadside ditches. As illustrated in the ground-level photographs included in Attachment Pages 21-40, no roadside ditches were observed within the investigated area. In the vicinity of the Cuba/Thimler Roads and SR 37 intersection, there are some enclosed storm sewer systems. Drainage through most of the rest of the project area is via sheet flow.

4.4 OPEN WATERS

No open waters were observed within the investigated area during the March, June, and September 2022 field reviews.

4.5 WILDLIFE EVIDENCE AND CONCERNS

Both the SR 37 and Notestine Road culverts conveying Amstutz Ditch are fully inundated as they cross the roadways. No wildlife crossing exists at this location. An inspection of the culverts did not identify the use of the culvert by bats or migratory birds.

5. CONCLUSION

The March, June, and September 2022 field review of the SR 37 intersection improvement project identified one likely jurisdictional feature within the investigated area, Amstutz Ditch. Amstutz Ditch (457 LF / 0.02 acres) is likely a water of the U.S. with hydrologic connectivity to the Maumee River, a TNW. No wetlands or roadside ditches were identified within the investigated area. No wetlands were observed in the vicinity of the NWI wetland identified during desktop reconnaissance.

Every effort should be taken to avoid and minimize the impacts on potential off-site water resources. If construction exceeds the limits of the investigated area illustrated in this document, further field investigation will be needed. This report is this office's best judgment of water resources that are likely to be under federal jurisdictional. The final determination of jurisdictional waters is ultimately the responsibility of the U.S. Army Corps of Engineers. The INDOT Office of Environmental Services should be contacted immediately if impacts occur.

The following structure within the investigated area was examined in March, June, and September 2022 for the presence of bats and birds and was found to show no signs of occupation:

- SR 37 (INDOT Structure No. CV 103-033-2.46 – 48-foot long 24-inch corrugated metal pipe for the conveyance of UNT to Flatrock River under SR 103)
- Notestine Road (INDOT Structure No. CV 103-033-2.46 – 48-foot long 24-inch corrugated metal pipe for the conveyance of UNT to Flatrock River under SR 103)

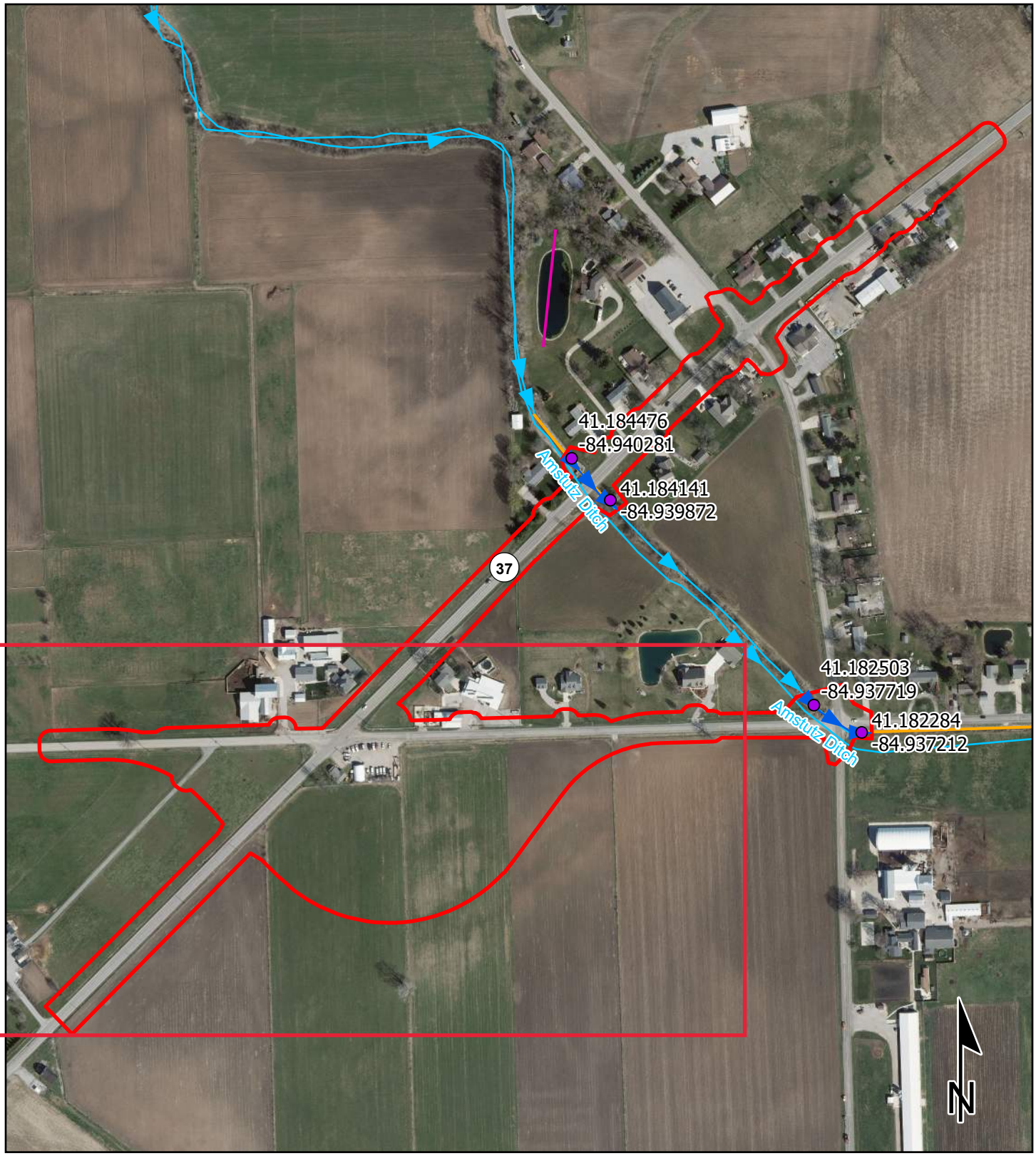
This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience, and professional judgment in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE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

Landon Little, Environmental Planner II

PREPARERS:

HNTB Inc., Staff	Position	Contributing Effort
Christine Meador	Science Project Manager	Project Management Quality Review
Landon Little	Environmental Planner II	Field Data Collection Report Preparation

Repeat attachments have been removed for brevity. Graphics can be found in Appendix B.



Investigated Area
Delineated Stream
OHWM Point

NHD Lines (Local Resolution)
Artificial Path
Canal/Ditch
Stream/River

0 200 400 Feet

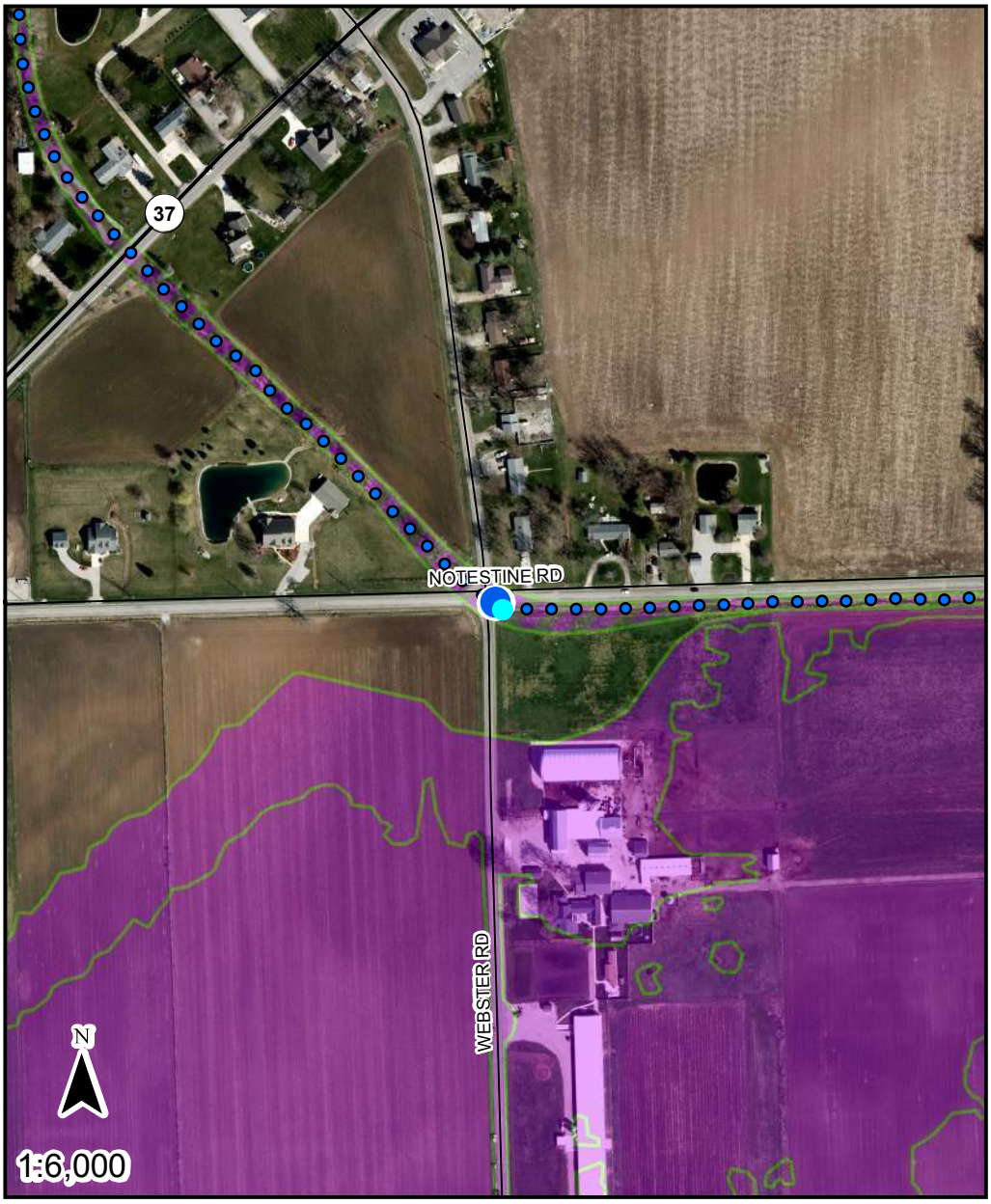
Delineated Features Map

SR 37 at Cuba/Thimler & Notestine Rd, 5.00 miles east of I-469
Intersection Improvment Project
Allen County, Indiana

Des. No. 1900142

1 inch = 400 ft

HNTB
Graphics created by HNTB Corporation (2022)



Point of Interest

Base Flood Elevation Point

Flood Elevation Points

STUDIED STREAM

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates (WGS84)

Long: **-84.9373979442**

Lat: **41.1823376248**

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

County: **Allen**

Stream Name: **Amstutz Ditch**

Approximate Ground Elevation: **773.8 feet (NAVD88)**

Base Flood Elevation: **770.5 feet (NAVD88)**

Drainage Area: **Not available**

Best Available Flood Hazard Zone: **DNR Approximate Floodway**

National Flood Hazard Zone: **Not Mapped**

Is a Flood Control Act permit from the DNR needed for this location? **yes**

Is a local floodplain permit needed for this location? **yes-**

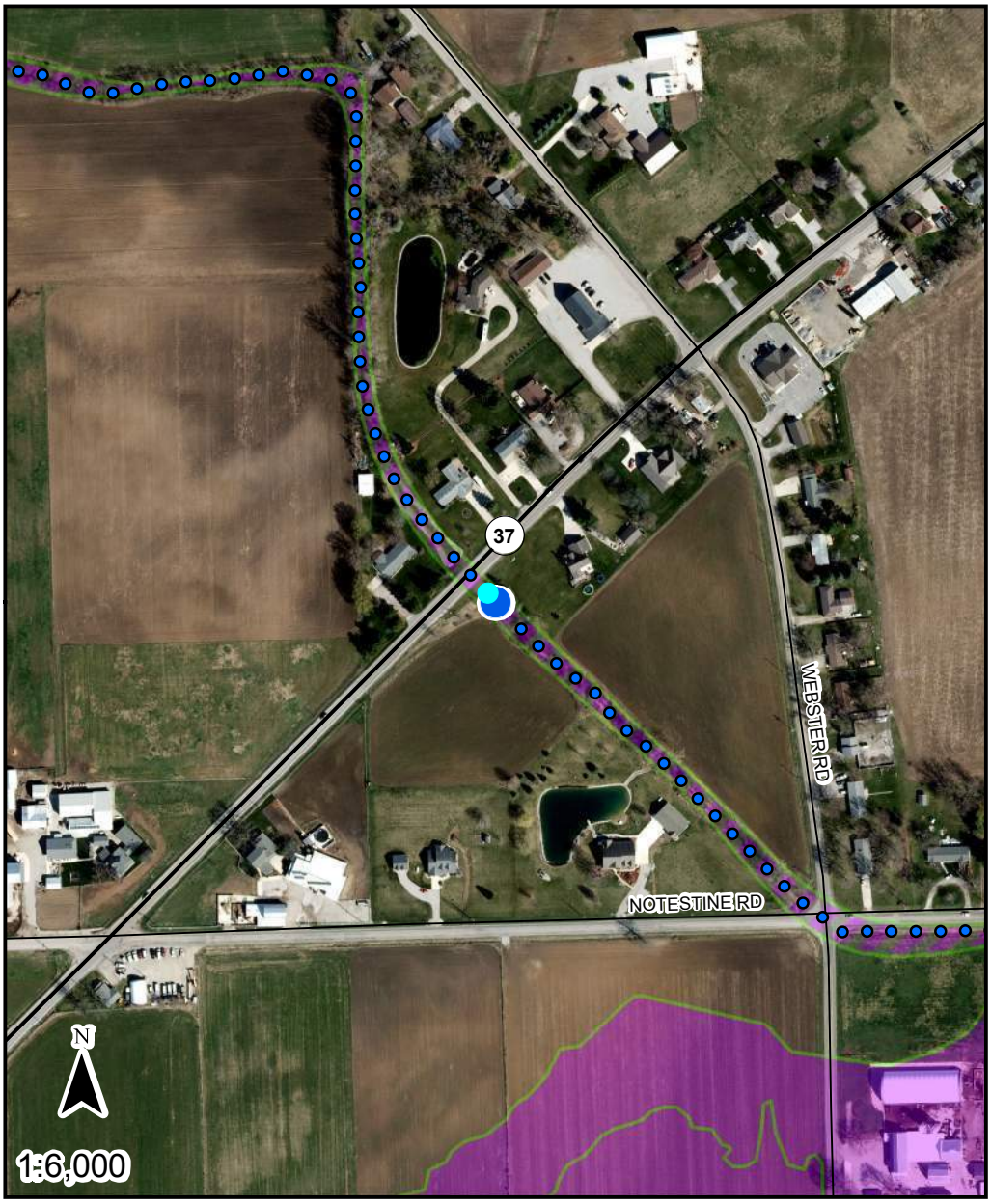
Floodplain Administrator: **Benjamin Roussel, Executive Director, Allen County Plan Commission**

Community Jurisdiction: **Allen County, County proper**

Phone: **(260) 449-4479**

Email: **benroussel@allencounty.us**

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



Point of Interest

Base Flood Elevation Point

Flood Elevation Points

STUDIED STREAM

DNR Approximate Floodway

DNR Approximate Fringe

Point of Interest Coordinates (WGS84)

Long: **-84.9399084918**

Lat: **41.1841301869**

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

County: **Allen**

Stream Name: **Amstutz Ditch**

Approximate Ground Elevation: **769.3 feet (NAVD88)**

Base Flood Elevation: **772.9 feet (NAVD88)**

Drainage Area: **Not available**

Best Available Flood Hazard Zone: **DNR Approximate Floodway**

National Flood Hazard Zone: **Not Mapped**

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: **Benjamin Roussel, Executive Director, Allen County Plan Commission**

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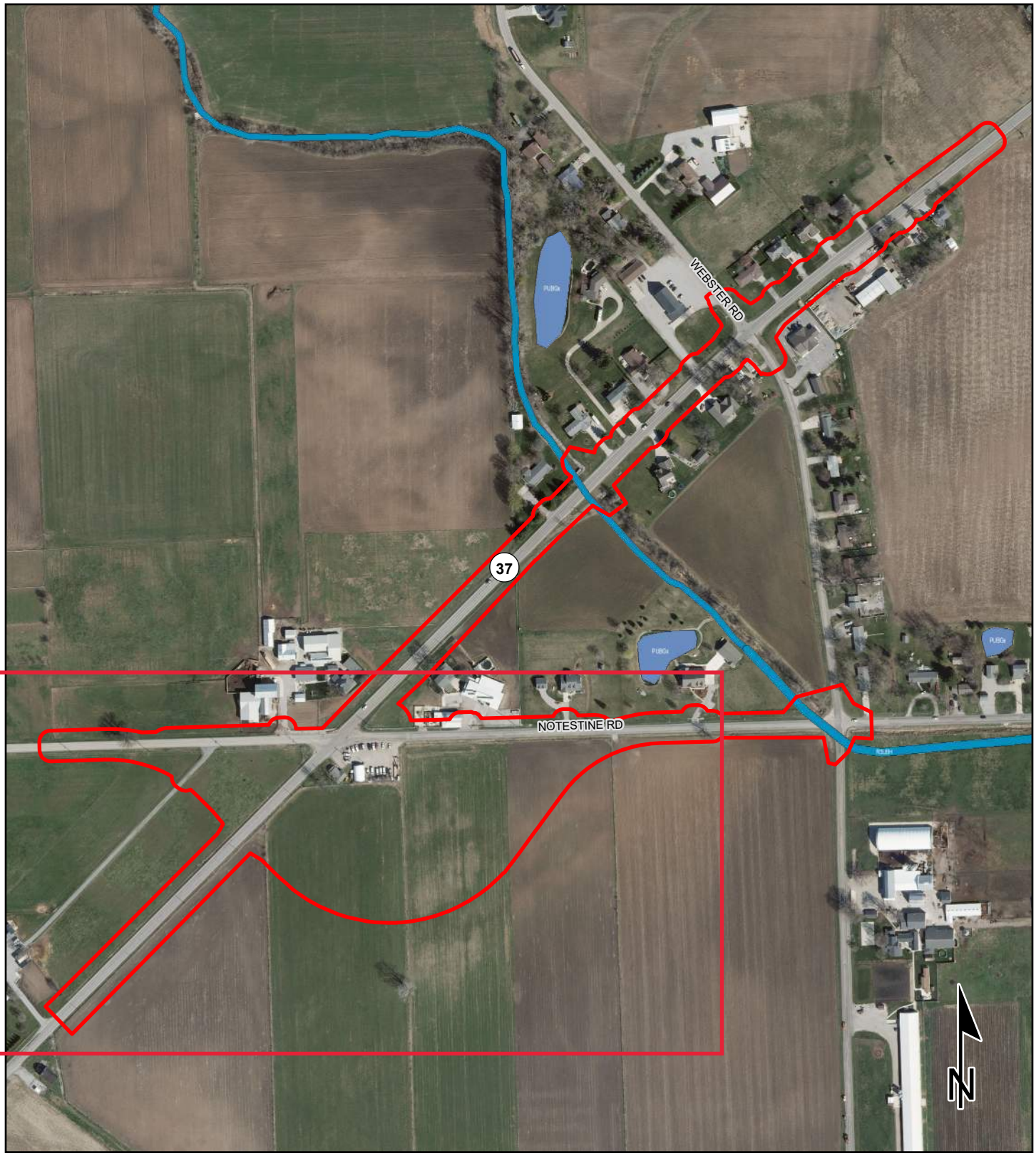


Wetlands
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- Other

Investigated Area

0 200 400 Feet

National Wetlands Inventory Map

SR 37 at Cuba/Thimler & Notestine Rd, 5.00 miles east of I-469

Intersection Improvment Project

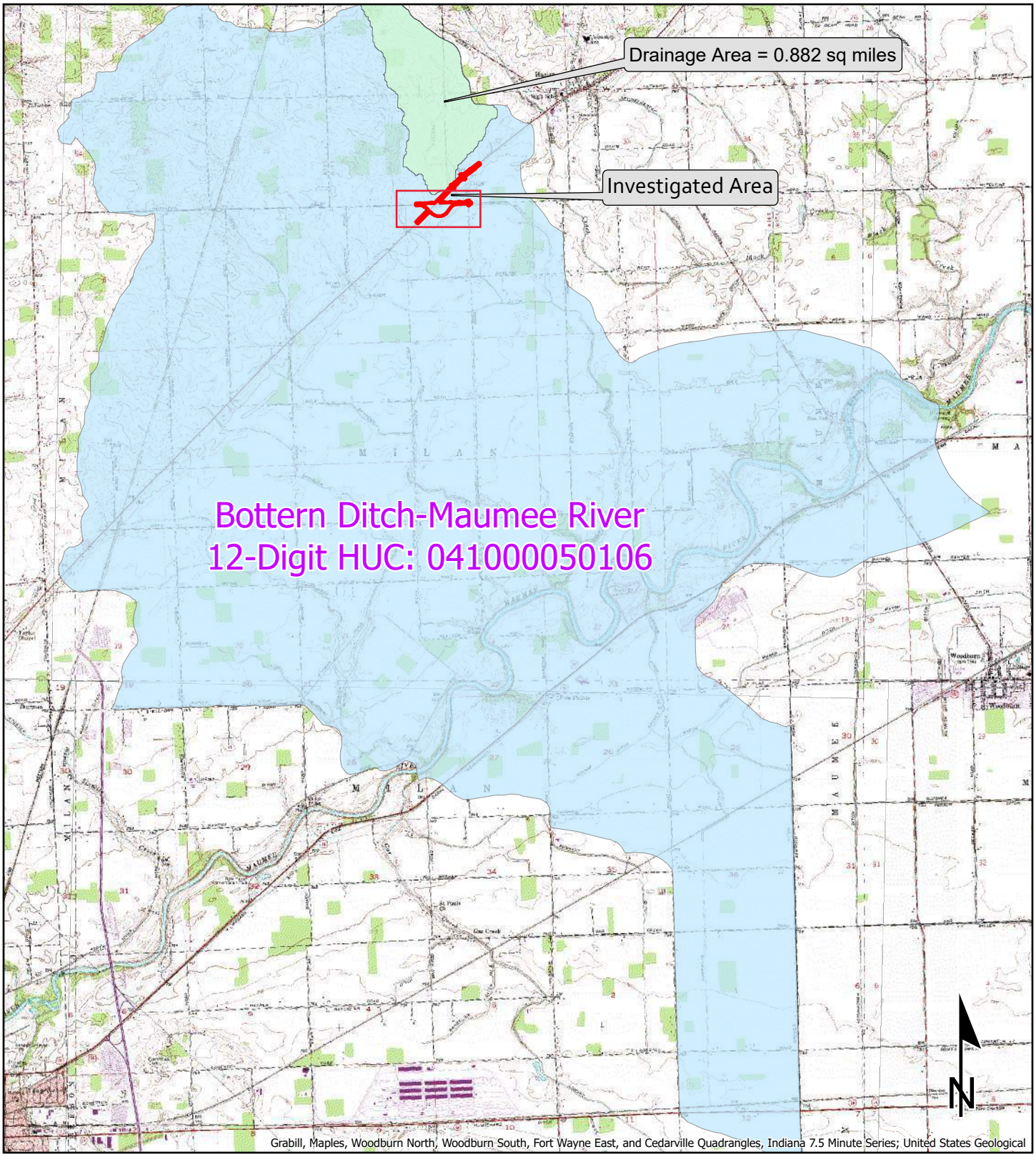
Allen County, Indiana

Des. No. 1900142

1 inch = 400 ft

HNTB

Graphics created by HNTB Corporation (2022)



Investigated Area

Watershed

USGS StreamStats Drainage Area

0 6,000 Feet

Watershed Map

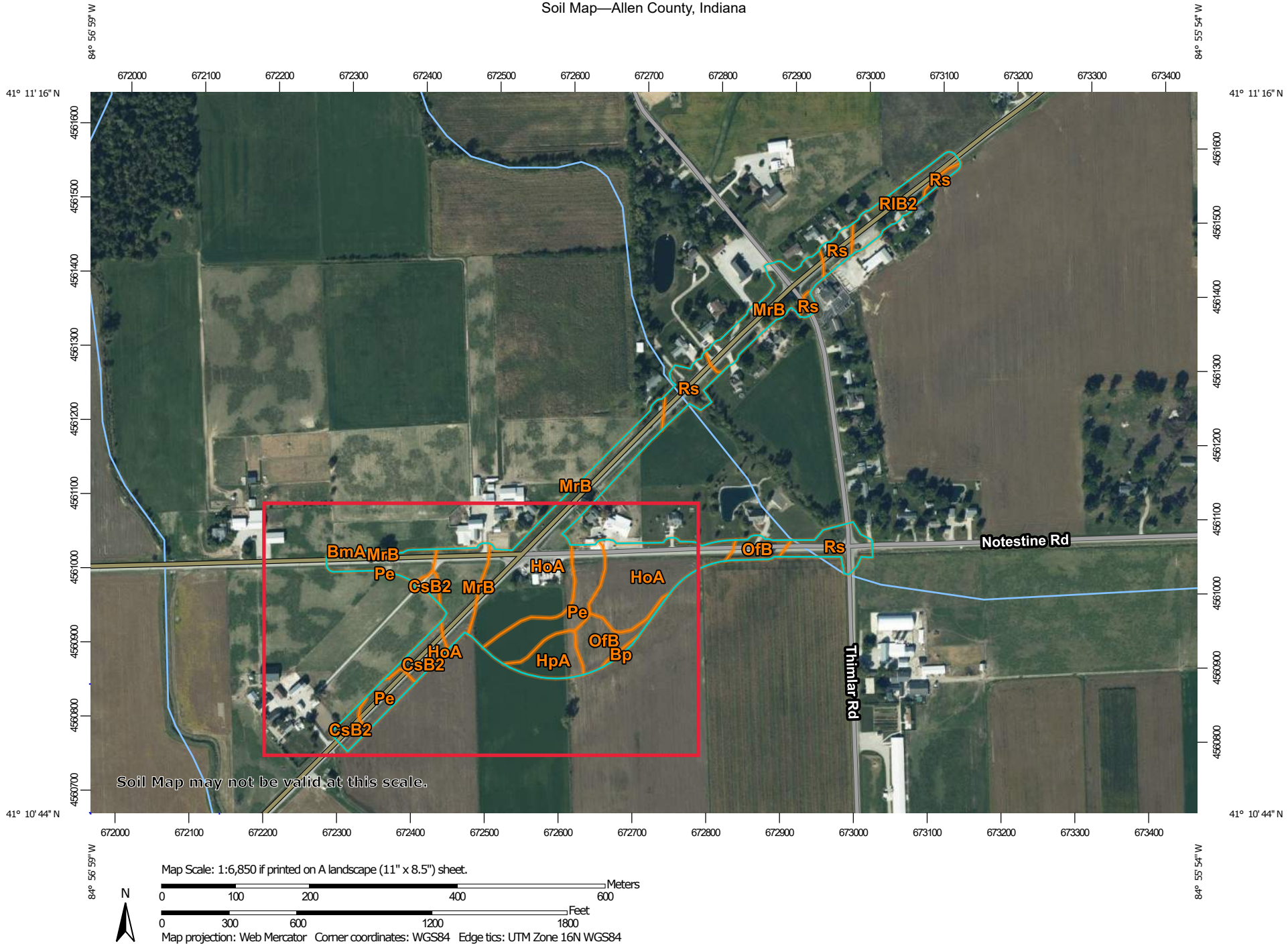
SR 37 at Cuba/Thimler & Notestine Rd, 5.00 miles east of I-469
Intersection Improvment Project
Allen County, Indiana

Des. No. 1900142

1 inch =6,000 ft

HNTB

Graphics created by HNTB Corporation (2022)



Map Scale: 1:6,850 if printed on A landscape (11" x 8.5") sheet.

N

0 100 200 400 600 Meters

0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

USDA **Natural Resources Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Allen County, Indiana
Survey Area Data: Version 21, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 8, 2019—Oct 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

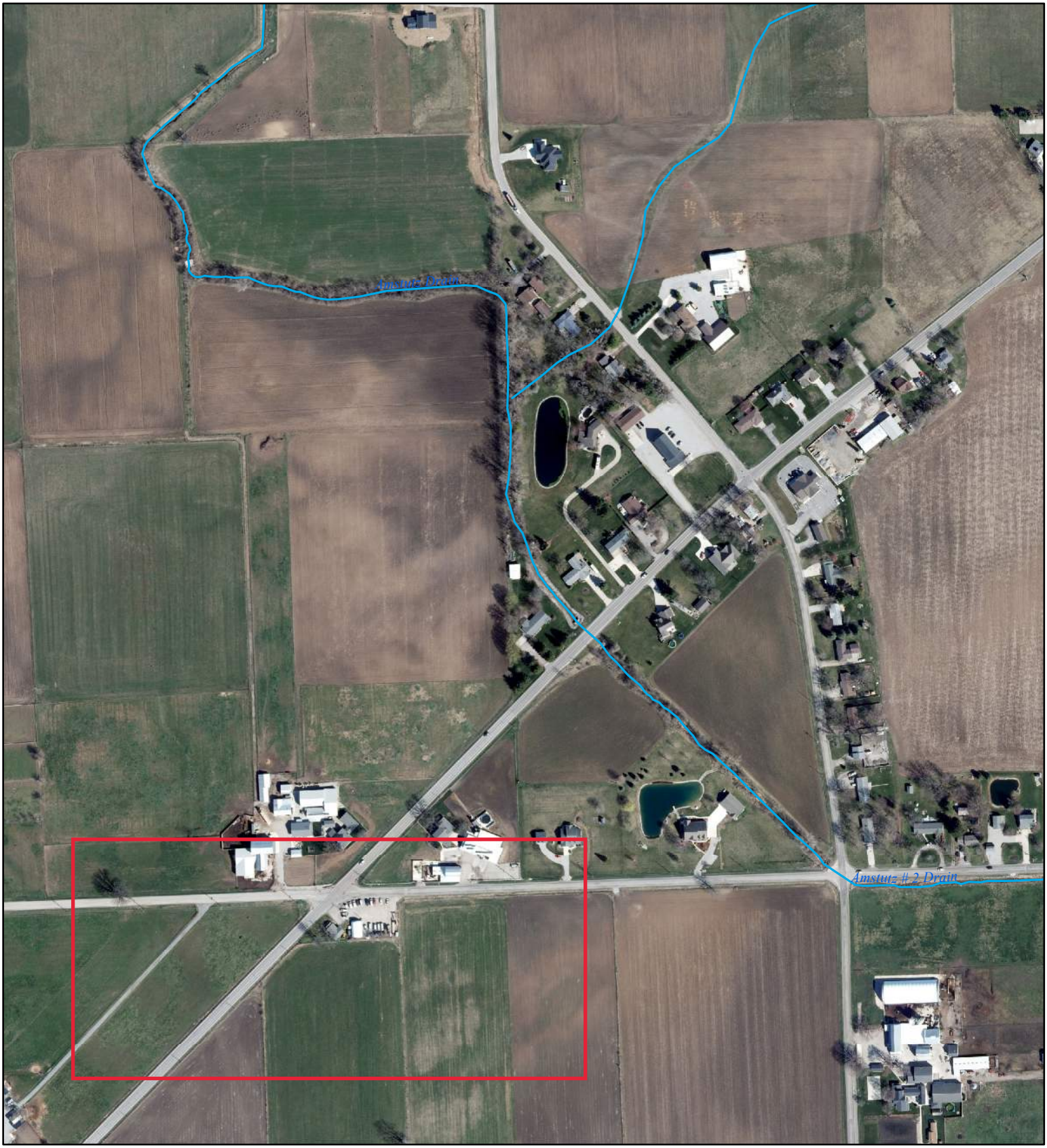
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BmA	Blount loam, interlobate moraines, 0 to 2 percent slopes	0.0	0.0%
Bp	Borrow pits	0.1	0.3%
CsB2	Crosby silt loam, 2 to 6 percent slopes, moderately eroded	1.2	4.9%
HoA	Whitaker loam, 0 to 2 percent slopes	8.7	36.5%
HpA	Whitaker silt loam, 0 to 2 percent slopes	1.0	4.2%
MrB	Glynwood silt loam, 2 to 6 percent slopes	3.7	15.5%
OfB	Oshtemo fine sandy loam, loamy substratum, 2 to 6 percent slopes	1.5	6.3%
Pe	Pewamo silty clay loam, 0 to 1 percent slopes	3.7	15.6%
RlB2	Rawson loam, 2 to 6 percent slopes, moderately eroded	1.3	5.5%
Rs	Rensselaer silty clay loam	2.7	11.2%
Totals for Area of Interest		**23.7**	**100.0%**

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BmA	Blount loam, interlobate moraines, 0 to 2 percent slopes	5	0.0	0.0%
Bp	Borrow pits	0	0.1	0.3%
CsB2	Crosby silt loam, 2 to 6 percent slopes, moderately eroded	10	1.2	4.9%
HoA	Whitaker loam, 0 to 2 percent slopes	10	8.7	36.5%
HpA	Whitaker silt loam, 0 to 2 percent slopes	10	1.0	4.2%
MrB	Glynwood silt loam, 2 to 6 percent slopes	4	3.7	15.5%
OfB	Oshtemo fine sandy loam, loamy substratum, 2 to 6 percent slopes	0	1.5	6.3%
Pe	Pewamo silty clay loam, 0 to 1 percent slopes	91	3.7	15.6%
RlB2	Rawson loam, 2 to 6 percent slopes, moderately eroded	5	1.3	5.5%
Rs	Rensselaer silty clay loam	100	2.7	11.2%
Totals for Area of Interest			**23.7**	**100.0%**

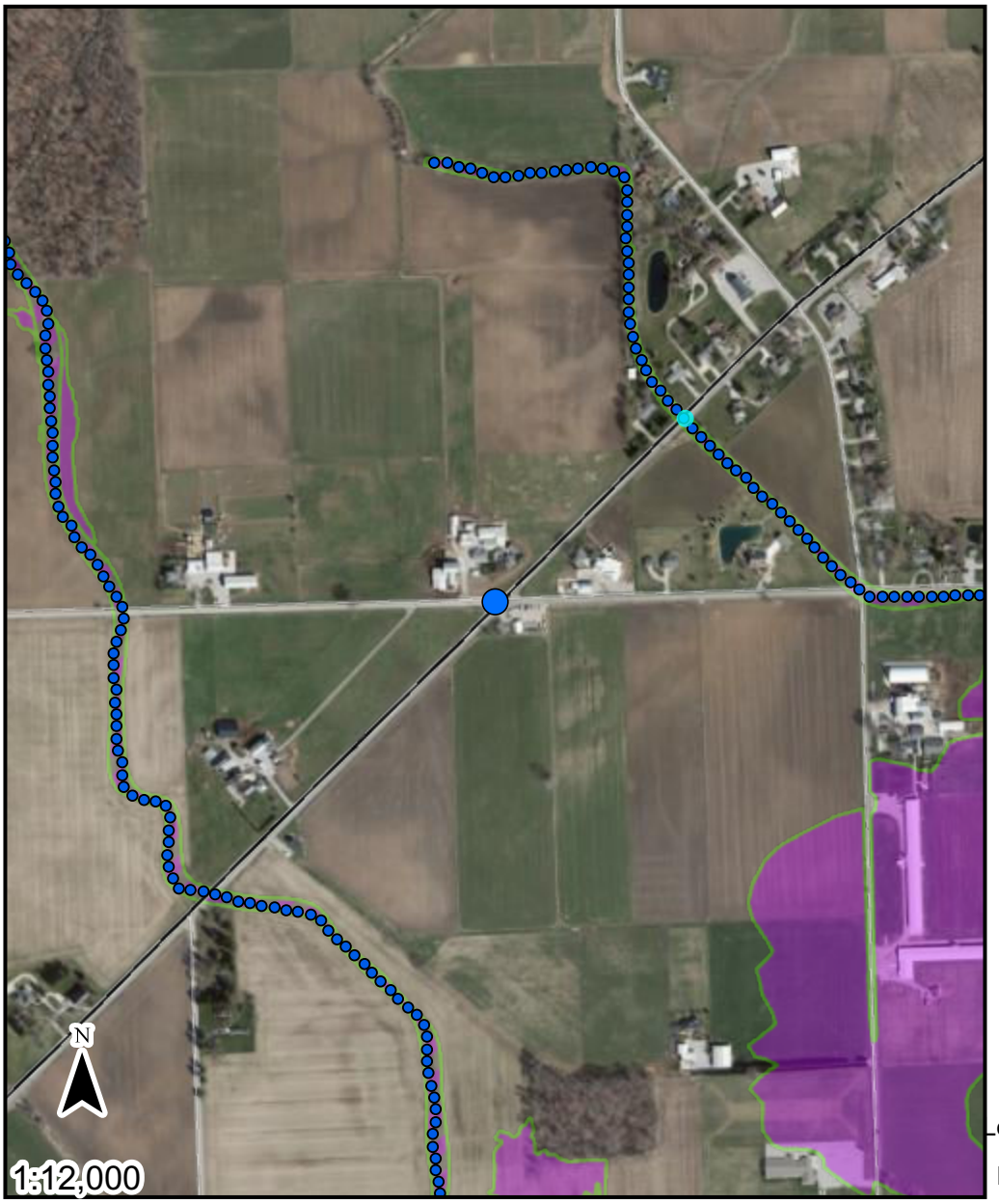
Allen County Legal Drains



North American Datum 1983
State Plane Coordinate System, Indiana East

N

Date: 12/14/2022 1 " = 375 '



Point of Interest

Base Flood Elevation Point

CreateINFIPReport_PointOfInteres

POI

POI

1.0

FloodHazard_BestAvai_DN

DNR Approximate Floodway

DNR Approximate Fringe

Not Mapped

Long: **-84.94288689401084**

Lat: **41.18224066310797**

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

County: **Allen**

Stream Name:
Amstutz Ditch

Approximate Ground Elevation: **781.3 feet (NAVD88)**

Base Flood Elevation: **773.0 Feet (NAVD88)**

Drainage Area: **Not Available**

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

NFHL

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

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

Floodplain Administrator: **Benjamin Roussel, Executive Director, Allen County Plan Commission**

Community Jurisdiction: **Allen County, County proper**

Phone: **(260) 449-4479**

Email: **benroussel@allencounty.us**

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

Date Generated: 5/6/2024