

# Appendix F

Water Resources

Des. No. 1900333



## **Waters of the U.S. Determination**

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SR 26 in Tippecanoe County, Indiana  
Small Structure Project, 4.98 Miles West of US 52/231  
Designation Number: 1900333  
Asset Name: CV 026-079-28.10

Prepared by:

*Kirk Roth*

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*317-488-2363*

*Corradino, LLC*

September 19, 2022

## 1. Project Information

### Dates of Field Reconnaissance:

Field work for this report was conducted on September 1 and September 14, 2021 and September 14, 2022 by Corradino, LLC.

### Project Location:

Otterbein Quadrangle  
Sections 7 and 18, Township 23 North, Range 5 West  
Tippecanoe County, Indiana  
Coordinates: 40.44609, -87.02433

### Project Description:

This project is located on SR 26, 4.98 miles west of US 52/231, at structure CV 026-079-28.10. SR 26 crosses Goose Creek within the project area. The structure location is shown on the attached Aerial and Photo Key Maps and illustrated in photos 1-6, 11-12, and 19 in the Photo Log. The existing twin concrete box structures are each 296 feet long with an 84-inch span and 84-inch rise. The project will replace the existing structures with a single span precast reinforced concrete three-sided structure. To provide access on the outlet side of the structure for future inspection and maintenance work, a new access road approximately 900 feet in length will be constructed on the existing fill slopes of SR 26. Incidental work will include approximately 400 feet of asphalt replacement, milling and resurfacing to tie the new pavement into the existing. Scour protection (riprap on geotextiles) will be placed at the inlet, along the structure, and at the outlet in accordance with INDOT Standard Drawings. The project area is surrounded by wooded terrain.

## 2. Desktop Reconnaissance

### Soils

According to the Soil Survey Geographic (SSURGO) Database for Tippecanoe County, Indiana, the project area does contain soil areas with nationally listed hydric soils. The soil at the west and east ends of the project area is Strawn-Rodman Complex (SyF), with Ouiatenon Loamy Sand (Ox) in the central section. Richardville Silt Loam (RdB2) is at the western tip of the project area north of SR 26.

Soil Unit Name	Symbol	NRCS Flooding Frequency	NRCS Drainage Class	NRCS Hydric Soil Category	SSURGO Hydric Rating
Ouiatenon Loamy Sand	Ox	Occasional	Somewhat Excessively Drained	Predominantly Nonhydric	3% Hydric
Strawn-Rodman Complex	SyF	None	Well Drained	Nonhydric	0% Hydric
Richardville Silt Loam	RdB2	None	Well Drained	Nonhydric	0% Hydric

**National Wetland Inventory Information**

Wetland/Water Feature Name	Location
PFO1A	205 feet north
PF01A	387 feet south

**National Hydrography Dataset Information**

12-digit Hydrologic Unit – 051201080501

Reach Code	Flowline Type	Stream Name	Mapped Location
05120108000970	Stream/River	Goose Creek	Project structure, extending north and south
05120108002439	Stream/River	UNT1 to Goose Creek	50 feet north of project structure, extending east
05120108029128	Stream/River	UNT2 to Goose Creek	150 feet north of project structure, extending west
05120108022763	Canal/Ditch	UNT3 to Goose Creek	165 feet south of project structure, extending west

**Attached Documents:**

- Project Location Map
- Topographic Map
- Aerial Map
- Water Resources Map
- National Hydrography Dataset (NHD) and National Wetland Inventory (NWI) Map
- IDNR Floodplain Analysis and Regulatory Assessment (FARA)

- StreamStats Report
- Soils Map
- Photo Key and Photo Log
- Wetland Determination Data Sheet
- Preliminary Jurisdictional Determination

### 3. Field Reconnaissance

Site reconnaissance was conducted on September 1 and September 14, 2021 and September 14, 2022 by Corradino, LLC.

#### Stream Analysis

##### Goose Creek

The project structure CV 026-079-28.10 is associated with the perennial Goose Creek, which eventually encounters Indian Creek, and the navigable Wabash River. Structure CV 026-079-28.10 carries Goose Creek under SR 26. Within the project area, Goose Creek flows south and drains the surrounding wooded area. During the site inspection, shallow flowing water was present, as well as an Ordinary High Water Mark (OHWM). Goose Creek is believed to be perennial due to its large size, robust water flow, and perennial status on USGS Topographic Maps. Riprap is not present in the channel. Stream quality is considered excellent due to the natural state of the creek, low turbidity, presence of abundant aquatic fauna and the presence of extensive complexity such as run/riffle complexes and variable substrate size. The OHWM was approximately 16 feet wide and 0.25 foot deep at a location approximately 40 feet south of the project structure. The StreamStats website (<https://streamstats.usgs.gov/ss/>) shows the area of Goose Creek to be 6.037 square miles at the project location. There are 701 linear feet of Goose Creek within the investigative area.

Goose Creek exhibited a well-defined bed and bank. All banks of Goose Creek were steep and there were no wetland hydrology characteristics above the OHWM. Upland vegetation dominated the areas beyond the banks, especially facultative upland *Lonicera maackii*, and also including facultative upland *Juniperus virginiana*, *Juglans nigra*, *Acer saccharum*, *Tilia americana*, *Cercis canadensis*, *Lonicera tatarica*, *Parthenocissus quinquefolia*, *Cardamine concatenata*, *Asarum canadense*, the facultative *Platanus occidentalis*, and the facultative wetland *Equisetum hyemale* and *Verbesina alternifolia*. Facultative and facultative wetland species were fewer in density than the facultative upland species. Wetland characteristics did not extend beyond the OHWM of Goose Creek and therefore any wetland characteristics are considered a feature of Goose Creek and not a separate feature. Goose Creek is listed as a stream/river in the USGS National Hydrography Dataset. It is likely that Goose Creek is a Water of the U.S. due to its apparent connectivity with the Wabash River.

##### UNT1 to Goose Creek

In the northeast quadrant of the project area, an intermittent drainage with an OHWM and bed and bank structure contacts Goose Creek. This drainage is approximately 50 feet north of project structure CV 026-079-28.10. For the purposes of this report, this drainage is referred to as UNT1 to Goose Creek. Within the project area, UNT1 to Goose Creek flows west and drains the adjacent wooded area. During the site inspection, shallow flowing water was present. Riprap is not present in the channel. Due to the natural

state of the creek, but the small size and lack of run/riffle complexes or other cover features, UNT1 to Goose Creek is considered average stream quality. The OHWM was approximately 2.0 foot wide and 0.25 foot deep at a point 25 feet east of Goose Creek. UNT1 to Goose Creek appeared intermittent due to its small size, flowing water, and representation on USGS Topography Maps. The location of UNT1 to Goose Creek appears to be modified by the construction SR 26 and appears different than the mapped tributary on the USGS Topographic Map. UNT1 to Goose Creek is identified as a blue line stream but its drainage area cannot be mapped using the StreamStats website, perhaps due to this modification. StreamStats shows the area of UNT1 to Goose Creek to be included within the 6.037 square mile basin of Goose Creek. Approximately 265 linear feet of UNT1 to Goose Creek occur within the investigative area.

UNT1 to Goose Creek exhibited a well-defined bed and bank. No dominant vegetation was found within the OHWM and wetland hydrology characteristics were not observed outside the banks. Dominant vegetation along the banks included the facultative upland *Celtis occidentalis*, *Liriodendron tulipifera*, *Cornus florida*, *Lonicera maackii*, *Rubus allegheniensis*, *Solidago canadensis*, *Cardamine concatenata*, and the facultative wetland *Rudbeckia laciniata*. Wetland characteristics did not extend beyond the OHWM of UNT1 to Goose Creek and therefore any wetland characteristics are considered a feature of UNT1 to Goose Creek and not a separate feature. UNT1 to Goose Creek is listed as a stream/river in the USGS National Hydrography Dataset. It is likely that UNT1 to Goose Creek is a Water of the U.S. due to its apparent connectivity with the Wabash River.

#### UNT2 to Goose Creek

In the northwest quadrant of the project area, an ephemeral drainage with an OHWM and bed and bank structure contacts Goose Creek. This drainage is approximately 150 feet north of project structure CV 026-079-28.10. For the purposes of this report, this drainage is referred to as UNT2 to Goose Creek. Within the project area, UNT2 to Goose Creek flows east and drains the adjacent wooded area. During the site inspection, no water was present. Riprap is not present in the channel. Due to the natural state of the creek, but small size and lack of run/riffle complexes or other cover features, UNT2 to Goose Creek is considered average stream quality. The OHWM was approximately 9 foot wide and 0.75 foot deep at a point 25 feet west of Goose Creek. UNT2 to Goose Creek appeared ephemeral due to its small size and dry status while the nearby creeks had water. UNT2 to Goose Creek may be subject to fast, heavy drainage of the nearby hillslopes that it drains, as evidenced by its larger depth than other tributaries in the project area and the apparent lack of substantial silt. UNT2 to Goose Creek is not identified as a blue line stream and therefore its drainage area cannot be mapped using the StreamStats website. StreamStats shows the area of UNT2 to Goose Creek to be included within the 6.037 square mile basin of Goose Creek. Approximately 349 linear feet of UNT2 to Goose Creek occur within the investigative area.

UNT2 to Goose Creek exhibited a well-defined bed and bank. No dominant vegetation was found within the OHWM and the banks did not exhibit wetland hydrology characteristics. Dominant plants at and along the banks were the facultative upland *Juglans nigra*, *Acer saccharum*, *Tilia americana*, *Cercis canadensis*, *Lonicera tatarica*, *Parthenocissus quinquefolia*, *Asarum canadense*, and *Cardamine concatenata*. Wetland characteristics did not extend beyond the OHWM of UNT2 to Goose Creek and therefore any wetland characteristics are considered a feature of UNT2 to Goose Creek and not a separate feature. UNT2 to Goose Creek is listed as a canal/ditch in the USGS National Hydrography Dataset. It is likely that UNT2 to Goose Creek is a Water of the U.S. due to its apparent connectivity with the Wabash River.

UNT3 to Goose Creek

In the southwest quadrant of the project area, an ephemeral drainage with an OHWM and bed and bank structure contacts Goose Creek. This drainage is approximately 60 feet south of project structure CV 026-079-28.10. For the purposes of this report, this drainage is referred to as UNT3 to Goose Creek. Within the project area, UNT3 to Goose Creek flows east and drains the adjacent roadside and wooded area. During the site inspection, no water was present. Riprap is present in the channel beginning approximately 70 feet from Goose Creek. Areas of erosion occur along much of UNT3 to Goose Creek due to its location against the steep slope leading to SR 26. , Due to the unnatural state of the creek, erosion, small size, and lack of run/riffle complexes or other cover features, UNT3 to Goose Creek is considered poor stream quality. The OHWM was approximately 2.0 foot wide and 0.25 foot deep at a point 15 feet west of Goose Creek, which was unaffected by erosion or riprap. UNT3 to Goose Creek appeared ephemeral due to its small size and dry status while the nearby creeks had water. UNT3 to Goose Creek is not identified as a blue line stream and therefore its drainage area cannot be mapped using the StreamStats website. StreamStats shows the area of UNT2 to Goose Creek to be included within the 6.037 square mile basin of Goose Creek. Approximately 373 linear feet of UNT3 to Goose Creek occur within the investigative area.

UNT3 to Goose Creek exhibited a well-defined bed and bank for approximately 70 feet from Goose Creek, and a moderately-defined bad and bank for a further 300 feet, where it is lined with riprap. Bed and bank structure eventually ends within the investigative area. Where the riprap begins, upland plants, especially *Lonicera maackii*, are sparse but dominant within the channel. Facultative upland plants including *Rubus allegheniensis*, *Glechoma hederacea* and *Solidago canadensis* are dominant downstream of the riprap area. The banks did not exhibit wetland hydrology characteristics. Dominant plants at and along the banks were the upland *Lonicera maackii*, facultative upland *Juglans nigra*, *Robinia pseudoacacia*, *Tilia americana*, *Cercis canadensis*, *Lonicera tatarica*, *Parthenocissus quinquefolia*, *Robinia pseudoacacia*, and *Solidago canadensis* and facultative *Verbesina alternifolia*. Wetland characteristics were not found in or near the OHWM of UNT3 to Goose Creek. UNT3 to Goose Creek is listed as a canal/ditch in the USGS National Hydrography Dataset. It is likely that UNT3 to Goose Creek is a Water of the U.S. due to its apparent connectivity with the Wabash River.

**Table 1 – Stream Summary, SR 26, Tippecanoe County, Indiana, Designation Number 1900333**

Stream Name	Photos	Lat/Long	OHW Width (feet)	OHW Depth (feet)	USGS Blue-line?	Riffles? Pools?	Substrate	Quality	Likely Water of U.S.?
Goose Creek	1-17; 23-24	40.445474 -87.024085	16	0.25	Yes (Perennial)	Yes	Silt, Sand, Pebbles, Cobbles, Boulders	Excellent	Yes
UNT1 to Goose Creek	18-22	40.446344 -87.023444	2.0	0.25	Yes (Intermittent)	No	Silt, Sand, Pebbles	Average	Yes
UNT2 to Goose Creek	25-30	40.447003 -87.024476	9.0	0.75	No (Ephemeral)	No	Sand, Pebbles, Cobbles, Boulders	Average	Yes
UNT3 to Goose Creek	31-36; 65-66	40.445554 -87.024138	2.0	0.25	No (Ephemeral)	No	Silt, Sand, Pebbles, Boulders (Riprap)	Poor	Yes

### Wetland Analysis

The site was investigated for potential wetland characteristics. The only wetland hydrology features were confined to the OHWM of Goose Creek, UNT1 to Goose Creek, UNT2 to Goose Creek and UNT3 to Goose Creek. Most of the investigative area outside these creek beds is comprised of steep hill slopes or fill from SR 26. Upland plant species were predominant throughout the investigative area, especially facultative upland *Juglans nigra*, *Acer saccharum* in the forested areas, and *Robinia pseudoacacia*, *Solidago canadensis*, and *Schedonorus arundinaceus* downslope from SR 26. Upland *Lonicera maackii* was dominant in all except mowed areas. The facultative *Platanus occidentalis*, and the facultative wetland *Equisetum hyemale*, *Verbesina alternifolia*, and *Rudbeckia laciniata* were found in densities that would register as dominant in wetland delineation, but in each location they were outnumbered by facultative upland species.

A temporarily flooded broad-leaved deciduous palustrine forested (PFO1A) NWI Wetland is mapped approximately 200 feet north of the project structure CV 026-079-28.10 and immediately north of UNT2 to Goose Creek. A wetland determination data point, named UPL-1 (Photo 67 and 68), was taken in this area. Dominant vegetation included the upland *Lonicera maackii*, facultative upland *Juglans nigra*, *Tilia americana*, *Asarum canadense*, and the facultative *Smilax rotundifolia*. The Dominance Test and Prevalence Index did not indicate a hydrophytic vegetation regime. No hydric soil indicators and no wetland hydrology indicators were found. This area experienced substantial change after the construction of SR 26, as indicated by USGS Topographic maps.

Because no locations outside the tributaries were found with wetland hydrology indicators or hydrophytic vegetation, no wetlands were identified within the investigative area.

### Roadside Ditch Analysis

#### RSD1 (photos 37-47)

A roadside ditch occurs in the northwest quadrant of the project area and is referred to as RSD2 in this document. RSD2 has a bed and bank structure but does not exhibit an OHWM and drains into Goose Creek north of the project structure. RSD2 is dominated by upland and facultative upland plants such as *Lonicera maackii*, *Juglans nigra*, *Parthenocissus quinquefolia*, *Ageratina altissima*, *Sanicula canadensis* and *Solidago canadensis*, with facultative wetland *Verbesina alternifolia* in shaded areas. The vegetation present does not support wetland status. Away from Goose Creek, the bed of RSD2 is predominantly riprap. RSD2 drains the nearby roadside and forested area.

Due to the lack of an OHWM, RSD2 does not exhibit characteristics of a tributary. Because RSD2 is not a wetland or tributary, it is not likely a Water of the U.S.



## 4. Summary and Conclusions

As running waterways directly traceable to the Wabash River, Goose Creek, UNT1 to Goose Creek, UNT2 to Goose Creek, and UNT3 to Goose Creek within the project area are apparent jurisdictional Waters of the U.S. The jurisdictional area in the project area would extend to the limits of the OHWM of the channel on all the banks of all tributaries.

RSD1 is a non-jurisdictional feature within the study area.

There were no areas with wetland characteristics within the study area.

No bat or bird use of the bridge was detected during the September 1, 2021, September 14, 2021 or September 14, 2022 survey.

This waterway is a likely Water of the U.S. Every effort should be taken to avoid and minimize impacts to the waterway. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgment based on the guidelines set forth by the Corps.

### **Acknowledgement:**

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

Kirk Roth

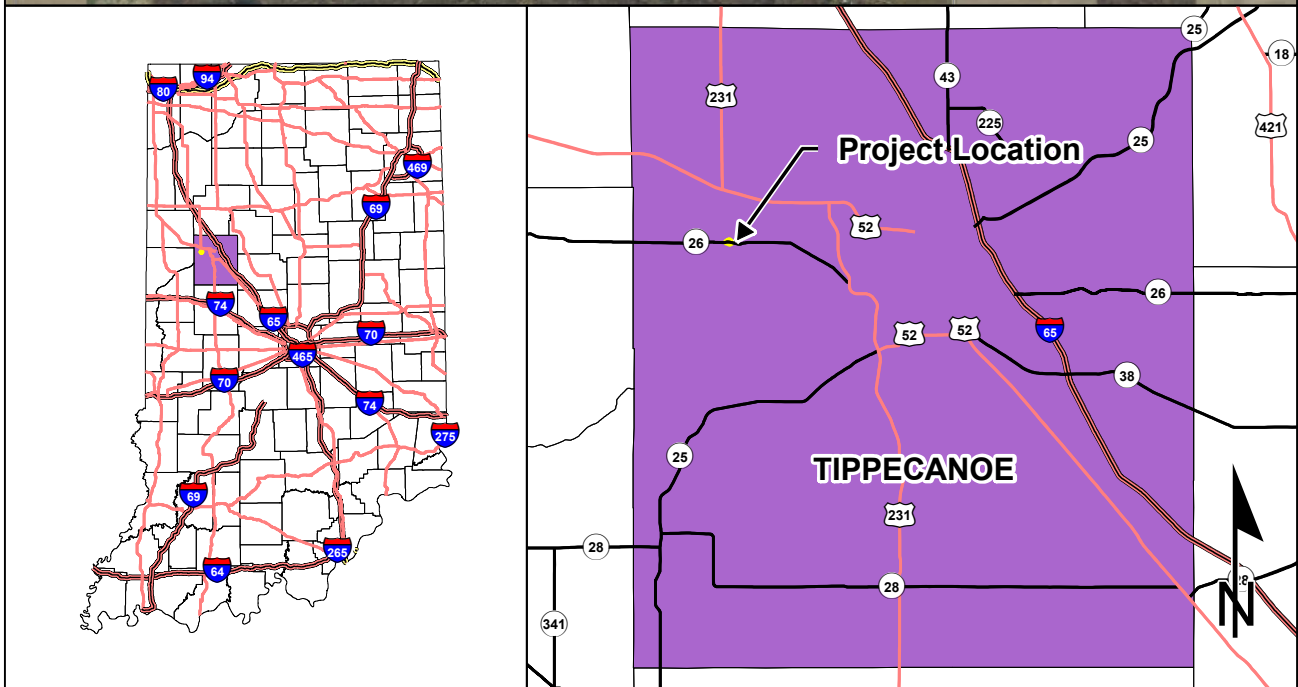
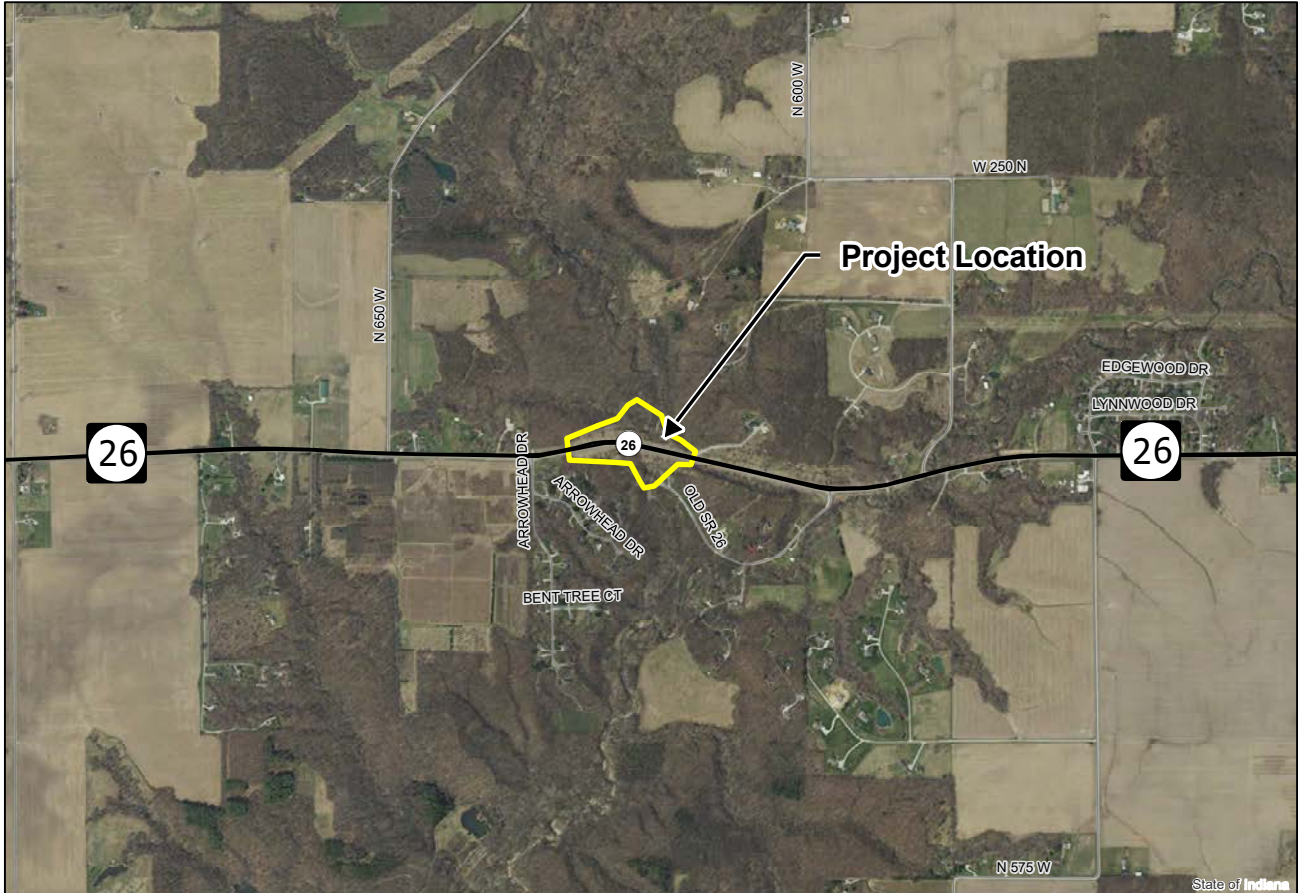


Environmental Scientist

Corradino, LLC

September 19, 2022

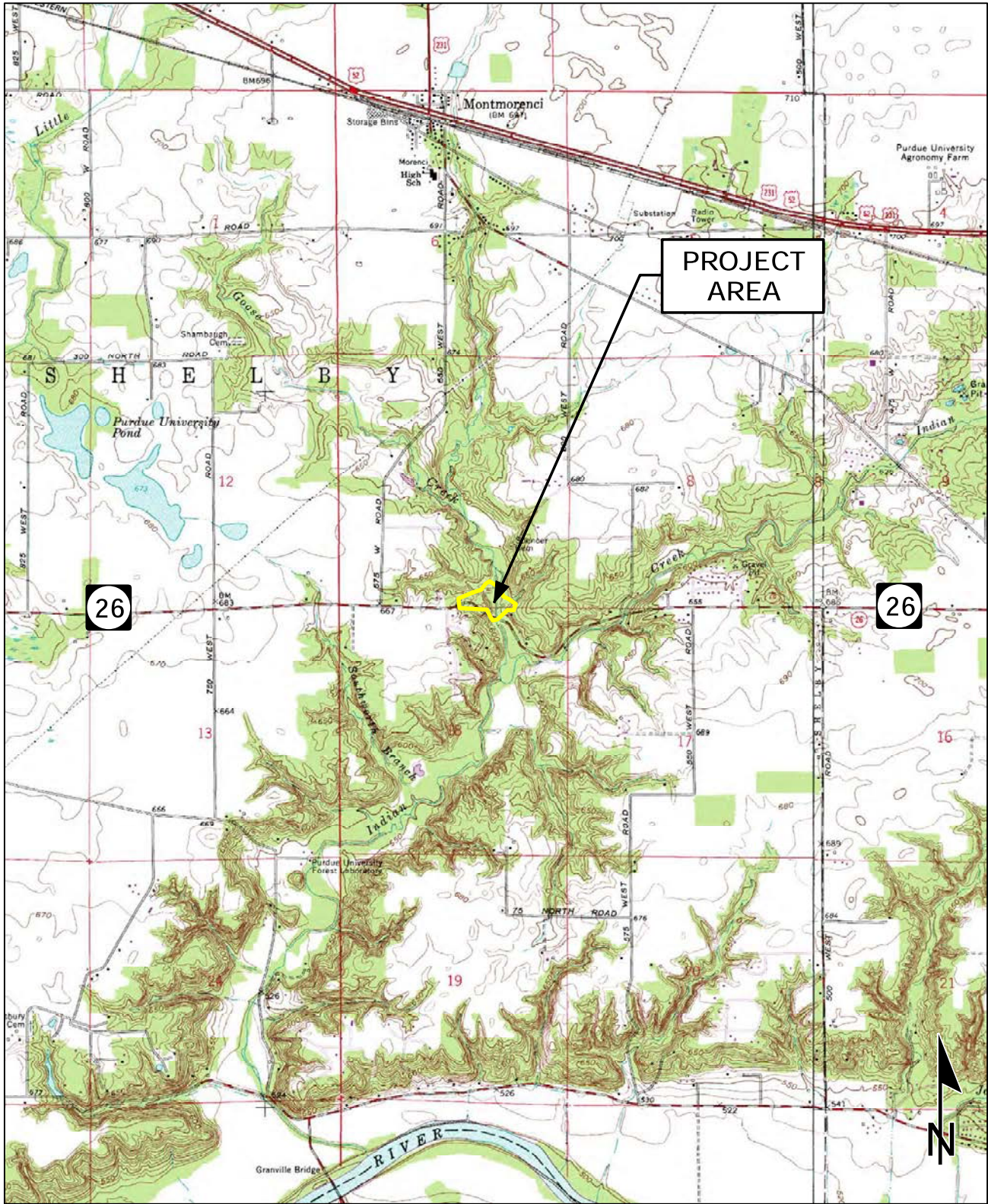
**Project Location Map**  
**SR 26, 4.98 Miles West of US 52/231**  
**Des. No. 1900333, Small Structure Replacement**  
**Tippecanoe County, Indiana**



Sources: 0.25 0.125 0 0.25 Miles  
**Non Orthophotography**  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://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.

**INDIANA STATEWIDE GIS DATA**

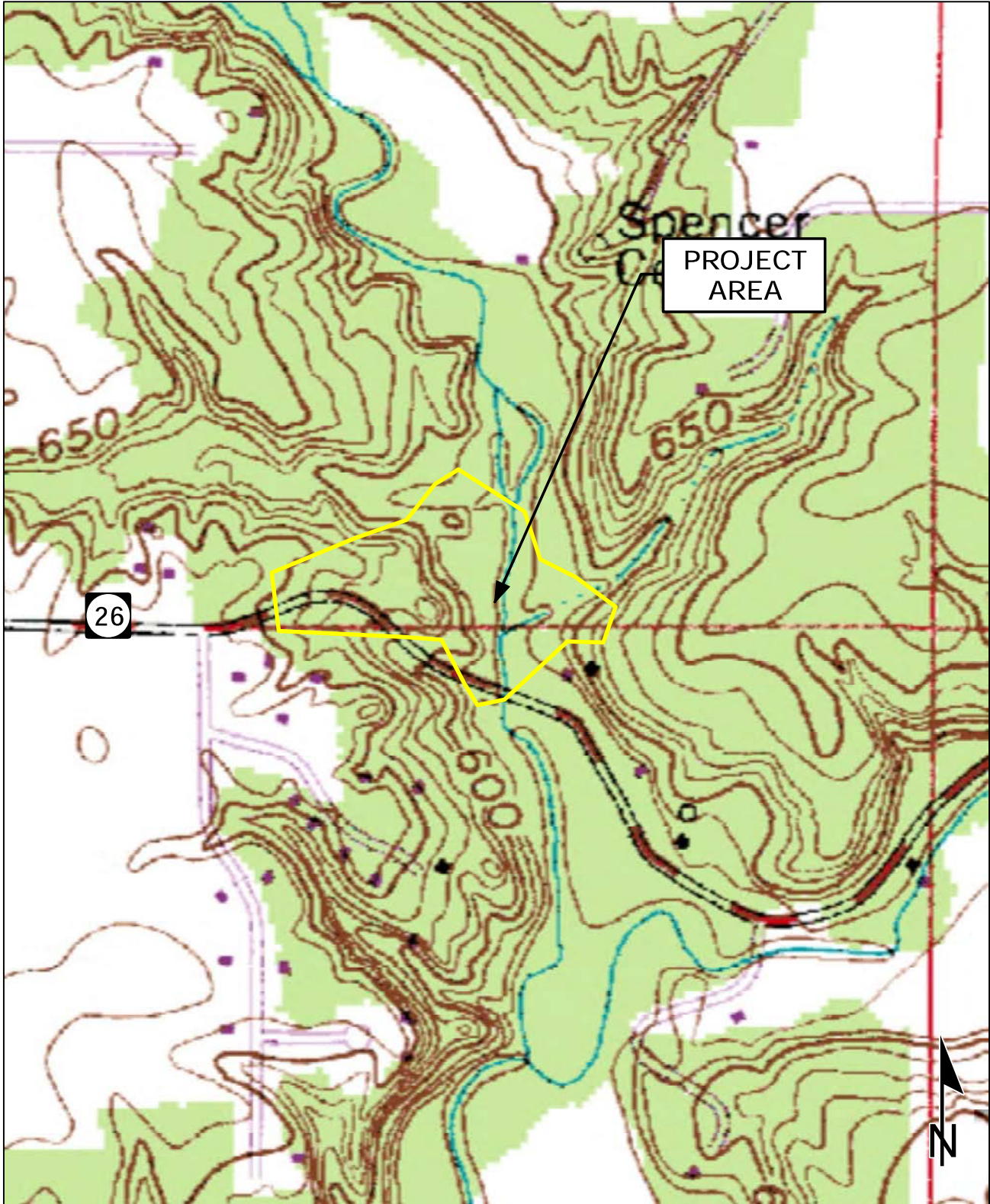
USGS Topographic Map  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



Sources: 0.6 0.3 0 0.6 Miles  
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 Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
 Map Projection: UTM Zone 16 N Map Datum: NAD83  
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**OTTERBEIN  
 QUADRANGLE INDIANA  
 7.5 MINUTE SERIES  
 (TOPOGRAPHIC)**

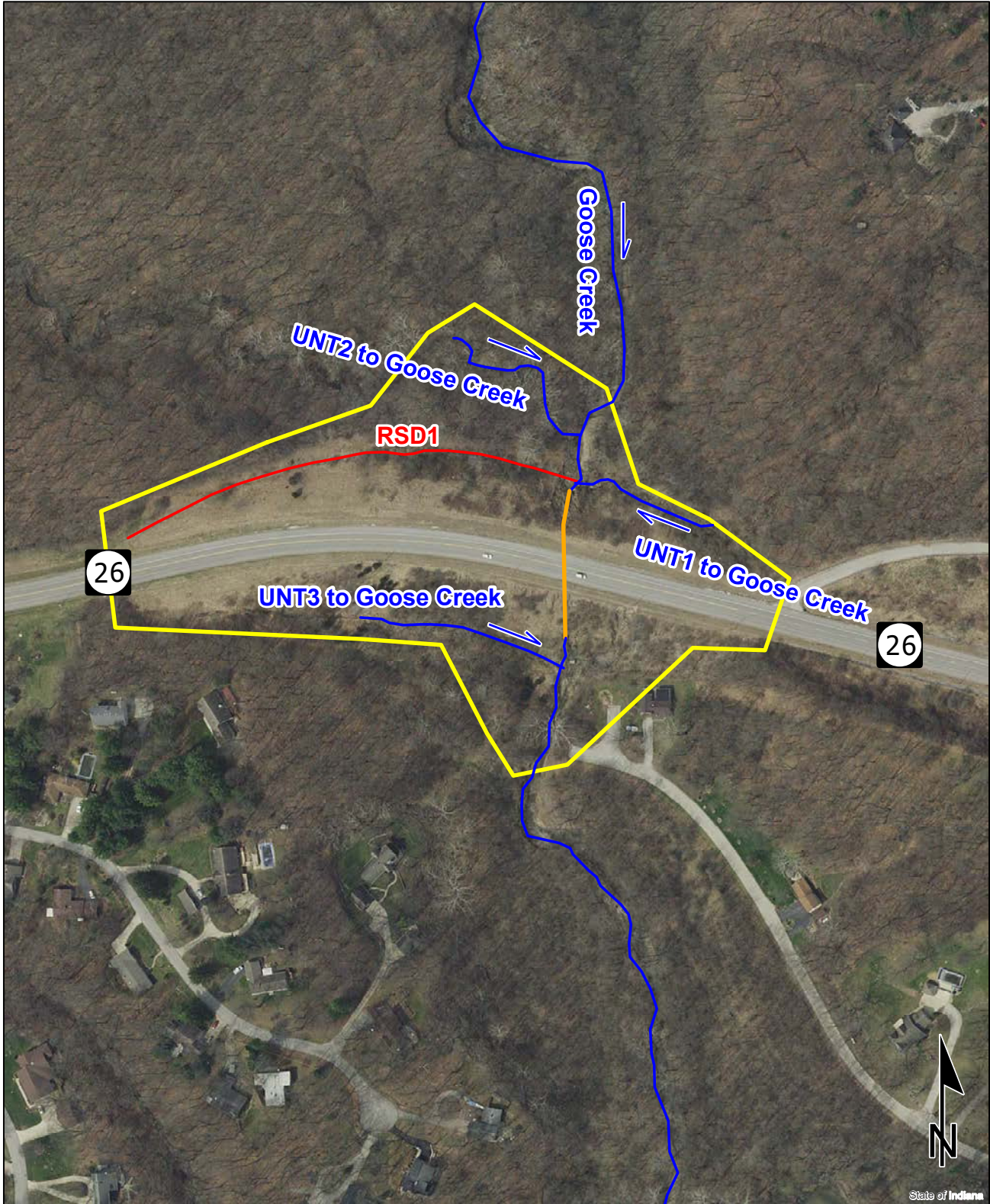
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SR 26, 4.98 Miles West of US 52/231  
Des. No. 1900333, Small Structure Replacement  
Tippecanoe County, Indiana



Sources: 0.1 0.05 0 0.1 Miles  
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Data - Obtained from the State of Indiana Geographical Information Office Library  
Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
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OTTERBEIN  
QUADRANGLE INDIANA  
7.5 MINUTE SERIES  
(TOPOGRAPHIC)






Aerial Map  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



Sources: 250 125 0 250 Feet  
**Non Orthophotography**  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://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.

**INDIANA STATEWIDE  
 AERIAL IMAGERY  
 FLOWN 2016**

**Legend**

	Flow Direction		Roadside Ditch
	Tributary		Investigative Area
	Culvert		

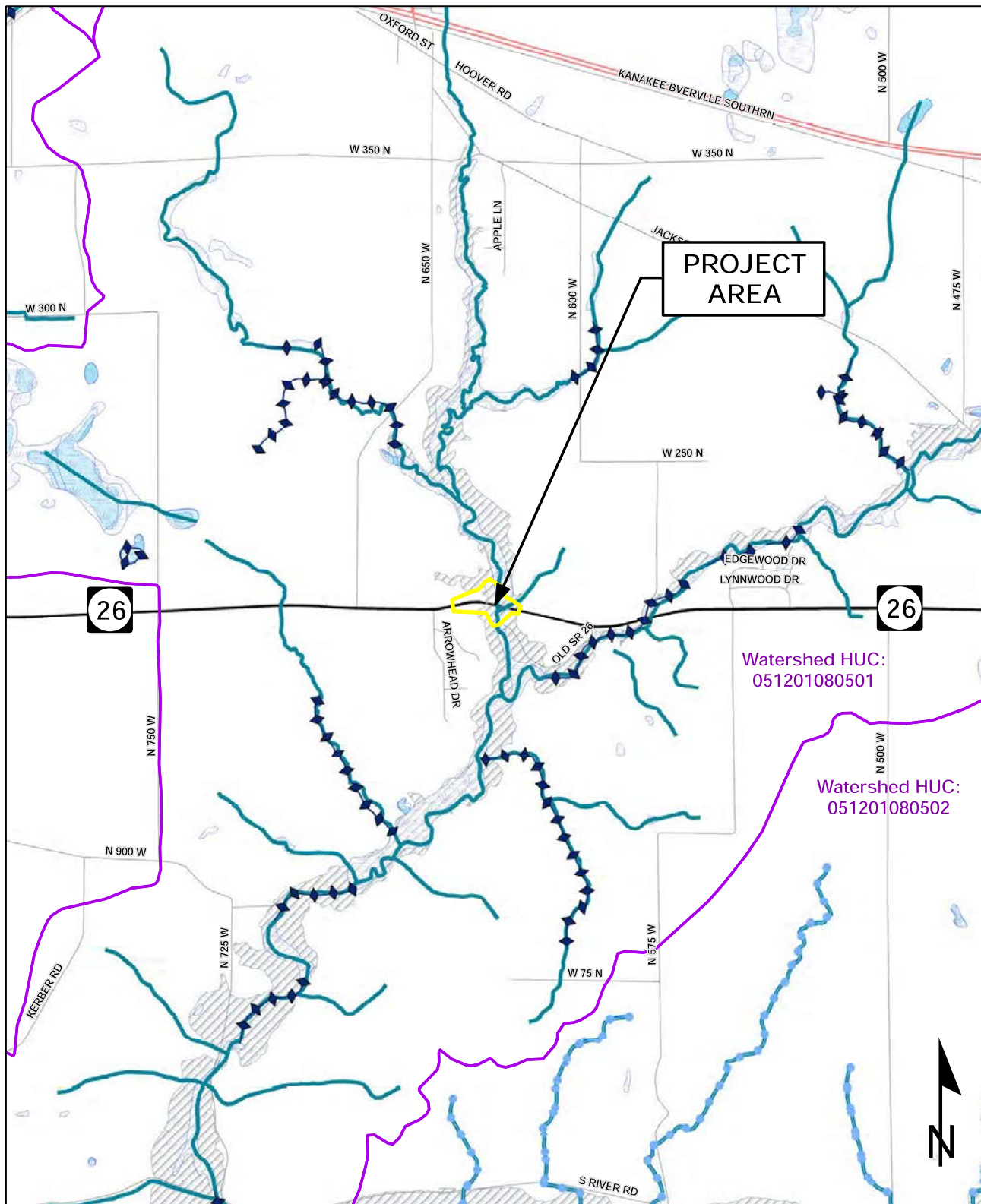
Appendix F-13

# Water Resources Map

## SR 26, 4.98 Miles West of US 52/231

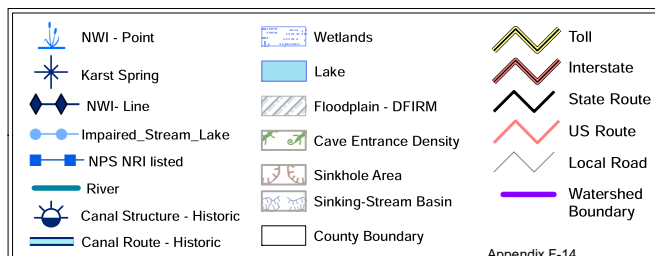
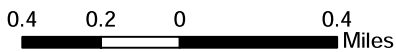
### Des. No. 1900333, Small Structure Replacement

#### Tippecanoe County, Indiana

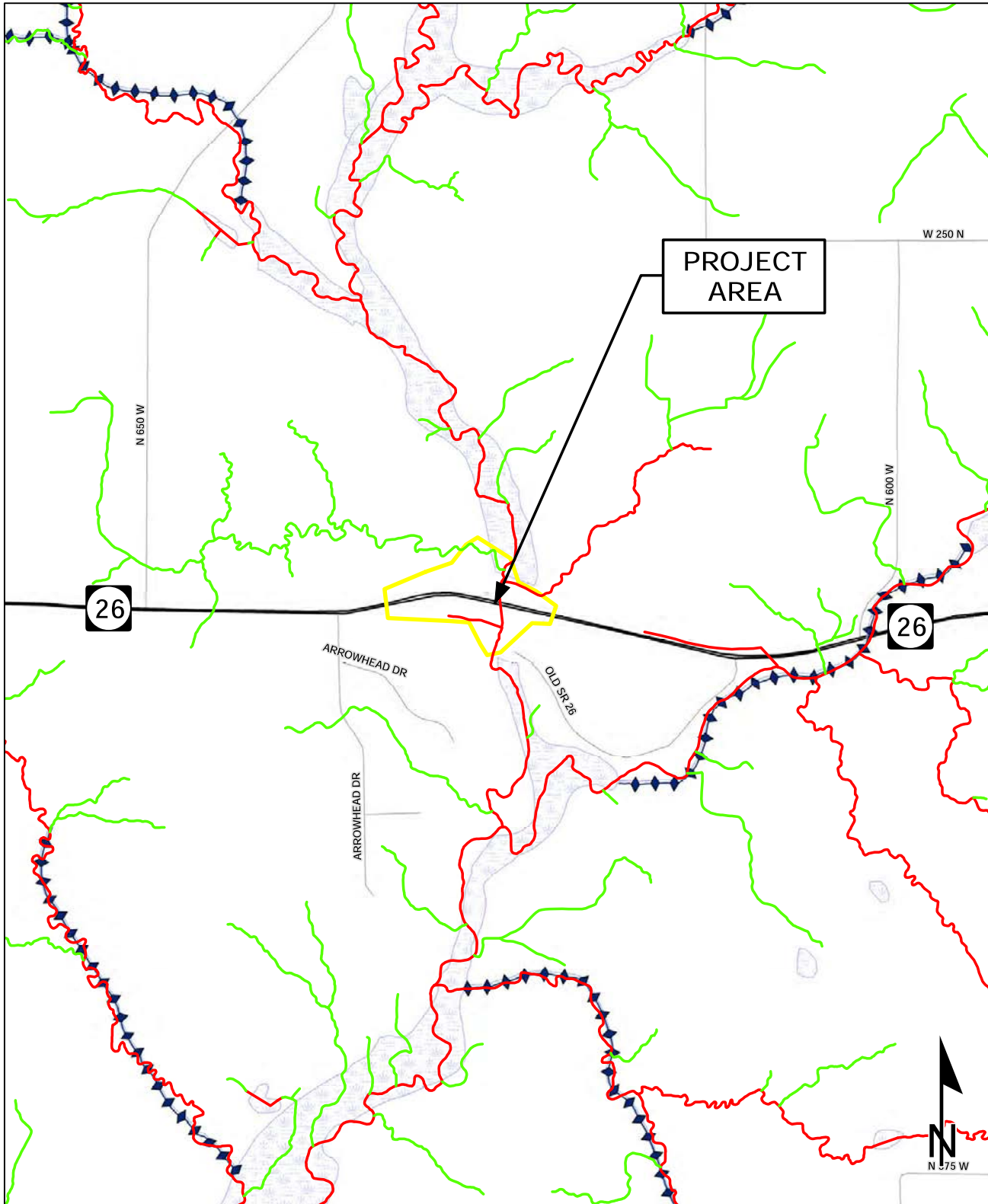


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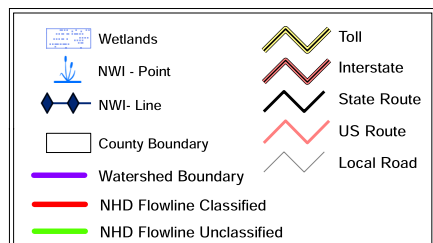


NHD and NWI Features Map  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana

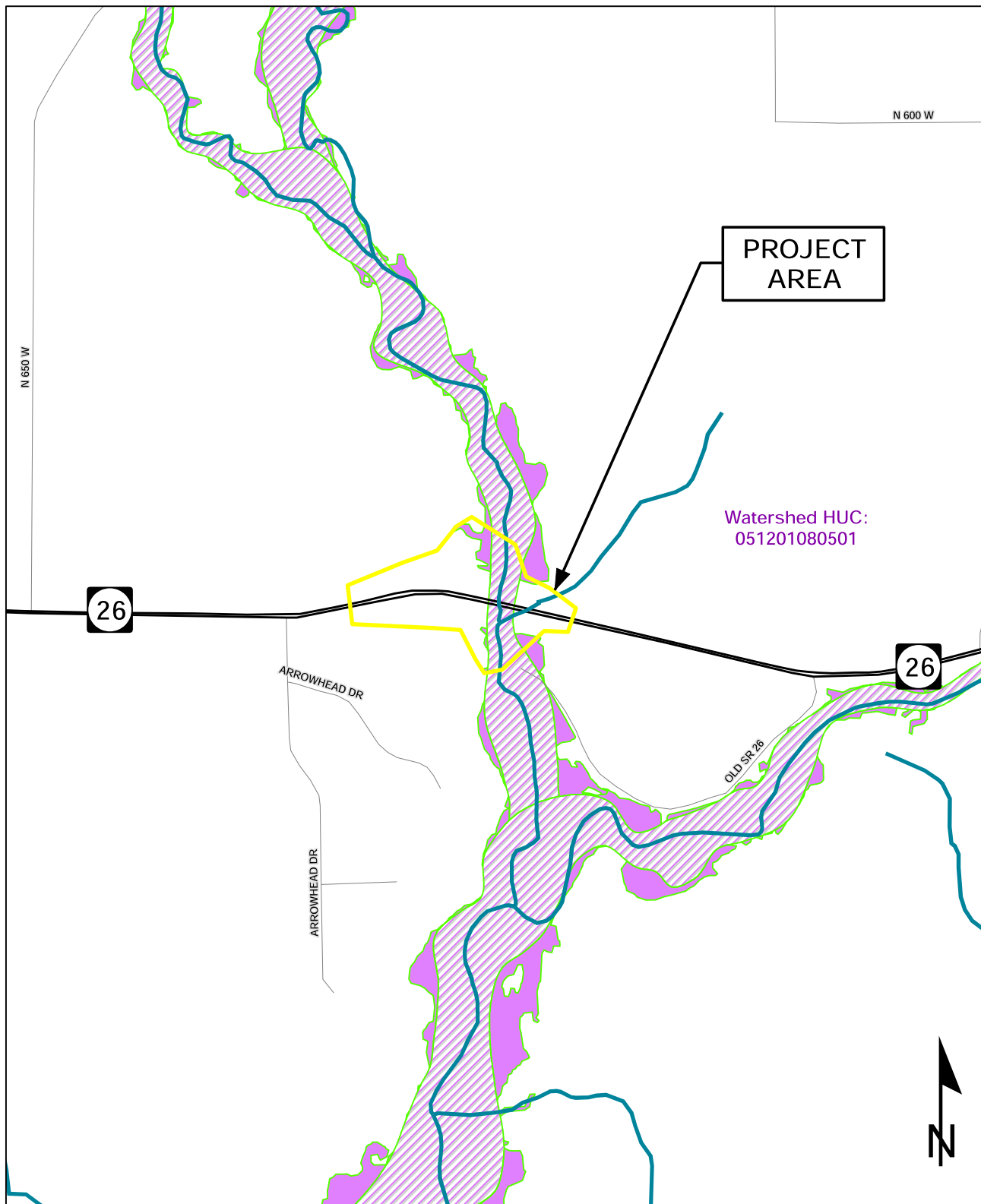


Sources:  
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 Data - Obtained from the State of Indiana Geographical Information Office Library  
 Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
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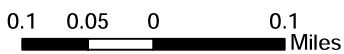
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



**FARA Map**  
**SR 26, 4.98 Miles West of US 52/231**  
**Des. No. 1900333, Small Structure Replacement**  
**Tippecanoe County, Indiana**



Sources:  
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 Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://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.



Legend	
	DNR Approximate Floodway
	DNR Approximate Fringe
	Watershed Boundary
	Stream



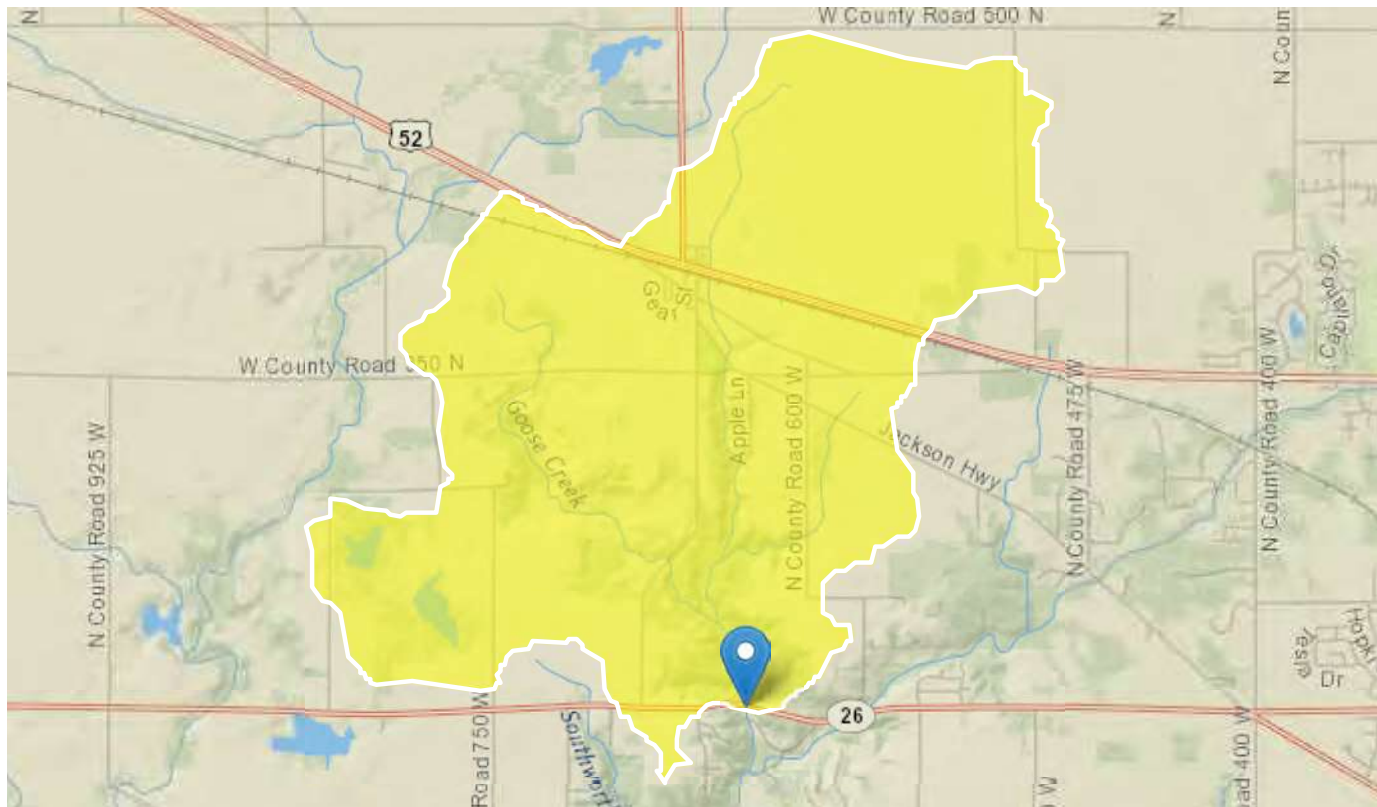
# StreamStats Report

Region ID: IN

Workspace ID: IN20211108141619243000

Clicked Point (Latitude, Longitude): 40.44592, -87.02401

Time: 2021-11-08 09:16:39 -0500



## Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	6.037	square miles
K2INDNR	Average hydraulic conductivity (ft/d) for the full depth of unconsolidated deposits from InDNR well database.	43	ft per day
QSSPERMTHK	Index of the permeability of surficial Quaternary sediments computed as in SIR 2014-5177	293.28	dimensionless
LOWREG	Low Flow Region Number	1729	dimensionless
T2INDNR	Average transmissivity (ft <sup>2</sup> /d) for the full depth of unconsolidated deposits from InDNR well database.	3352	square feet per day

**Parameter**

<b>Parameter Code</b>	<b>Parameter Description</b>	<b>Value</b>	<b>Unit</b>
LC01FOREST	Percentage of forest from NLCD 2001 classes 41-43	21.1	percent

## General Flow Statistics Parameters [Harmonic Mean Central Region 2016 5102]

<b>Parameter Code</b>	<b>Parameter Name</b>	<b>Value</b>	<b>Units</b>	<b>Min Limit</b>	<b>Max Limit</b>
DRNAREA	Drainage Area	6.037	square miles	2.99	828
K2INDNR	Avg_Hydraulic_Conductivity_Full_Depth	43	ft per day	6.36	45.9
QSSPERMTHK	Permeability_Index	293.28	dimensionless	43.8	5400
LOWREG	Low Flow Region Number	1729	dimensionless		

## General Flow Statistics Flow Report [Harmonic Mean Central Region 2016 5102]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

<b>Statistic</b>	<b>Value</b>	<b>Unit</b>	<b>PII</b>	<b>Plu</b>	<b>ASEp</b>
Harmonic Mean Streamflow	1.78	ft <sup>3</sup> /s	0.917	3.46	39.3

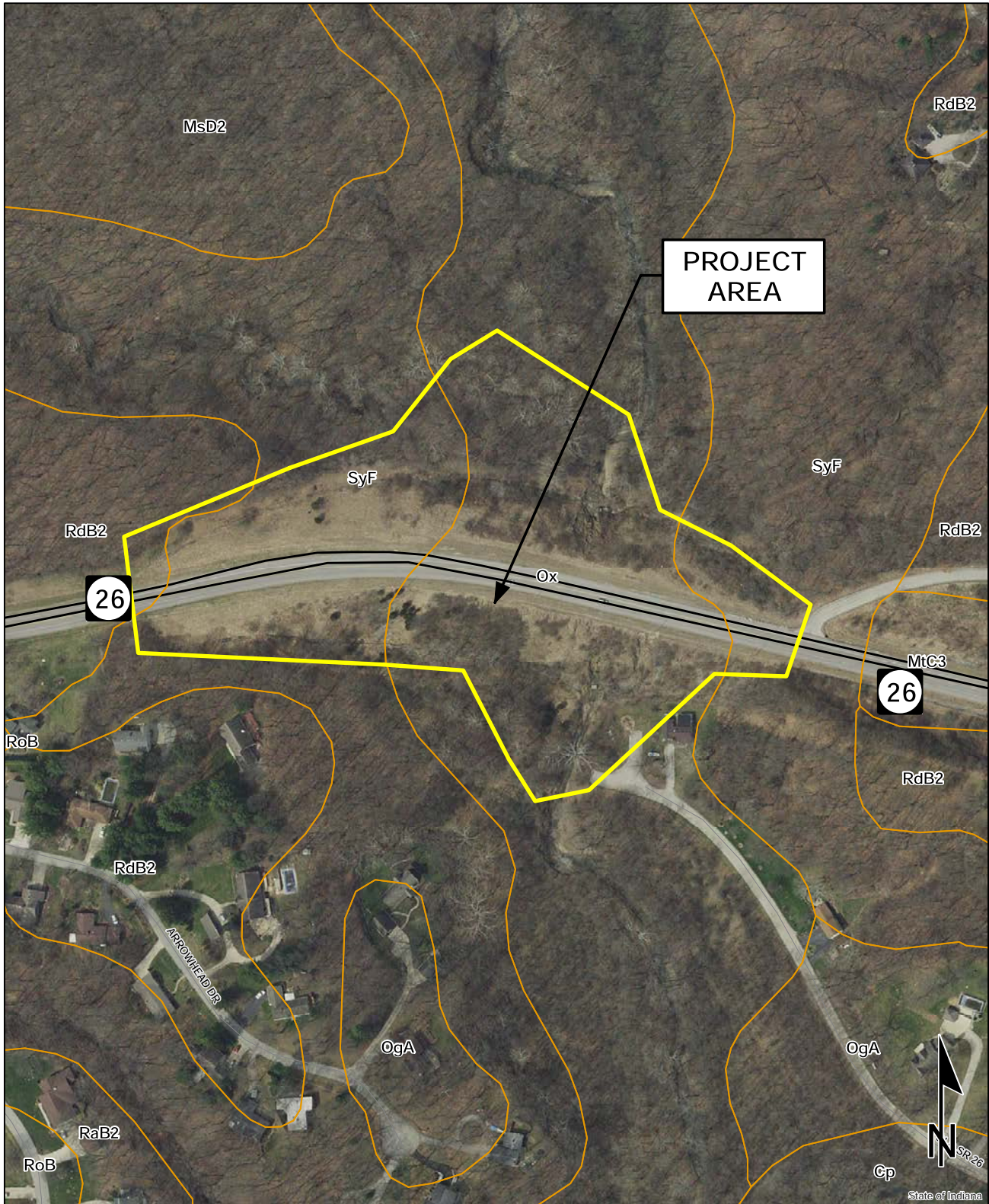
*General Flow Statistics Citations*

**Martin, G.R., Fowler, K.K., and Arihood, L.D., 2016, Estimating selected low-flow frequency statistics and harmonic-mean flows for ungaged, unregulated streams in Indiana (ver 1.1, October 2016): U.S. Geological Survey Scientific Investigations Report 2016–5102, 45 p. (<http://dx.doi.org/10.3133/sir20165102>)**

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Soils Map  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



Sources: 250 125 0 250 Feet  
 Non Orthophotography  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
 Orthophotography - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
 Map Projection: UTM Zone 16 N Map Datum: NAD83

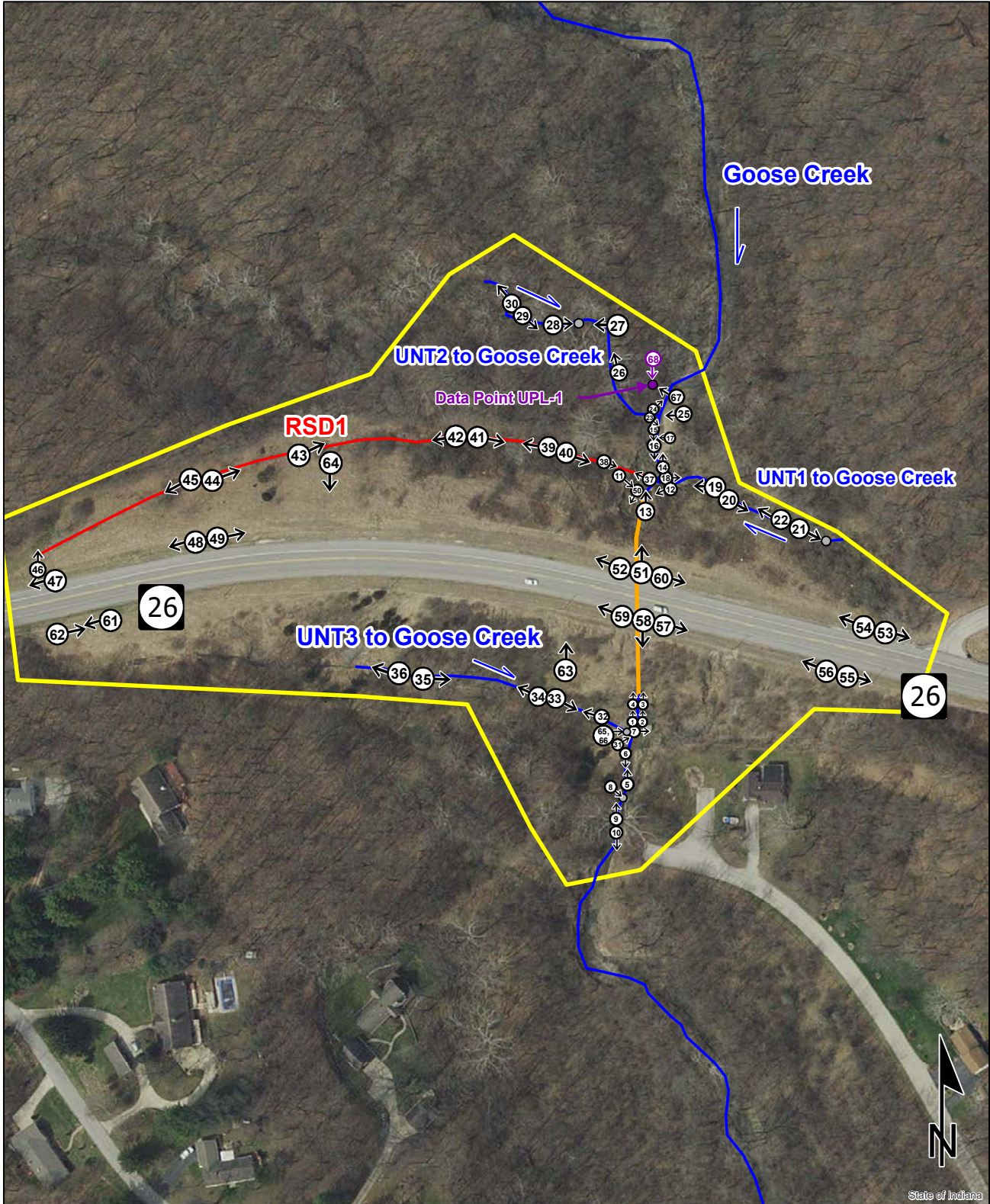
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**NRCS  
SOILS DATA**

Legend

- Ox = Ouiatenon Sandy Loam, 3% hydric
- RdB2 = Richardville Silt Loam, 0% Hydric
- SyF = Strawn-Rodman Complex, 0% hydric

Photo Key Map  
 SR 26, 4.98 Miles West of US 52/231  
 Des. No. 1900333, Small Structure Replacement  
 Tippecanoe County, Indiana



State of Indiana

Sources: 180 90 0 180 Feet  
**Non Orthophotography**  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://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.

**INDIANA STATEWIDE  
 AERIAL IMAGERY  
 FLOWN 2016**

**Legend**

	Flow Direction		Investigative Area
	Tributary		Roadside Ditch
	Ordinary High Water Mark		Culvert
			Data Point

Appendix F-20

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 1—Goose Creek upstream and west project structure CV 026-079-28.10 , north view; 1 SEP 2021.**



**Picture 2— Goose Creek upstream and detached project culvert CV 026-079-28.10 piece; north view; 1 SEP 2021.**



**Picture 3—Goose Creek east project structure CV 026-079-28.10 ; north view; 1 SEP 2021.**



**Picture 4—Goose Creek west structure CV 026-079-28.10 ; north view; 1 SEP 2021.**

DES# 1900333 Waters of the U.S. Determination Report—Photo Log



Picture 5—Goose Creek upstream and project structure CV 026-079-28.10 ; north view; 1 SEP 2021.



Picture 6—Goose Creek downstream view from structure; south view; 1 SEP 2021.



Picture 7—East slope from Goose Creek; east view; 1 SEP 2021.



Picture 8—Goose Creek OHWM measurement; southeast view; 1 SEP 2021.

OHWM : 40.445474; -87.024085  
Width 16 feet; Depth 0.25 foot

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 9—Goose Creek upstream; north view; 1 SEP 2021.**



**Picture 10—Goose Creek downstream; south view; 1 SEP 2021.**



**Picture 11—Goose Creek debris north of structure CV 026-079-28.10 inlet; southeast view; 14 SEP 2021. Note that steel beams have collected debris.**



**Picture 12—Goose Creek structure CV 026-079-28.10 inlet; southwest view; 1 SEP 2021. Note that culvert end pieces have detached.**

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 13—Goose Creek upstream including debris; north view; 1 SEP 2021.**



**Picture 14—Goose Creek upstream; north view; 1 SEP 2021.**



**Picture 15—Goose Creek downstream; south view; 1 SEP 2021.**



**Picture 16—Goose Creek downstream; south view; 1 SEP 2021.**



**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 17—Goose Creek slope ; west view; 1 SEP 2021.**



**Picture 18—UNT<sub>1</sub> to Goose Creek from Goose Creek; east view; 1 SEP 2021.**



**Picture 19—UNT<sub>1</sub> to Goose Creek at Goose Creek; west view; 1 SEP 2021.**



**Picture 20—UNT<sub>1</sub> to Goose Creek upstream; southeast view; 1 SEP 2021.**

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 21—UNT<sub>1</sub> to Goose Creek upstream and OHWM location; southeast view; 1 SEP 2021.**

**OHWM : 40.446344; -87.023444**

**Width 2.0 feet; Depth 0.25 foot**



**Picture 22—UNT<sub>1</sub> to Goose Creek downstream; northwest view; 1 SEP 2021.**



**Picture 23—Goose Creek from UNT<sub>2</sub> to Goose Creek; southeast view; 14 SEP 2021.**



**Picture 24—Goose Creek from UNT<sub>2</sub> to Goose Creek ; northeast view; 14 SEP 2021.**

DES# 1900333 Waters of the U.S. Determination Report—Photo Log



Picture 25—UNT<sub>2</sub> to Goose Creek from Goose Creek; west view; 14 SEP 2021.



Picture 26—UNT<sub>2</sub> to Goose Creek upstream; northwest view; 14 SEP 2021.



Picture 27—UNT<sub>2</sub> to Goose Creek upstream; west view; 14 SEP 2021.



Picture 28—UNT<sub>2</sub> to Goose Creek downstream and OHWM location; east view; 14 SEP 2021.

OHWM : 40.447003; -87.024476  
Width 9.0 feet; Depth 0.75 foot

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



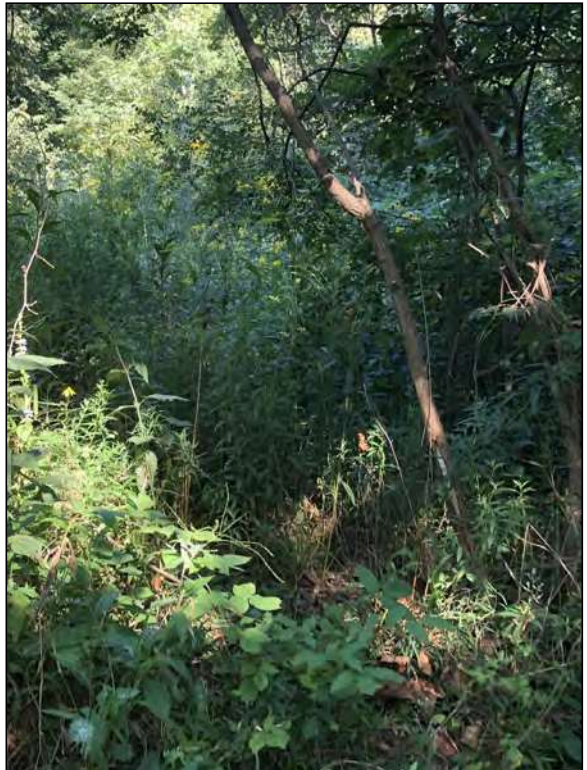
**Picture 29 —UNT<sub>2</sub> to Goose Creek downstream;  
southeast view; 14 SEP 2021.**



**Picture 30—UNT<sub>2</sub> to Goose Creek upstream—  
bed and bank becomes obscure in this area;  
northwest view; 14 SEP 2021.**



**Picture 31—Goose Creek from UNT<sub>3</sub> to Goose  
Creek ; northeast view; 1 SEP 2021.**



**Picture 32—UNT<sub>3</sub> to Goose Creek from Goose  
Creek; northwest view; 1 SEP 2021.**

DES# 1900333 Waters of the U.S. Determination Report—Photo Log



Picture 33—UNT<sub>3</sub> to Goose Creek downstream—note that bed and bank structure begins to obscure; southeast view; 1 SEP 2021.



Picture 34—UNT<sub>3</sub> to Goose Creek upstream—note large shrubs (*Lonicera*) within bed; northwest view; 1 SEP 2021.



Picture 35—UNT<sub>3</sub> to Goose Creek downstream from end of bed and bank structure—note riprap; east view; 1 SEP 2021.



Picture 36—UNT<sub>3</sub> to Goose Creek end of bed and bank structure—note riprap; west view; 1 SEP 2021.

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 37—RSD1 at Goose Creek; northwest view; 1 SEP 2021.**



**Picture 38—RSD1 toward Goose Creek; southeast view; 1 SEP 2021.**



**Picture 39—RSD1 vegetated area; northwest view; 1 SEP 2021.**



**Picture 40—RSD1 sparsely vegetated area; southeast view; 1 SEP 2021.**

DES# 1900333 Waters of the U.S. Determination Report—Photo Log



Picture 41—RSD1 riprap area—note medium-sized tree (*Juglans*) in bed; southeast view; 1 SEP 2021.



Picture 42—RSD1 riprap area; southwest view; 1 SEP 2021.



Picture 43—RSD1 riprap from open area; northeast view; 1 SEP 2021.



Picture 44—RSD1 open area; northeast view; 1 SEP 2021.

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 45—RSD1 open area; southwest view; 1 SEP 2021.**



**Picture 46—RSD1 from SR 26; north view; 1 SEP 2021.**



**Picture 47—SR 26 roadside from RSD1 end ; southwest view; 1 SEP 2021.**



**Picture 48—SR 26 roadside northwest quadrant; southwest view; 1 SEP 2021.**



**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 49—SR 26 roadside northwest quadrant; northeast view; 1 SEP 2021.**



**Picture 50—Eroded area west of the Goose Creek structure CV 026-079-28.10 inlet. Erosion is extensive upslope to SR 26; southwest view; 1 SEP 2021.**



**Picture 51—Project center north of SR 26; north view; 1 SEP 2021.**



**Picture 52—Project center north of SR 26; northwest view; 1 SEP 2021.**

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 53—SR 26 roadside northeast quadrant and drive; southeast view; 1 SEP 2021.**



**Picture 54—SR 26 roadside northeast quadrant; northwest view; 1 SEP 2021.**



**Picture 55—SR 26 roadside southeast quadrant; southeast view; 1 SEP 2021.**



**Picture 56—SR 26 roadside southeast quadrant; northwest view; 1 SEP 2021.**

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 57—Project center south of SR 26; east view; 1 SEP 2021.**



**Picture 58—Project center south of SR 26; south view; 1 SEP 2021.**



**Picture 59—Project center south of SR 26; west view; 1 SEP 2021.**



**Picture 60—Project center north of SR 26; southeast view; 1 SEP 2021.**

**DES# 1900333 Waters of the U.S. Determination Report—Photo Log**



**Picture 61—SR 26 roadside southwest quadrant; southwest view; 1 SEP 2021.**



**Picture 62—SR 26 roadside southwest quadrant; northeast view; 1 SEP 2021.**



**Picture 63—Southwest quadrant slope; north view; 1 SEP 2021.**



**Picture 64—Northwest quadrant slope; south view; 1 SEP 2021.**

DES# 1900333 Waters of the U.S. Determination Report—Photo Log



Picture 65—UNT<sub>3</sub> to Goose Creek at the junction with Goose Creek; east view; 14 SEP 2022.



Picture 66—UNT<sub>3</sub> to Goose Creek OHHM location; east view; 14 SEP 2022.  
OHWM : 40.445554 -87.024138  
Width 2.0 feet; Depth 0.25 foot



Picture 67—UPL-1 data point; northwest view; 14 SEP 2022.



Picture 68—UPL-1 soil sample ; 14 SEP 2022.  
40.446740 -87.024022

**WETLAND DETERMINATION DATA FORM – Midwest Region**

Project/Site: DES 1900333 - SR 26 City/County: Tippecanoe Sampling Date: 9-14-22  
 Applicant/Owner: INDOT State: IN Sampling Point: UPL-1  
 Investigator(s): Kirk Roth Section, Township, Range: Section 7, Township 23 N, Range 5 W  
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Convex  
 Slope (%): 1 Lat: 40.446740 Long: -87.024022 Datum: NAD83  
 Soil Map Unit Name: Ouiatenon Loamy Sand NWI classification: PFO1A

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 <u>    </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydic Soil Present? Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	

Remarks:  
 Site characteristics do not support wetland status.

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30 feet</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)
1. <u>Tilia americana</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Juglans nigra</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Platanus occidentalis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
4. <u>Celtis occidentalis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5. <u>Amelanchier arborea</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
	<u>100</u> =Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15 feet</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>125</u> x 4 = <u>500</u> UPL species <u>40</u> x 5 = <u>200</u> Column Totals: <u>205</u> (A) <u>810</u> (B) Prevalence Index = B/A = <u>3.95</u>
1. <u>Lonicera maackii</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>50</u> =Total Cover			
Herb Stratum (Plot size: <u>5 feet</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Asarum canadense</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Sanicula odorata</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. <u>Botrypus virginianus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
4. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
5. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
6. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
7. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
8. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
9. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
10. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>55</u> =Total Cover			
Woody Vine Stratum (Plot size: <u>30 feet</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>
1. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
2. <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>	
	<u>    </u> =Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)  
 Vegetation does not support dominant hydrophytic status.

**SOIL**

Sampling Point: UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-20	10YR 3/3	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)   |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)           |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)       |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Dark Surface (S7)          |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Mucky Mineral (F1)   |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3)       |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Redox Dark Surface (F6)    |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      | <input type="checkbox"/> Redox Depressions (F8)     |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

<sup>3</sup>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:  
Soil characteristics do not support hydric status.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

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 \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No signs of wetland hydrology were observed.

**Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM**

**BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR PJD:** 9/19/22

**B. NAME AND ADDRESS OF PERSON REQUESTING PJD:** Kirk Roth, 200 S. Meridian St, Ste 330, Indianapolis, IN 46225

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**

The project (DES No. 1900333) is on SR 26, 4.98 miles west of US 52/231 at structure CV 026-079-28.10. The project will include the construction of a single span reinforced concrete three-sided structure. A new access road, approximately 900 feet in length, will be constructed on the existing fill slopes of SR 26. Incidental work will include approximately 400 feet of asphalt replacement, milling and resurfacing to tie the new pavement into the existing. Scour protection (riprap on geotextiles) will be placed at the inlet, along the structure, and at the outlet. 0.65 acre of additional right-of-way is anticipated for this project. Construction is expected to begin in 2024 and last approximately 3 months. Water that passes through the structure will be maintained during construction with appropriate erosion and sediment control techniques.

**(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)**

State: Indiana      County/parish/borough: Tippecanoe      City: Montmorenci

Center coordinates of site (lat/long in degree decimal format):

Lat.: 40.44609      Long.: -87.02433

Universal Transverse Mercator: 16T 497936m E 4477271 m N

Name of nearest waterbody: Goose Creek

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date:

Field Determination. Date(s):



**TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH “MAY BE” SUBJECT TO REGULATORY JURISDICTION.**

<b>Site number</b>	<b>Latitude (decimal degrees)</b>	<b>Longitude (decimal degrees)</b>	<b>Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)</b>	<b>Type of aquatic resource (i.e., wetland vs. non-wetland waters)</b>	<b>Geographic authority to which the aquatic resource “may be” subject (i.e., Section 404 or Section 10/404)</b>
Goose Creek	40.445474 +	-87.024085	701 l.f.	non-wetland waters	Section 404, non-wetland
UNT1 to Goose Creek	40.446344 +	-87.023444	265 l.f.	non-wetland waters	Section 404, non-wetland
UNT2 to Goose Creek	40.447003	-87.024476	349 l.f.	non-wetland waters	Section 404, non-wetland
UNT3 to Goose Creek	40.445554	-87.024138	373 l.f.	non-wetland waters	Section 404, non-wetland

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring “pre-construction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant’s acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there “*may be*” waters of the U.S. and/or that there “*may be*” navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA. Data reviewed for PJD (check all that apply)**

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:  
Map: Corradino, LLC
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report. Rationale: \_\_\_\_\_
- Data sheets prepared by the Corps: \_\_\_\_\_
- Corps navigable waters' study: \_\_\_\_\_
- U.S. Geological Survey Hydrologic Atlas: \_\_\_\_\_
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:20,000 Otterbein
- Natural Resources Conservation Service Soil Survey. Citation: NRCS Soil Survey - Tippecanoe County
- National wetlands inventory map(s). Cite name: USFWS-NWI V2 Wetland Mapping for SR 26, 4.98 Miles West of US 52/231
- State/local wetland inventory map(s): \_\_\_\_\_
- FEMA/FIRM maps: Tippecanoe County, Indiana
- 100-year Floodplain Elevation is: \_\_\_\_\_.(National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Indiana Statewide Aerial Imagery, 2016  
or  Other (Name & Date): Corradino, LLC - September 1 & 14, 2021; September 14, 2022
- Previous determination(s). File no. and date of response letter: \_\_\_\_\_
- Other information (please specify): \_\_\_\_\_

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

\_\_\_\_\_  
Signature and date of  
Regulatory staff member  
completing PJD

**Kirk Roth** Digitally signed by Kirk Roth  
Date: 2022.09.19 08:31:16 -04'00'  
\_\_\_\_\_  
Signature and date of  
person requesting PJD  
(REQUIRED, unless obtaining  
the signature is impracticable)<sup>1</sup>

<sup>1</sup> Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

# Appendix G

Public Involvement

Des. No. 1900333

July 8, 2020



Re: Tippecanoe County 

### NOTICE OF SURVEY

Dear Property Owner:

HNTB, on behalf of The Indiana Department of Transportation (INDOT), will perform a survey for the proposed small structure replacement on SR 26 culvert crossing, 4.98 miles west of US 52/US 231, located in Tippecanoe County, Indiana, Des No. 1900333. A portion of this survey work may be performed on your property in order to provide design engineers information for project design. The survey work will include mapping the location of features such as trees, buildings, fences, drives, ground elevations, etc. The survey is needed for the proper planning and design of this highway project.

At this stage we generally do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, we will contact you with additional information.

Indiana Code 8-23-7-26 allows HNTB, as the authorized employees of INDOT, *Right of Entry* to the project site (including private property) upon proper notification. A copy of a Notice of Survey discussion sheet, as found on INDOT's website (<http://www.in.gov/indot/2888.htm>), is attached to this letter. Pursuant to Indiana Code 8-23-7-27, this letter serves as written notification that we will be performing the above noted survey in the vicinity of your property on or after July 14, 2020.

HNTB employees will show you their identification, if you are available, before coming onto your property.

If you own but are not the tenant of this property (i.e. rental, sharecrop), please inform us so that we may also contact the actual tenant of the property prior to commencement of our work. If you have any questions or concerns regarding our proposed survey work or schedule, please contact the HNTB Project Manager. This contact information is as follows:

Chris Buergelin, PS  
111 Monument Circle, Suite 1200  
Indianapolis, IN 46204  
(317) 903-4852

Under Indiana Code 8-23-7-28, you have a right to compensation for any damage that occurs to your land or water as a result of the entry or work performed during the entry. To obtain such compensation, you should contact the Crawfordsville District Real Estate Manager; contact information is below. The District Real Estate Manager can provide you with a form to request compensation for damages. Once you fill out this form, you can return it to the District Real Estate Manager for consideration. If you are not satisfied with the compensation that INDOT determines is owed to you, Indiana Code 8-23-7-28 provides the following:

The amount of damages shall be assessed by the county agricultural extension educator of the county in which the land or water is located and two (2) disinterested residents of the county, one (1) appointed by the aggrieved party and one (1) appointed by the department. A written report of the assessment of damages shall be mailed to the aggrieved party and the department by first class United States mail. If either the department or the aggrieved party is not satisfied with the assessment of damages, either or both may file a petition, not later than fifteen (15) days after receiving the report, in the circuit or superior court of the county in which the land or water is located.

If you have questions regarding the rights and procedures outlined in this letter, please contact the Indiana Department of Transportation Central Office. This contact information is as follows:

1-855-INDOT4U (463-6848)  
www.INDOT4U.com

Thank you in advance for your cooperation in this matter.

Sincerely,

HNTB Corporation

A handwritten signature in blue ink that reads "William M. Jones". The signature is written in a cursive style with a large, looping "J" at the end.

William M. Jones

Supervisory Survey Technician

# Appendix H

Air Quality

Des. No. 1900333



# 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**

April 26, 2022

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 Draft FY 2022-2026 Statewide Transportation Improvement Program (STIP) for review and comment 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 TIP's will be included in the FY 2022-2026 STIP by reference, pending FHWA approval in May 2022.

Area Plan Commission of Tippecanoe County (APCTC)	FY 2022-2026
• <i>Version 3/10/2022</i>	
Bloomington-Monroe County Metropolitan Planning Organization (BMCMPPO)	FY 2022-2026
• <i>Version 3/11/2022</i>	
Columbus Area Metropolitan Planning Organization (CAMPO)	FY 2022-2026
• <i>Version 3/22/2021</i>	
Delaware-Muncie Metropolitan Plan Commission (DMMPC)	FY 2022-2025
• <i>Version 12/15/2021</i>	
Evansville Metropolitan Planning Organization (EMPO)	FY 2022-2026
• <i>Version 3/10/2022</i>	
Kokomo-Howard County Governmental Coordinating Council (KHCGCC)	FY 2022-2026
• <i>Version 3/10/2022</i>	
Kentuckiana Regional Planning and Development Agency (KIPDA)	FY 2020-2025
• <i>Version 3/29/2022</i>	
Indianapolis Metropolitan Planning Organization (IMPO)	FY 2022-2025
• <i>Version 8/18/2021</i>	
Michiana Area Council of Governments (MACOG)	FY 2022-2026
• <i>Version 3/09/2022</i>	



Madison County Council of Governments (MCCOG)	FY 2022-2026
• <i>Version 7/13/2021</i>	
Northeastern Indiana Regional Coordinating Council (NIRCC)	FY 2022-2026
• <i>Version 3/28/2022</i>	
Northwestern Indiana Regional Planning Commission (NIRPC)	FY 2022-2026
• <i>Version 3/17/2022</i>	
Ohio-Kentucky-Indiana Regional Council of Governments (OKI)	FY 2020-2023
• <i>Version 03/10/2022</i>	
Terre Haute Area Metropolitan Planning Organization (THAMPO)	FY 2020-2024
• <i>Version 08/26/2021</i>	

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 2022-2026 and look forward to working together to achieve our mutual goals. Should you have any questions pertaining to this amendment, please contact Michael McNeil, STIP Specialist at 317-232-0223 or at [mmcneil@indot.in.gov](mailto:mmcneil@indot.in.gov).

Sincerely,



Michael Smith, Commissioner  
Indiana Department of Transportation

cc: (w/enclosure): FTA  
Michelle Allen, FHWA  
Jeffrey Brooks, INDOT  
Kristin Brier, INDOT  
Kathy Eaton-McKalip, INDOT  
Louis Feagans, 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

June 17, 2022

Mr. Michael Smith  
Commissioner  
Indiana Department of Transportation  
100 N Senate Ave. N955  
Indianapolis, IN 46204

**SUBJECT: Indiana FY2022-2026 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 FY2022-2026 Indiana Statewide Transportation Improvement Program (INSTIP), which was submitted by the INDOT request letter dated April 27, 2022.

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 FY2022-2026 STIP, including the Metropolitan Planning Organization (MPO) Transportation Improvement Programs (TIPs) directly incorporated into the STIP, subject to the corrective actions identified in the attached Federal Planning Finding (FPF) report. FHWA and FTA consider the projects in the 5<sup>th</sup> 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 FY2022-2026 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 FY2022-2026 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 June 17, 2022, 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. FHWA and FTA will continue to partner with INDOT to ensure the previously developed action plan (attached) is implemented to address the corrective actions. If progress is not made in addressing the corrective actions, future amendments to the FY2022-2026 STIP, or adoption of the FY2024-2028 STIP, may not be approved by USDOT.

If you have questions or need additional information concerning our approval and the FPF, please contact Ms. Michelle Allen of the FHWA Indiana Division at (317) 226-7344, or by email at michelle.allen@dot.gov, or Mr. Jason Ciavarella of the FTA Region 5 Office at (312) 353-1653, or by email at jason.ciavarella@dot.gov.

Sincerely,

**KELLEY  
BROOKINS** Digitally signed by  
KELLEY BROOKINS  
Date: 2022.06.13  
10:08:34 -05'00'

Kelley Brookins  
Regional Administrator  
FTA Region V

Sincerely,

**JERMAINE  
R HANNON** Digitally signed by  
JERMAINE R  
HANNON  
Date: 2022.06.13  
15:57:46 -04'00'

Jermaine R. Hannon  
Division Administrator  
FHWA Indiana Division

cc: (transmitted by e-mail)  
Louis Feagans, INDOT  
Roy Nunnally, INDOT  
Karen Hicks, INDOT

Indiana Department of Transportation (INDOT)  
State Preservation and Local Initiated Projects FY 2022 - 2026

SPONSOR	CONTR ACT#/ LEAD DES	STP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Total Cost of Project*	PROGRAM	PHASE	FEDERAL	MATCH	2022	2023	2024	2025	2026	
Comments:move FY22 ROW to FY23 APCTC Appendix C \$200,000																			
Tippecanoe County	419401 1802905	Init	IR 1805	Bridge Replacement	Bridge 65 on Lily Road over Wea Creek, 580' NE of CR 250W	Crawfordsville	.215	STBG	\$4,772,040.00	Local Bridge Program	CN	\$2,853,648.00	\$0.00			\$2,853,648.00			
												Local Funds	CN	\$0.00	\$713,411.98		\$713,411.98		
Performance Measure Impacted: Bridge Condition																			
Comments:include DES 1802907, 1802905																			
Tippecanoe County	419401/ 1802905	M01	IR 1805	Bridge Replacement	Bridge 65 on Lily Road over Wea Creek, 580' NE of CR 250W	Crawfordsville	.215	STBG		Local Bridge Program	CN	\$2,853,648.00	\$0.00				\$2,853,648.00		
												Local Funds	CN	\$0.00	\$1,686,152.00		\$1,686,152.00		
Performance Measure Impacted: Bridge Condition																			
Comments:Lafayette currently shows bridge #64 on des 182905 and bridge #65 on des 1802907. Modification switches those. Attached document included																			
Indiana Department of Transportation	420381 1900888	Init	US 52	Bridge Thin Deck Overlay	0.08 mi S of SR 28, over LINT WABASH RIVER	Crawfordsville	0	STBG	\$481,085.88	Bridge Construction	CN	\$237,543.20	\$50,385.80	\$298,929.00					
Performance Measure Impacted: Bridge Condition																			
Comments:include DES 1900737, 1900738, 1900888																			
Indiana Department of Transportation	420391 1900847	Init	185	Concrete Pavement Restoration (CPR)	At SR 38 Interchange, Remp Pavement	Crawfordsville	.38	NHPP	\$3,103,495.00	Road Construction	CN	\$3,158,980.10	\$350,988.90	\$3,509,969.00					
Performance Measure Impacted: Pavement Condition																			
Comments:include DES 1900847																			
Indiana Department of Transportation	420391 1900847	M01	185	Concrete Pavement Restoration (CPR)	At SR 38 Interchange, Remp Pavement	Crawfordsville	.38	NHPP	\$3,200,635.00	Road Construction	CN	-\$386,418.80	-\$42,935.40	(\$3,569,989.00)	\$3,080,635.00				
Performance Measure Impacted: Pavement Condition																			
Comments:move FY22 CN to FY23																			
Indiana Department of Transportation	421481 1701581	Init	SR38	Bridge Deck Overlay	WB Bridge over Elliott Ditch, 227 Miles W of I 85	Crawfordsville	0	STBG	\$829,214.00	Bridge Construction	CN	\$689,451.20	\$142,362.80				\$711,814.00		
Performance Measure Impacted: Bridge Condition																			
Comments:include DES 1701582, 1701581																			
Indiana Department of Transportation	42243/ 1900333	Init	SR28	Small Structure Replacement with Bridge	4.98 mi W of US 52/231, over Goose Creek	Crawfordsville	0	STBG	\$8,124,861.00	Bridge Construction	CN	\$4,250,180.80	\$1,082,540.20				\$5,312,701.00		
												Bridge ROW	RY	\$112,000.00	\$28,000.00	\$80,000.00	\$50,000.00		
Performance Measure Impacted: Bridge Condition																			
Comments:include DES 1900301, 1900322, 1900333																			
Indiana Department of Transportation	428021 1902679	Init	US 52	Auxiliary Lanes, Accel & Decel or Turn Lanes	Various Intersection locations (6) from Lafayette to Lebanon	Crawfordsville	29.06	STBG	\$4,361,010.00	Safety Construction	CN	\$3,193,635.20	\$798,408.80	\$3,982,044.00					
Performance Measure Impacted: Reliability and Freight Reliability																			
Comments:include DES 2002394, 1902679																			

\*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STP. This column is not fiscally constrained and is for information purposes.

# Appendix I

Additional Studies

Des. No. 1900333




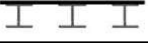



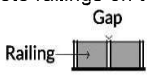

**Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated March 2022)**

ProjectNumber	SubProjectCode	County	Property
1800028	1800028	Tippecanoe	Tippecanoe County Fairgrounds
1800101	1800101	Tippecanoe	Wabash River Park - McAllister Park
1800101.2	1800101.2	Tippecanoe	South Tipp Park
1800115	1800115	Tippecanoe	Wabash River Golf Course - McAllister Park
1800121	1800121	Tippecanoe	Tapawingo Park
1800155	1800155	Tippecanoe	Happy Hollow Park
1800256	1800256	Tippecanoe	Tommy Johnston Park
1800275	1800275	Tippecanoe	Tippecanoe Battlefield Park
1800279	1800279	Tippecanoe	Hanna Park
1800345	1800345	Tippecanoe	McCaw Park
1800345.2	1800345.2	Tippecanoe	Munger Park
1800494	1800494	Tippecanoe	Celery Bog Nature Area
1800506	1800506	Tippecanoe	Celery Bog Nature Area
1800515	1800515	Tippecanoe	Celery Bog Nature Area
1800517	1800517	Tippecanoe	Celery Bog Nature Area
1800532	1800532	Tippecanoe	Prophetstown State Park
1800532.1	1800532.1	Tippecanoe	Prophetstown State Park
1800532.2	1800532.2	Tippecanoe	Prophetstown State 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.

Source: <https://www.in.gov/indot/2523.htm>

# Bridge/Structure Bat Assessment Form

<b>Date &amp; Time of Assessment</b> 9/1/21; 2:30pm	<b>DOT Project Number</b> 1900333	<b>Route/Facility Carried</b> SR 26	<b>County</b> Tippecanoe
<b>Federal Structure ID</b> CV 026-079-28.10	<b>Structure Coordinates</b> 40.083614; -86.920408 (latitude and longitude)	<b>Structure Height (approximate)</b> 7 feet	<b>Structure Length</b> 300 feet
<b>Structure Type (check one)</b>		<b>Structure Material (check all that apply)</b>	
<b>Bridge Construction Style</b>		<b>Deck Material</b>	<b>Beam Material</b>
<input type="radio"/> Cast-in-place 	<input type="radio"/> Pre-stressed Girder 	<input type="checkbox"/> Metal	<input type="checkbox"/> None
<input type="radio"/> Flat Slab/Box 	<input type="radio"/> Steel I-beam 	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete
<input type="radio"/> Truss 	<input type="radio"/> Covered 	<input type="checkbox"/> Timber	<input type="checkbox"/> Steel
<input type="radio"/> Parallel Box Beam 	<input type="radio"/> Other:	<input type="checkbox"/> Open grid	<input type="checkbox"/> Timber
		<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<b>Culvert Type</b>		<b>Culvert Material</b>	<b>Creosote Evidence</b>
<input checked="" type="radio"/> Box	<input type="radio"/> Other Structure	<input type="checkbox"/> Metal	<input type="radio"/> Yes <input checked="" type="radio"/> No
<input type="radio"/> Pipe/Round		<input checked="" type="checkbox"/> Concrete	<input type="radio"/> Unknown
<input type="radio"/> Other:		<input type="checkbox"/> Plastic	<b>Notes:</b>
		<input type="checkbox"/> Stone/Masonry	
		<input type="checkbox"/> Other:	
<b>Crossings Traversed (check all that apply)</b>		<b>Surrounding Habitat (check all that apply)</b>	
<input type="checkbox"/> Bare ground	<input type="checkbox"/> Open vegetation	<input type="checkbox"/> Agricultural	<input type="checkbox"/> Grassland
<input type="checkbox"/> Rip-rap	<input type="checkbox"/> Closed vegetation	<input type="checkbox"/> Commercial	<input type="checkbox"/> Ranching
<input checked="" type="checkbox"/> Flowing water	<input type="checkbox"/> Railroad	<input type="checkbox"/> Residential-urban	<input type="checkbox"/> Riparian/wetland
<input type="checkbox"/> Standing water	<input checked="" type="checkbox"/> Road/trail - Type: Interstate	<input checked="" type="checkbox"/> Residential-rural	<input type="checkbox"/> Mixed use
<input type="checkbox"/> Seasonal water	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Woodland/forested	<input type="checkbox"/> Other:
<b>Areas Assessed (check all that apply)</b>			
Check all areas that apply. If an area is not present in the structure, check the "not present" box. Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.			
<b>Area (check if assessed)</b>	<b>Assessment Notes</b>	<b>Evidence of Bats (include photos if present)</b>	
<input checked="" type="checkbox"/> All crevices and cracks: <b>Bridges/culverts:</b> rough surfaces or imperfections in concrete <b>Other structures:</b> soffits, rafters, attic areas	<input type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)	<input type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Vertical surfaces on concrete I-beams	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists	<input type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input type="checkbox"/> All guiderails	<input checked="" type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<input checked="" type="checkbox"/> All expansion joints	<input type="checkbox"/> Not present	<input type="checkbox"/> Visual - live #	<input type="checkbox"/> dead #
		<input type="checkbox"/> Audible	<input type="checkbox"/> Species
		<input type="checkbox"/> Guano	<input type="checkbox"/> Odor
		<input type="checkbox"/> Staining	<input type="checkbox"/> Photos
<b>Name:</b> Kirk Roth		<b>Signature:</b> 	

# Culvert Inspection Report

CV 026-079-28.10

SR 26

over

GOOSE CREEK



Inspection Date: 05/13/2021

Inspected By: Daniel W. Bewley

Inspection Type(s): Culvert



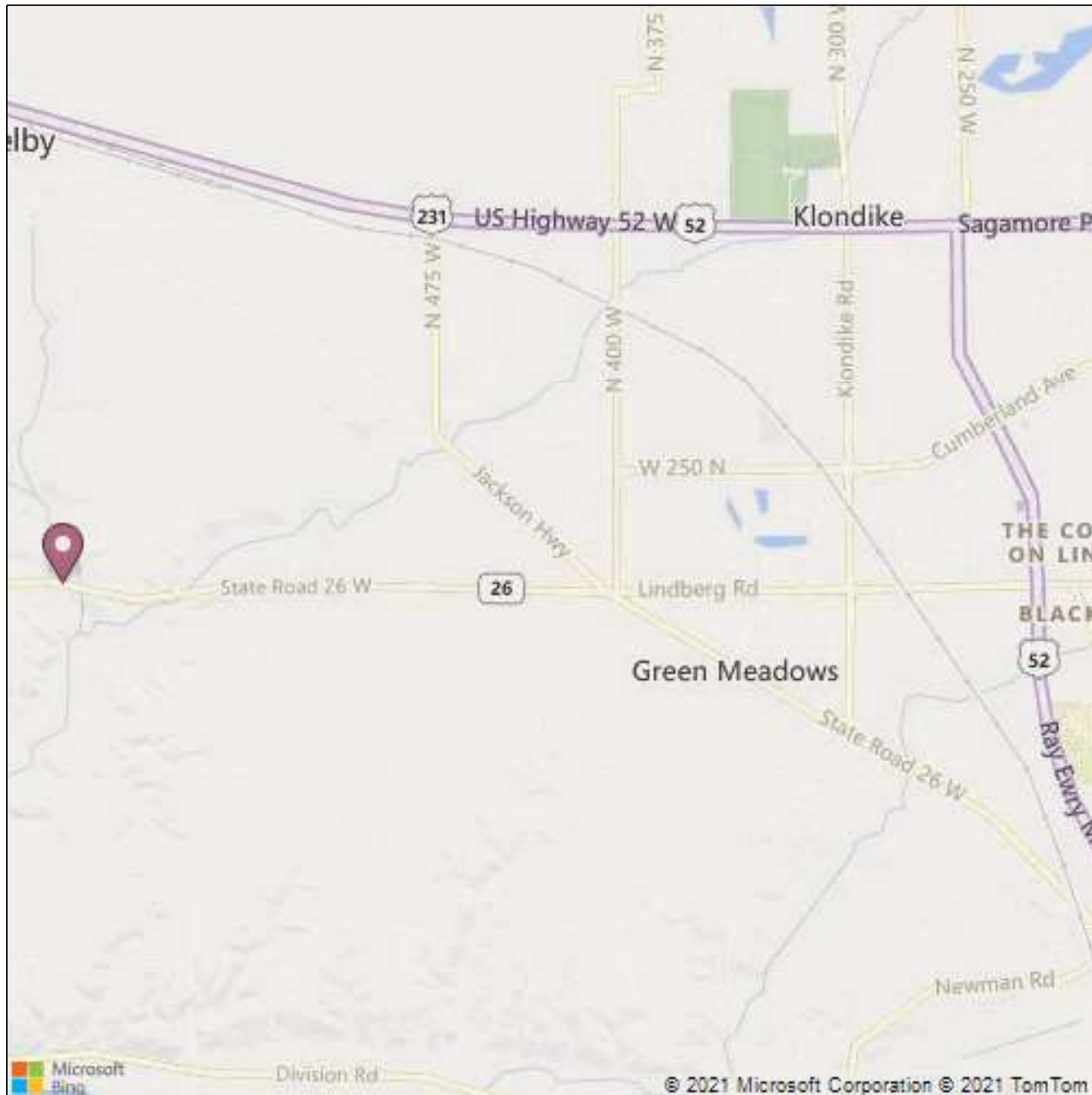
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Inspector: Daniel W. Bewley  
Inspection Date: 05/13/2021

Asset Name: CV 026-079-28.10  
Facility Carried: SR 26

### Culvert Inspection Report



Latitude: 40.44605  
Longitude: -87.02412

Inspector: Daniel W. Bewley

Structure Number: 93000628

Inspection Date: 05/13/2021

Facility Carried: SR 26

### Culvert Inspection Report

## Executive Summary

5/13/2021 Culvert is in overall poor condition on both of the ends.

Maintenance letter was written

SPMS shows Des# 1900333, Contract# R-42243, Letting Date 7/12/2023, Work Type Replacement With Bridge & Project Status Active

**Large Culvert Inspection Report**

(8) Asset Code:	93000628	(27) Year Built:	1993
Asset Name:	CV 026-079-28.10	(90) Inspection Date:	05/13/2021
OLD Culvert ID:	026-79-28.10	(91) Inspection Frequency:	12
Team Assignment:	01	<input type="checkbox"/> Additional Treatment Exists	

**Identification**

(2) Highway Agency District:	01	(3) County Code:	079
Sub District:	1300	Ramp ID:	
(42B) Type of Service (Under):	5	<input type="checkbox"/> Adjacent to Roadway	
(7) Facility Carried:	SR 26	(6) Features Intersected:	GOOSE CREEK
(9) Location:	4.98 W US 52/231	(9.01) Location Additional Description:	Best accessed from Old SR 26; park at dead end and walk north up channel
(11) Milepoint:	0	(16) Latitude:	40.44605
		(17) Longitude:	-87.02412
Classification:			
(104) Highway System of the Inventory Route:	0	(26) Functional Classification of Inventory Route:	02

**Geometric Data**

Culvert: Kind of Material:	2. Concrete Precast	Culvert: Type of Structure:	19. 4 Sided Box Culvert	Min Est Fill Cover (ft.):	55.0
Culvert: Max. Horizontal Opening (ft.):	20.00	Culvert: Max. Vertical Opening (ft.):	6.00	(34) Skew:	10
Barrel Length (ft.):	300.00	Original Culvert Shape:	Box		

Measurement Remarks: From CV Chart. 300' long each = 600' long total

Structure Additional Description: Twin Reinforced Concrete Boxes; 7' x 7' RC Boxes

**Openings:**

Direction	Opening Latitude	Opening Longitude	Direction	Opening Latitude	Opening Longitude
1.			3.		
2.			4.		

Openings Comments:

Follow Up Required:

\*\*If checked, please describe for follow up:

**Endangered Species**

Bats: seen or heard under structure? \* N

Birds/swallows/nests seen? Empty nests present? N

\* If yes, add one photo to the dropdown field

**General Condition Ratings**

(36A) Bridge Railings:	N	(36C) Approach Guardrail:	N
(36B) Transitions:	N	(36D) Approach Guardrail Ends:	N

**Culvert:**

(62) Culvert - Rating: 4

(62) Culvert Rating Comments: *North end of both boxes have the last segment disconnected. The south end of east box has the last 2 segments disconnected. All other joints are in good condition and box sections have good alignment. If erosion continues/goes unfixed more sections of the boxes could become disconnected. No obvious changes since last inspection.*

**Deck:**

(58) Deck: N

(58a) Deck Comments:

**Superstructure:**

(59) Superstructure: N

(59.01) Superstructure Comments:

**Substructure:**

(60) Substructure: N

(60.01) Substructure Comments:

CV-Headwall/Anchor Rating N

CV-Wingwalls Rating N

**Channel:**

(61) Channel and Channel Protection: 4

(61.01) Channel and Channel Protection Comments: *There is a considerable amount of bank erosion and channel scour at both ends of the structure. There is severe drift build up at the north end (trees). Channel flows from north to south. Maintenance Letter was written in 10/2017, another was written in 2020.*

Bank Erosion Rating: 4

Drift/Sediment Rating 4

Channel Alignment Rating 4

**Check this box if culvert has OBSTRUCTED flow**

Describe Obstruction: *The north end of the culvert has H-piles placed vertical through the channel to stop the debris from clogging the entrance into the culvert boxes. This is doing its job, the trees are now against the piles.*

Overtopping Frequency: 1

Overtopping Frequency Comments:

Inspector: Daniel W. Bewley  
Inspection Date: 05/13/2021

Structure Number: 93000628  
Facility Carried: SR 26

Culvert Inspection Report

Pictures



PHOTO 1 Condition  
Description Road alignment looking East



PHOTO 2 Condition  
Description Road alignment looking West

Inspector: Daniel W. Bewley  
Inspection Date: 05/13/2021

Structure Number: 93000628  
Facility Carried: SR 26

### Culvert Inspection Report

#### Pictures



PHOTO 3 Condition  
Description Pavement condition above culvert



PHOTO 4 Elevation, Condition  
Description Profile looking North

Inspector: Daniel W. Bewley  
Inspection Date: 05/13/2021

Structure Number: 93000628  
Facility Carried: SR 26

Culvert Inspection Report

Pictures



PHOTO 5

Description Looking South through West box



PHOTO 6 Condition

Description Looking North through East box



Culvert Inspection Report

Pictures



PHOTO 7

Description Looking North through West box



PHOTO 8 Condition

Description North segment from West box is off

Culvert Inspection Report

Pictures



PHOTO 9

Description North segment from East box is off

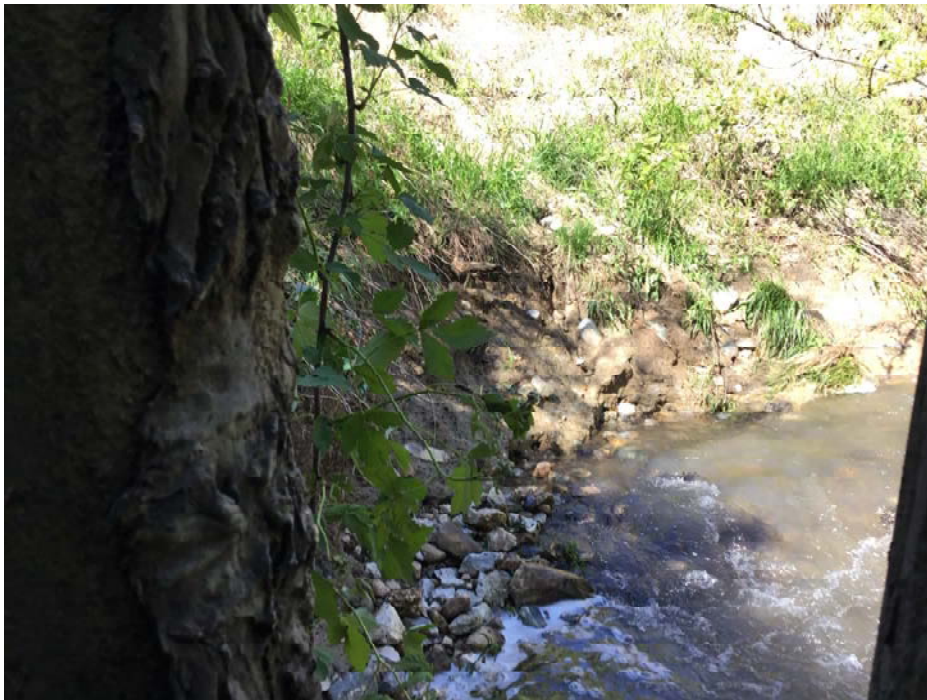


PHOTO 10 Condition

Description Massive bank erosion on North side of road

Culvert Inspection Report

Pictures



PHOTO 11 Condition

Description Erosion on North side of road. Showing erosion above the boxes



PHOTO 12 Condition

Description Up stream alignment or looking North

Inspector: Daniel W. Bewley  
Inspection Date: 05/13/2021

Structure Number: 93000628  
Facility Carried: SR 26

### Culvert Inspection Report

## Pictures



PHOTO 13 Condition  
Description Down stream alignment looking North or up stream

Date Reported: 05/13/2021  
Priority: Yellow  
Work Code: Channel Debris  
Removal  
Deficiency Description: 2nd letter, 1st one written 5/15/2020

CV 026-079-28.10  
93000628

Reported By: Dan Bewley  
Phone: 765-376-0820  
Email Address: dbewley@indot.in.gov  
Recommendation: Log jam behind the steel piling on North side of road, needs to be removed.

Work Description: Remove log jam

Date Repairs Completed:  
Maintenance Comments:

Date Reported: 05/13/2021 CV 026-079-28.10  
Priority: Yellow 93000628  
Work Code: Erosion Control/Riprap  
Deficiency Description: Both hill sides are "Sluffing" Large eroded areas are causing the ends of the segmental boxes to fall off.  
2nd letter for same concern. 1st one written 5/15/2020

Reported By: Dan Bewley  
Phone: 765-362-0820  
Email Address: dbewley@indot.in.gov  
Recommendation: Determine if erosion needs to be repaired or if can wait for bridge replacement (7/12/2023).

Work Description:

Date Repairs Completed:  
Maintenance Comments:

Environmental Justice Memorandum  
 SR 26 Small Structure Replacement with Bridge (DES #1900333)  
 November 8, 2022

SR 26, 4.98 miles west of US 52/231 over Goose Creek  
 Tippecanoe County, Indiana  
 Designation Number 1900333

**1. Environmental Justice Analysis**

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require no relocations and up to 0.63 acre of additional permanent ROW and no temporary ROW. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Tippecanoe County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is comprised of Census Tract 102.1 which encompasses the proposed ROW acquisition, and Census Tract 106 which includes an area of the project not subject to ROW acquisition. 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 2018 and 2019 U.S. Census American Community Survey was obtained from <https://data.census.gov/cedsci> on July 27, 2022 by Corradino, LLC. The data collected for minority and low-income populations within the COC and AC are summarized in the below table.

**Table 1 – Census Data Summary**

	COC – Tippecanoe County, Indiana	AC – Census Tract 102.1	AC – Census Tract 106
Percent Minority	23.62%	4.59%	10.10%
125% of COC	29.52%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No
Percent Low-Income	18.72%	7.37%	6.09%
125% of COC	23.40%	AC < 125% COC	AC < 125% COC
EJ Population of Concern		No	No

The AC Census Tract 102.1 has a percent minority of 4.59% which is below 50% and is below the 125% COC threshold. The AC Census Tract 106 has a percent minority of 10.10% which is below 50% and is below the 125% COC threshold. Therefore, AC Census Tracts 102.1 and 106 do not contain a minority population of EJ concern.

The AC Census Tract 102.1 has a percent low-income of 7.37% which is below 50% and is below the 125% COC threshold. The AC Census Tract 106 has a percent low-income of 6.09% which is below 50% and is below the 125% COC threshold. Therefore, AC Census Tracts 102.1 and 106 do not contain a low-income population of EJ concern.

## **2. Conclusion**

The census data sheets, map, and calculations can be found in attachments to this document. This project does not contain a minority population or low-income population of EJ. Therefore, this project is not expected to not have a disproportionately high and adverse effect on minority or low-income populations. No further EJ analysis is warranted.



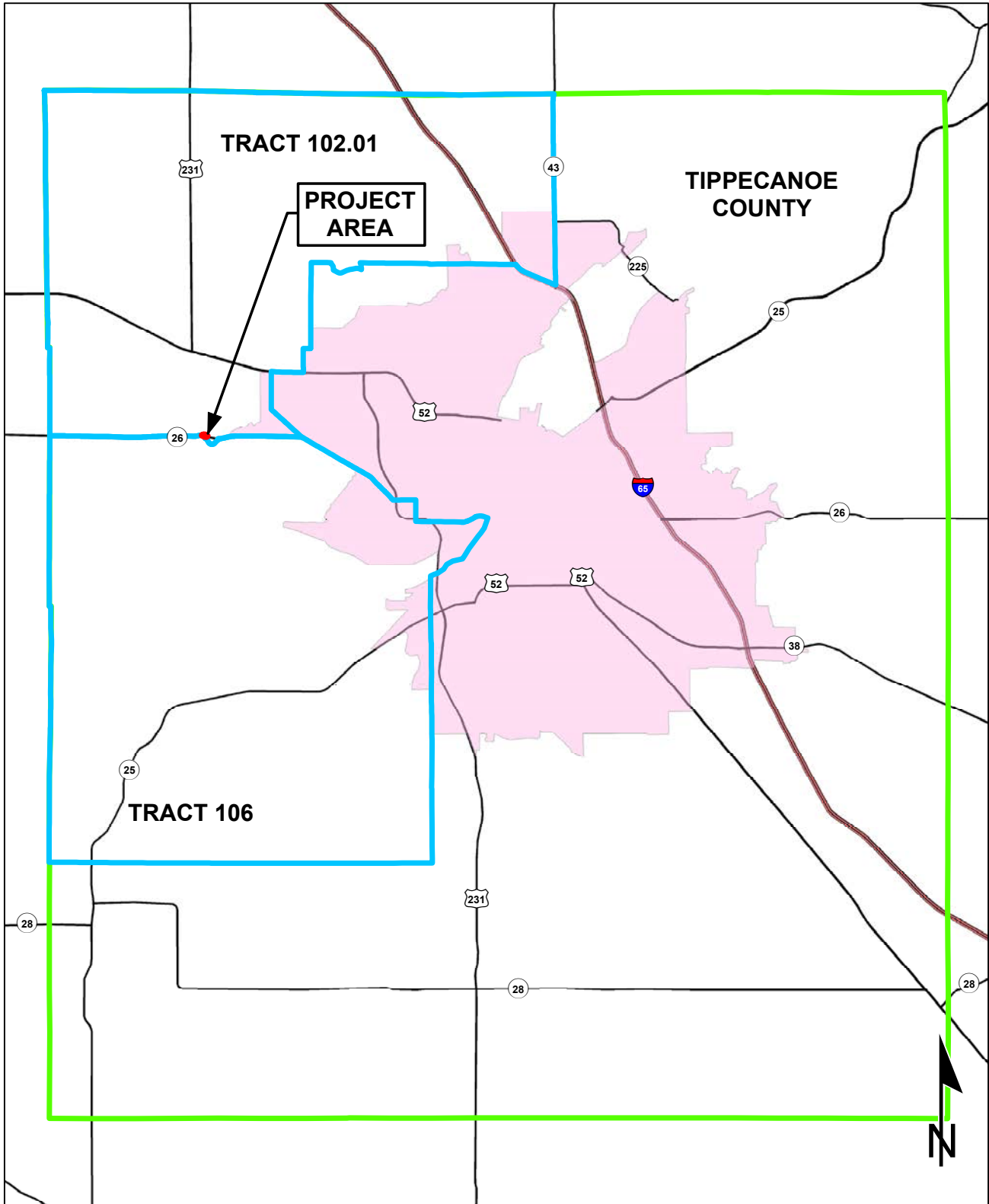
Kirk Roth  
Environmental Scientist  
Corradino, LLC  
200 S. Meridian Street, Suite 330  
Indianapolis, IN 46225

### **Attachments:**

Attachment A – Census Tract Map  
Attachment B – Income Data  
Attachment C – Minority Data  
Attachment D – Calculation Table







Census Tract Map  
Des. No. 1900333, SR 26, 4.98 Miles West of US 52/231  
Small Structure Replacement  
Tippecanoe County, Indiana



Sources:  
**Non Orthophotography** 2.5 1.25 0 2.5 Miles  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://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.**

**Census Tract 102.01 and 106  
In Tippecanoe County**

-  Project Area
-  Affected Community (AC)
-  Community of Comparison (COC)
-  Urban Area Boundary (UAB)

# Attachment B

American Community Survey

## B17001 | POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

2019: ACS 5-Year Estimates Detailed Tables | Universe: Population for whom poverty status is determined

Notes | Geos <sup>3</sup> | Years | Topics | Surveys | Codes 123 | Hide | Transpose | Margin of Error | Restore | Excel | CSV | ZIP | Print | Map

	Tippecanoe County, Indiana		Census Tract 102.01, Tippecanoe County, Indiana		Census Tract 106, Tippecanoe County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
▼ Total:	174,497	±1,255	5,171	±330	5,750	±346
▼ Income in the past 12 months below poverty level:	32,662	±1,877	381	±184	350	±153
> Male:	16,722	±1,203	130	±88	183	±92
> Female:	15,940	±1,127	251	±155	167	±95
▼ Income in the past 12 months at or above poverty level:	141,835	±1,855	4,790	±328	5,400	±345
> Male:	71,521	±1,219	2,471	±235	2,745	±230
> Female:	70,314	±1,149	2,319	±240	2,655	±290

# Attachment C

American Community Survey

## B03002 HISPANIC OR LATINO ORIGIN BY RACE

2018: ACS 5-Year Estimates Detailed Tables | Universe: Total population

Notes | Geos | Years | Topics | Surveys | Codes | Hide | Transpose | Margin of Error | Restore | Excel | CSV | ZIP | Print | Map

	Tippecanoe County, Indiana		Census Tract 102.01, Tippecanoe County, Indiana		Census Tract 106, Tippecanoe County, Indiana	
Label	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
▼ Total:	189,294	*****	5,228	±325	5,859	±304
▼ Not Hispanic or Latino:	173,808	*****	5,060	±359	5,479	±483
White alone	144,589	±166	4,988	±353	5,267	±471
Black or African American alone	9,445	±388	27	±46	74	±86
American Indian and Alaska Native alone	332	±142	9	±14	0	±16
Asian alone	15,320	±299	0	±16	56	±45
Native Hawaiian and Other Pacific Islander alone	74	±58	0	±16	0	±16
Some other race alone	258	±158	0	±16	0	±16
▼ Two or more races:	3,790	±526	36	±52	82	±76
Two races including Some other race	145	±84	0	±16	0	±16
Two races excluding Some other race, and three or more races	3,645	±526	36	±52	82	±76
▼ Hispanic or Latino:	15,486	*****	168	±190	380	±335
White alone	11,151	±890	148	±191	345	±328
Black or African American alone	200	±117	0	±16	0	±16
American Indian and Alaska Native alone	98	±76	0	±16	0	±16
Asian alone	58	±40	0	±16	3	±6
Native Hawaiian and Other Pacific Islander alone	0	±27	0	±16	0	±16
Some other race alone	3,354	±882	20	±30	32	±44
▼ Two or more races:	625	±285	0	±16	0	±16
Two races including Some other race	346	±216	0	±16	0	±16
Two races excluding Some other race, and three or more races	279	±151	0	±16	0	±16

## Attachment D

### Community of Comparison (COC) and Affected Community (AC) Data for DES 1900333

	Tippecanoe County, Indiana (COC)	Census Tract 102.01, Tippecanoe County, Indiana (AC)	Census Tract 106, Tippecanoe County, Indiana (AC)
Label	Estimate	Estimate	Estimate
Total Race Population Sample:	189,294	5,228	5,859
Non-Hispanic White alone	144,589	4,988	5,267
Not Non-Hispanic White alone	44,705	240	592
% Minority	23.62	4.59	10.10
125%COG	29.52	< 125% COG	< 125% COG
Total Poverty Population Sample:	174,497	5,171	5,750
Income Below Poverty Status	32,662	381	350
% Below Poverty Status	18.72	7.37	6.09
125%COG	23.40	<125% COG	<125% COG

#### Source

<https://data.census.gov/cedsci/>