

East 146th Street

Start

**Carmel Clay Parks & Recreation**  
**White River Greenway North**  
**Extension Feasibility Study**  
**January 6, 2020**

White River

North Trail

Finish

North Trail

South Trail

Bridge Over White River

South Trail

Start

Finish



White River

Allisonville Road

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Prepared for Carmel Clay Parks & Recreation By:

- SJCA P.C.
- JQOL
- Green 3, LLC

# **Executive Summary**

## **Introduction**

The White River Greenway North Extension Feasibility Study, funded by Carmel Clay Parks & Recreation (CCPR), analyzed the potential non-motorized trail alignments along the western and southern portions of the land currently owned by Conner Prairie. As identified in the 2020-2024 Comprehensive Parks and Recreation Master Plan, one of the top four priorities for CCPR is the expansion of the White River Greenway through equitable partnerships, increasing connections to nearby attractions and trail networks to establish a regional system.

The White River Greenway North Extension project area is predominantly on property owned by Conner Prairie and is in an area rich in flora, culture, and history. Conner Prairie, as described in their 2019 Master Plan, has identified a goal to, "Leverage their ongoing pedestrian improvements on Allisonville Road, River Road and 146<sup>th</sup> Street to get pedestrians to Conner Prairie." Two other points from the master plan included a trail that provides easy access between Carmel and Fishers, along with a "signature" bridge that will cross the White River. Of the listed alternatives in the Conner Prairie Master Plan, the trails that will be explored in this feasibility study are for Alternatives E and G, which for the sake of this report will be referred to as the South Trail and the North Trail.

The proposed White River Greenway North Expansion further aligns with the White River Vision Plan, a collaborative plan in which CCPR, the City of Carmel, and Conner Prairie participated. This plan provides a vision for embracing the 58-mile stretch of the White River that runs through Hamilton County and Marion County. Trail expansion and enhanced connectivity are identified as recommendations for the Allisonville Stretch of the White River Vision Plan, which encompasses the White River Greenway North Extension project area.

## **Greenway Description**

The North Trail will start at the intersection of E. 146th Street and River Road where it will run south along River Road on the east side for 0.55 miles to a point near the Cherry Creek Boulevard roundabout. From there, the trail will diverge from the road, heading south toward a future River Ecology Center planned by Conner Prairie, to the west bank of the White River. The trail will continue westerly along the White River, extending across CCPR property, and ending at the existing trailhead near the intersection of River Road and Tall Timber Run.

The South Trail will begin at the connection of the existing trails at River Road Park, located at the intersection of River Road and 126th Street. The trail will then travel east over the White River, where it will continue east until its terminus at Allisonville Road, just north of the 126<sup>th</sup> Street intersection.

For additional details on the trail alternatives, please see Appendix A.

## **Purpose of Assessment**

The purpose of the assessment is to determine the feasibility of the two trail alternatives: the North Trail, which will diverge from River Road, running closer to the White River and the

South Trail, which will run from the trails at River Road Park, across the White River, to where it will meet its terminus at Allisonville Road.

#### Assessment Approach

The objective of this approach is not to produce a detailed design but to rather determine the feasibility of both the trail alignment alternatives. The alternatives were depicted using aerial/GIS mapping images, along with property linework and contour elevation linework. Professional assumptions were made in order to determine the approximate cost of the two alternatives.

# Proposed Trails

## North Trail



Figure 1: Conceptual Alignment for North Trail

### Preferred Route

As previously mentioned, the North Trail will follow along River Road to the roundabout at Cherry Creek Boulevard. From there, the trail will diverge from the road, heading south toward a future River Ecology Center planned by Conner Prairie, to the west bank of the White River. The trail will continue westerly along the White River, extending across CCPR property, and ending at the existing trailhead near the intersection of River Road and Tall Timber Run. A new trailhead with parking area and restroom facilities are feasible on the property owned by CCPR, however, these facilities are not included within the projected costs for the North Trail.



Figure 2: Typical North Trail alignment conditions along west bank of the White River



Figure 3: Elizabeth Warner Drain crossing near southern connection point for North Trail

### Potential Challenges

Based on the environmental red flag investigation (See Appendix B), there should be no anticipated impacts from hazardous materials. Endangered species to avoid include the Indiana Bat and Northern long-eared bat. A portion of the project is in the Low Potential Zone of the Rusty Patched Bumble Bee. Due to the presence of the bat populations within the trail's projected construction area, tree removal should occur during the bat inactive season, from October 1 to April 1. Lastly, a portion of the North Trail will cross two Hamilton County regulated drains (Tunis Garrard Drain and Elizabeth Warner Drain).

### Permitting

An Indiana Department of Natural Resources (IDNR) Construction in a Floodway (CIF) permit will be required for construction within the 100-year floodplain of the White River. If more than 0.1 acres of wetland is impacted as a result of the

construction of the trail, mitigation for the wetlands will be required. Also, the North Trail will disturb over 1 acre of land and will require a Rule 5 permit from the Indiana Department of Environmental Management (IDEM). Lastly, any work that will impact a regulated drain or the floodplain of a waterway will require approval by the Hamilton County Surveyor's Office.

### Estimated Cost

To this point, a preliminary estimate has been created for the anticipated materials needed to construct the trail itself, utilizing the City of Carmel typical section for a multi-use path (see Appendix C). The total construction estimate for the North Trail was determined to be \$1,325,620.00, which includes a 25% contingency. For budgetary purposes, Professional Services (i.e. surveying, design, permitting) was assumed to be \$159,075.00 (which is 12% of the construction cost) and Construction Inspection was assumed to be \$132,560.00 (which is 10% of the construction cost). No permanent land acquisition is anticipated for this project; therefore, no additional funding for land purchasing has been included in the estimate for this trail.

### Next Steps

The next step for development of this project is to have a topographic survey, waters of the US/wetland delineation, and preliminary design performed to better define the project scope and the overall project construction cost. Also, the next phase could include identifying potential funding sources for this section of trail.

## South Trail



### WHITE RIVER GREENWAY NORTH EXTENSION- SOUTH TRAIL

SITE LAYOUT PLAN January 3, 2020



Figure 4: Conceptual Alignment for South Trail

### Preferred Route

The South Trail will begin at the connection of the existing trails at River Road Park, located at the intersection of River Road and 126th Street. The trail will then travel east over the White River, where it will continue east until its terminus at Allisonville Road, just north of the 126th Street intersection. The exact alignment and location of the path is to be determined. Shown above is the preferred region for the location of the South Trail. The goal of this trail is to be a connector between the communities of Carmel and Fishers.

### Potential Challenges

The portion of the South Trail that is between Allisonville Road and the White River is heavily forested and is predominately within the floodplain areas of both the White River and Shoemaker Ditch. There appears to be unnamed tributaries and isolated wetlands within this area, so the use of a boardwalk section may be needed to cross over these natural resources within minimal impact.



Figure 5: Conceptual boardwalk trail section

The region of construction for the South Trail falls within the presence of both the Indiana bat, the Northern long-eared bat, and the Rusty Patched Bumble Bee. Additionally, several mussel and aquatic species have been recorded within the White River. Tree removal will need to occur during the bats' inactive season: October 1 to April 1. In order to ensure there are no impacts to any federally endangered, threatened or rare species, coordination with the IDNR should be initiated in the early stages of the design phase. For additional details, see Appendix B.



## WHITE RIVER GREENWAY NORTH EXTENSION

Bridge Cross Section January 3, 2020



**JQOL**  
QUALITY OF LIFE

Figure 6: Conceptual bridge section over the White River

### Permitting

Two CIF permits will be required, due to the 100-year floodplains of Shoemaker Ditch and the White River. Tree removal is expected within both floodplains and a new pedestrian crossing will be required for the crossing of the White River. A U.S Army Corps of Engineers (USACE) Section 401/404 Individual Permit (IP) likely will be required for construction within any mapped/isolated wetlands. Mitigation for wetland impacts and vegetation removal will likely be required. Also, the South Trail will disturb over 1 acre of land and will require a Rule 5 permit from the Indiana Department of Environmental Management (IDEM). Lastly, any work that will impact a regulated drain or the floodplain of a waterway will require approval by the Hamilton County Surveyor's Office.

The trail itself, because it will be turning into a bridge as it crosses the White River, will need additional measures taken to ensure that the trail remains compliant with the Americans with



Disabilities Act (ADA). The trail will not be able to exceed a 1:12 running slope and must remain below a 1:48 cross slope. See Appendix B for more details.

#### Estimated Cost

To this point, a preliminary estimate has been created for the anticipated materials needed to construct the trail itself, utilizing the City of Carmel typical section for a multi-use path (see Appendix C). The total construction estimate for the South Trail was determined to be \$7,386,540.00, which includes a 25% contingency. For budgetary purposes, Professional Services (i.e. surveying, design, permitting) was assumed to be \$886,385.00 (which is 12% of the construction cost) and Construction Inspection was assumed to be \$738,655.00 (which is 10% of the construction cost). No permanent land acquisition is anticipated for this project; therefore, no additional funding for land purchasing has been included in the estimate for this trail.

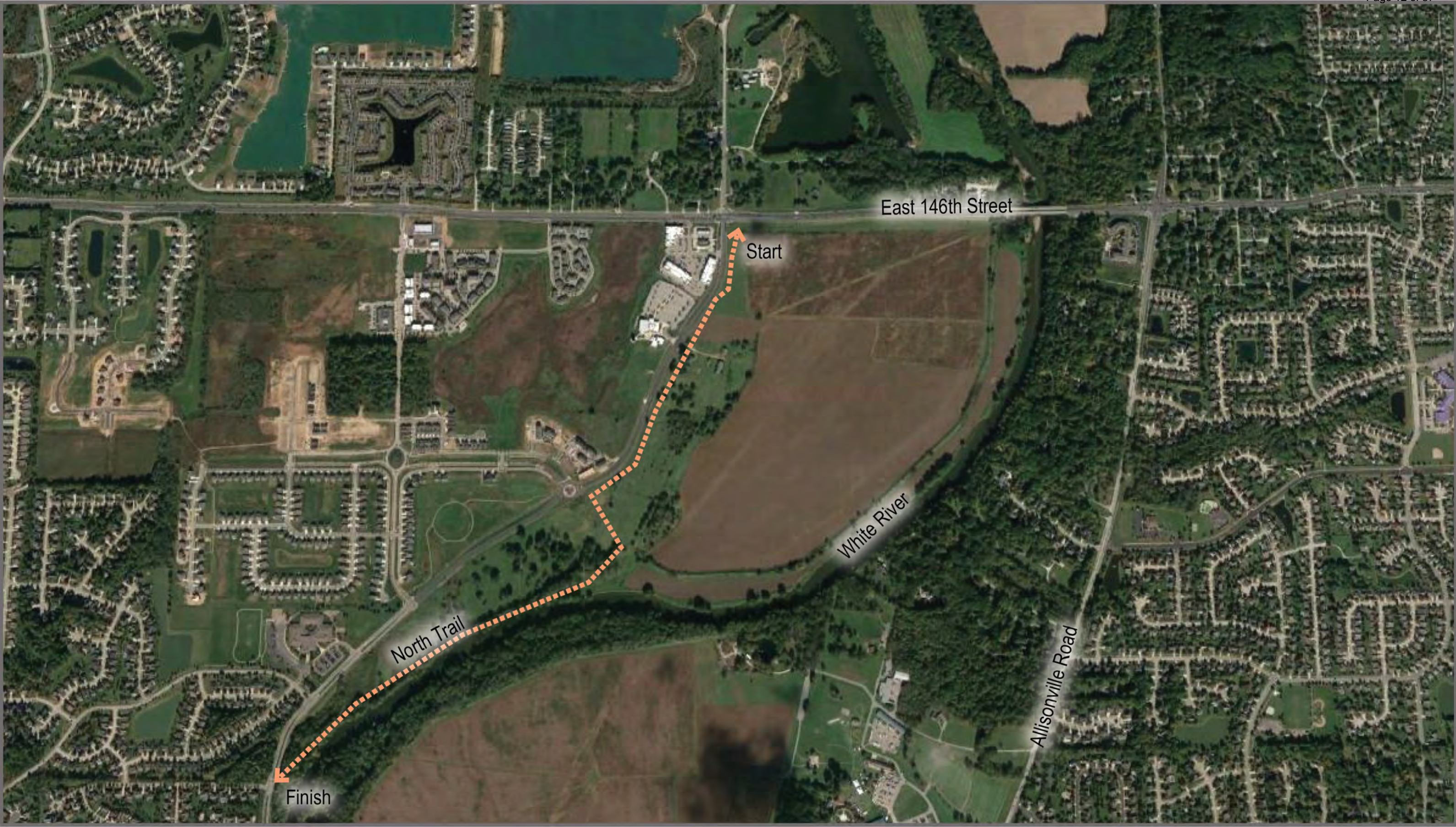
#### Next Steps

The next step for development of this project is to have a topographic survey, waters of the US/wetland delineation, and preliminary design performed to better define the project scope and the overall project construction cost. Also, the next phase could include identifying potential funding sources for this section of trail.

## **Appendices**

- A. **Trail Mapping**
- B. **NLT Environmental Report**
- C. **Multi-Use Path Typical Section**
- D. **Trail Quantities and Estimate**

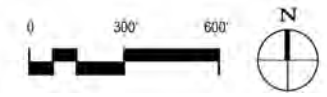
## **Appendix A**



# WHITE RIVER GREENWAY NORTH EXTENSION- NORTH TRAIL

SITE LAYOUT PLAN January 3, 2020

White River Greenway North Extension Feasibility Study

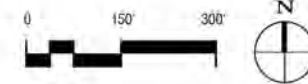




# WHITE RIVER GREENWAY NORTH EXTENSION- SOUTH TRAIL

SITE LAYOUT PLAN January 3, 2020

White River Greenway North Extension Feasibility Study



## **Appendix B**



**Preliminary Environmental Review  
Carmel Clay Parks/Conner Prairie Trail & Bridge over White River  
Hamilton County, Indiana**

**Report Completed on:** November 18, 2019

**Prepared for:**  
SJCA P.C.

**Prepared By:**  
Erin Mulryan, MPA  
Green 3, LLC  
Historic Fountain Square  
1104 Prospect Street  
Indianapolis, IN 46203



### **Site Location:**

North Trail (to 146<sup>th</sup> Street): Sections 23, 24, & 26, Township 18 North, Range 4 East

South Trail, including bridge over White River (to 126<sup>th</sup> Street): Sections 26 & 35, Township 18 North, Range 4 East

Clay Township, Hamilton County, Indiana

### **Purpose of this Report:**

This report identifies the findings of a desktop review of environmental and cultural resources that may be affected by the proposed trail project. This preliminary review is based off of project information and a proposed general trail alignment and did not include a site investigation. This report also includes a preliminary opinion of anticipated waterway permit requirements.

### **Project Description:**

The Carmel Clay Parks Next Level Trails (NLT) Program proposed trail project consists of two trail segments; for the purposes of this report, the trails will be referred to as the North Trail and the South Trail.

The North Trail approximately 1.36 miles in length, beginning at a point near the intersection of River Road and 146<sup>th</sup> Street, traveling south along the east side of River Road for approximately 0.55 mile to a point near the entrance to the Overlook at the Legacy residential development, where it will leave the edge of the roadway. From that point, the trail will travel south toward the White River, traveling along the river to a terminus near the intersection of River Road and Tall Timber Run.

The length of the South Trail will be dependent on the final preferred alignment but will be approximately 0.7 mile in length. This segment will begin at a connection to existing trails in River Road Park, which is located at the intersection of River Road and 126<sup>th</sup> Street. The trail will travel east, crossing the White River via a new pedestrian bridge, and will continue east to a terminus at Allisonville Road.

### **Environmental Resources Summary:**

A preliminary red flag investigation (RFI) was conducted in November 2019 using online GIS data made available by the Indiana Department of Transportation. The draft RFI report and supporting maps are included in the appendices of this report. In summary:

**Infrastructure**- with the exception of several planned trails and recreational facilities, no other infrastructure facilities were identified in the project area. There is one pipeline mapped south of the South Trail, however due to the distance to the pipeline and the scope of the project, no impacts are anticipated.

**Water Resources**- the White River and several tributaries are mapped within and adjacent to the project area. This segment of the river is impaired for mercury and polychlorinated biphenyls (PCBs). There are





freshwater emergent wetlands and riverine wetlands within and adjacent to the trail alignments that should be avoided. Due to the likelihood that impacts to unmapped wetlands and other water features will occur and waterway permits will be required, this report recommends that a Waters of the U.S. and Wetland Delineation investigation report be completed.

**Mining/Mineral Resources-** one site, a petroleum well, is located approximately 0.26 mile west of the western terminus of the South Trail. No other mining/mineral resources are located within 0.5 mile of the project.

**Hazardous Materials-** four (4) National Pollutant Discharge Elimination System (NPDES) pipe facilities are located within and adjacent to the project area. No impacts are anticipated; however, the locations should be noted on project plans to ensure avoidance. There is also an underground storage tank (UST) located in the southwest quadrant of the River Road/146<sup>th</sup> Street intersection, opposite the northern terminus of the North Trail. Due to the distance to the UST and the scope of the project, no impacts are expected.

**North Trail Soils-** the dominant soil types in the project area are Ockley silt loam, 0-2% slopes (OcA); Ockley silt loam-Urban land complex, 0-2% slopes (YoxA); and Fox clay loam, 8-18% slopes, severely eroded (FxC3). None of these soils are listed as hydric on the Natural Resources Conservation Service (NRCS) hydric soils list for Hamilton County.

**South Trail Soils-** the dominant soil types in the project area is Gessie silt loam, 0-2% slopes, frequently flooded, brief duration (Ge). This soil is not listed as hydric with the NRCS.

**Endangered Species-** the project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened Northern long-eared bat (*Myotis septentrionalis*). A portion of the project is also in the Low Potential Zone for the Rusty Patched Bumble Bee (*Bombus affinis*). In addition, several mussel and other aquatic species have been recorded in the White River. Coordination with the Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife and the U.S. Fish and Wildlife Service (USFWS) should be initiated prior to construction to ensure no adverse impacts to state and federally endangered, threatened, or rare species occur. Tree removal should occur during the bat inactive season, which is October 1 to April 1.

### Permits:

A cursory review of permits that are likely to be required for the proposed Conner Prairie Trails was conducted by Christian Radcliff of Green 3, LLC on November 7, 2019. Assumptions about the level of impacts required for construction were made and are noted below. The review entailed an examination of a KMZ file of the proposed trails, the USFWS National Wetlands Inventory (NWI) map, the IDNR floodplains portal, and aerial imagery.

The following permits will likely be required for the construction of a trail in each location:



### *North Trail:*

- One IDNR Construction in a Floodway (CIF) permit will be required for construction in the 100-year floodplain of the White River. It is assumed that tree removal will be required. Mitigation for vegetation removal will likely be required, and completion of the non-modeling worksheet by the designer will be needed.
- One Section 401/404 IP will likely be required for construction within mapped forested wetlands. It is assumed that impacts to more than 0.1 acre of wetland will be required for trail construction. Mitigation for wetland impacts will likely be required.
- A Rule 5 erosion control permit with the Indiana Department of Environmental Management (IDEM) will likely be required. It is assumed that the construction area will be greater than 1 acre in area.
- A Section 9 permit with the US Coast Guard (USCG) will not be required because the project will not occur over the Wabash River or Ohio River, the only waters that qualify as navigable waterways within the USCG 8<sup>th</sup> District in Indiana.

### *South Trail:*

- Two CIF permits will be required for construction in the 100-year floodplains of Shoemaker Ditch and the White River. It is assumed that tree removal will be required in both floodplains, and a new pedestrian crossing will be required over the White River. Mitigation for vegetation removal will likely be required for each permit, and completion of the modeling worksheet by the bridge designer will be needed for the permit within the White River floodplain.
- One U.S. Army Corps of Engineers (USACE) Section 401/404 Individual Permit (IP) will likely be required for construction within mapped forested wetlands. It is assumed that more than 0.1 acre of wetland impacts will be required for trail construction. It is assumed that less than 0.1 acre/300 linear feet of stream impacts will be required. Mitigation for wetland impacts will likely be required.
- A Rule 5 erosion control permit with the Indiana Department of Environmental Management (IDEM) will likely be required. It is assumed that the construction area will be greater than 1 acre in area.
- A Section 9 permit with the US Coast Guard (USCG) will not be required because the project will not occur over the Wabash River or Ohio River, the only waters that qualify as navigable waterways within the USCG 8<sup>th</sup> District in Indiana.

A Waters of the U.S. and Wetland Delineation investigation report is recommended to identify water resources in the project area. Additional impacts to jurisdictional water features may occur if more features are identified in the report. All jurisdictional determinations are made by appropriate USACE staff. The requirements for permit approval are determined by appropriate staff from each regulatory agency.



### **Historic Resources Summary:**

**Above Ground Resources-** According to the IDNR Division of Historic Preservation and Archaeology (DHPA) database and Indiana Historic Buildings, Bridges, and Cemeteries Map, there are two resources rated Contributing adjacent to the North Trail. Contributing resources are not typically considered eligible for listing on the National Register of Historic Places; therefore, adverse impacts to historic properties are not anticipated.

**Below Ground Resources-** A cursory archaeological records review for the proposed Conner Prairie Trails was conducted by Christopher Jackson, M.S., RPA, of Green 3, LLC on October 24, 2019. The review entailed an examination of cultural resource management (CRM) reports that are available online via the IDNR DHPA State Historic Architectural and Archaeological Research Database (SHAARD) and archaeological site locations that are provided on SHAARD GIS.

A review of the CRM reports indicated that for the North Trail, five professional investigations have been undertaken that either traverse or were situated in the immediate vicinity of the proposed trail. The South Trail had 20 professional studies occurring in the immediately vicinity of or crossing the proposed trail. It should be noted that all of these investigations occurred prior to the recently revised regulations pertaining to archaeological studies.

From an inspection of the SHAARD, it could be ascertained that approximately 150 archaeological sites have been recorded in a 1-mile radius of the North Trail, and approximately 60 sites have been inventoried in that radius for the South Trail.

Based on this information, it can be determined that the project area was heavily utilized by prehistoric peoples.

Based on the data obtained from this preliminary archaeological records review, it can be ascertained that this section was heavily utilized in prehistoric times and that there is a very high probability for archaeological resources to be present along the proposed alignment for either section. As a result of this, it is recommended that a Phase Ia archaeological field investigation, following the current regulations, should be undertaken for both sections of the proposed trail.

### **Acknowledgement:**

This environmental review has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement.

Erin Mulryan, MPA

President

Green 3, LLC

**Supporting Documentation:**

- Appendix A- Project Maps
- Appendix B- Draft Red Flag Investigation Report & Supporting Maps
- Appendix C- Above Ground Historic Resources Map & Resources Information

**References:**

Indiana Map online GIS tool, <https://maps.indiana.edu/>

NRCS Soil Survey online mapping tool, <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

NRCS Hydric Soils List by State/County, [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd1316620.html](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316620.html)

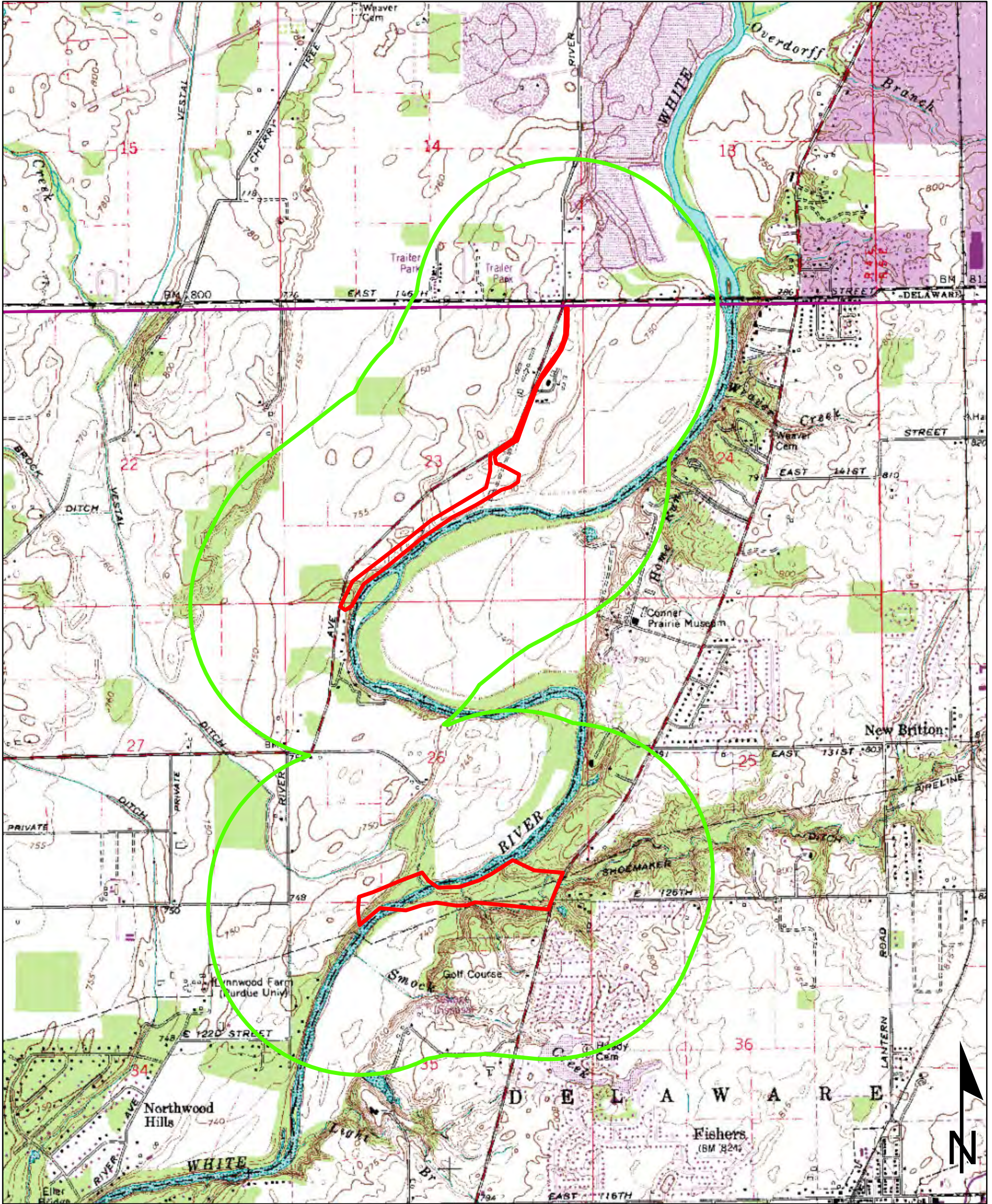
Hamilton County GIS, <https://gis1.hamiltoncounty.in.gov/GeneralViewer/>

IDNR DHPA SHAARD online mapping tools, <https://www.in.gov/dnr/historic/4505.htm>

NWI online mapping tool, <https://www.fws.gov/wetlands/data/mapper.html>

IDNR Floodplain Information Portal, <https://dnrmaps.dnr.in.gov/appsphp/fdms/>

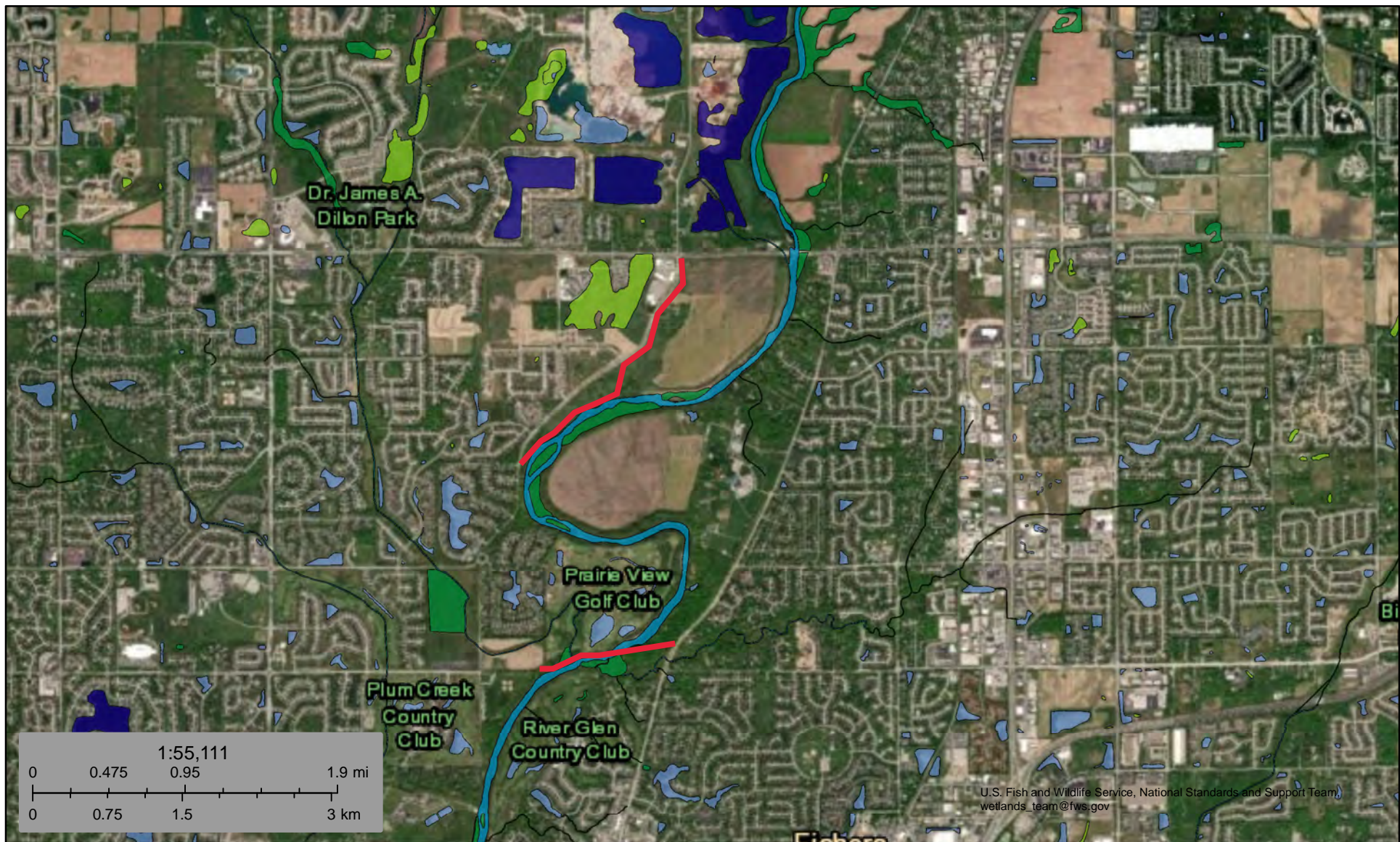
## Appendix A Project Maps



Sources: 0.35 0.17 0 0.35 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.


**NOBLESVILLE & FISHERS  
 QUADRANGLE  
 INDIANA  
 7.5 MINUTE SERIES**

# Carmel Clay Parks NLT Trails



November 15, 2019

**Wetlands**

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

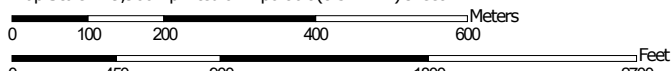
 Proposed Trails

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—Hamilton County, Indiana



Map Scale: 1:9,960 if printed on A portrait (8.5" x 11") sheet.



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



Natural Resources Conservation Service

Web Soil Survey  
National Cooperative Soil Survey  
White River Greenway North Extension Feasibility Study


11/15/2019  
Page 1 of 3



Soil Map—Hamilton County, Indiana

**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.

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: Hamilton County, Indiana  
 Survey Area Data: Version 20, Sep 16, 2019

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

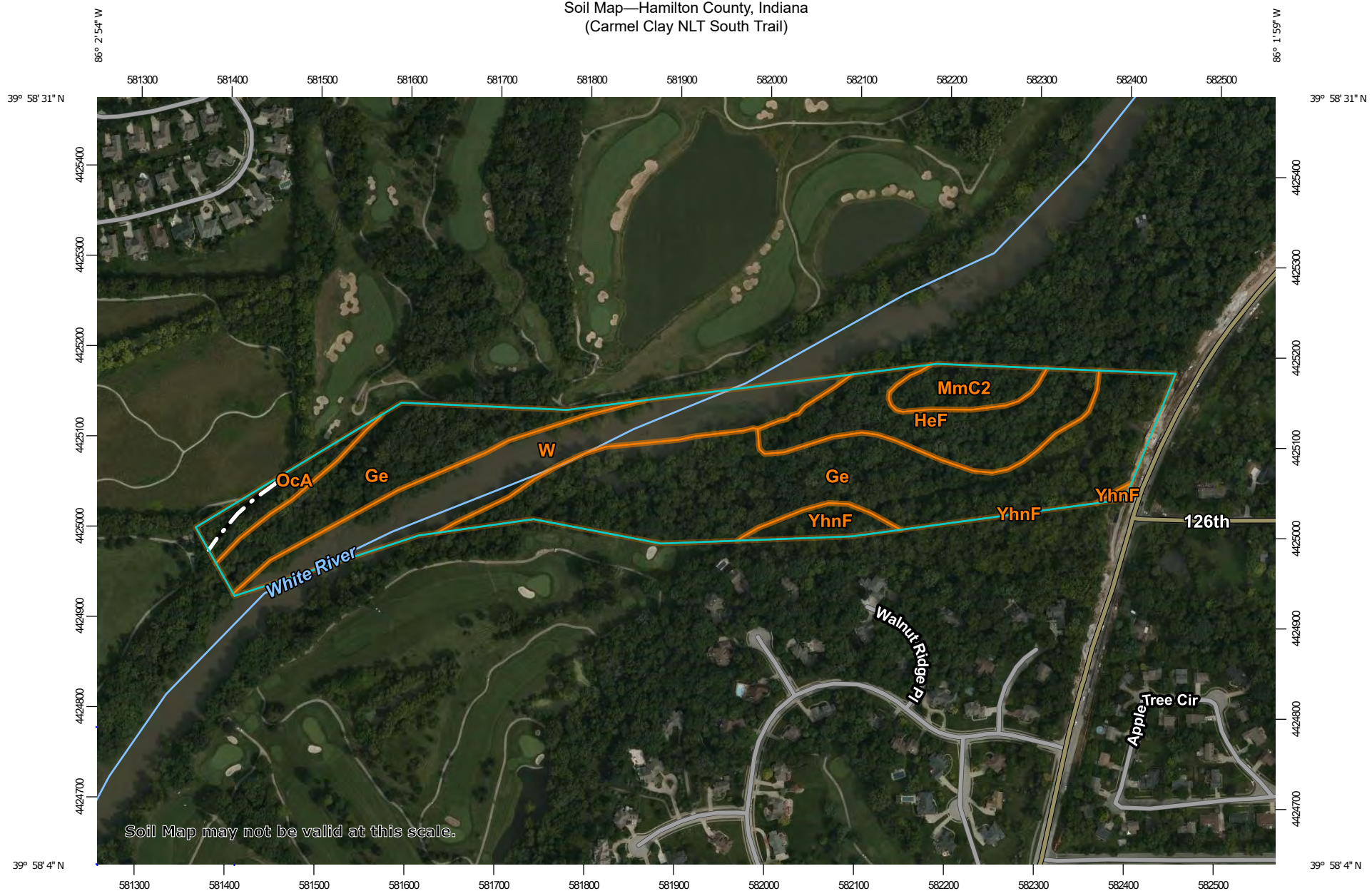
Date(s) aerial images were photographed: Aug 1, 2018—Sep 30, 2018

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.

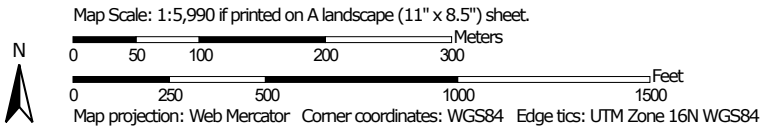
## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FxC3	Fox clay loam, 8 to 18 percent slopes, severely eroded	7.6	25.6%
Ge	Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	0.1	0.2%
OcA	Ockley silt loam, 0 to 2 percent slopes	11.7	39.3%
OcB2	Ockley silt loam, 2 to 6 percent slopes, eroded	1.6	5.5%
YfpD3	Fox clay loam-Urban land complex, 8 to 18 percent slopes, severely eroded	0.6	2.1%
YoxA	Ockley silt loam-Urban land complex, 0 to 2 percent slopes	7.7	25.7%
YoxB2	Ockley silt loam-Urban land complex, 2 to 6 percent slopes, eroded	0.1	0.4%
YsnA	Sleeth loam-Urban land complex, 0 to 2 percent slopes	0.3	1.1%
<b>Totals for Area of Interest</b>		<b>29.9</b>	<b>100.0%</b>

### Soil Map—Hamilton County, Indiana (Carmel Clay NLT South Trail)




Soil Map may not be valid at this scale.



Soil Map—Hamilton County, Indiana  
(Carmel Clay NLT South Trail)

**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: Hamilton County, Indiana  
Survey Area Data: Version 20, Sep 16, 2019

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

Date(s) aerial images were photographed: Aug 1, 2018—Sep 30, 2018

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
Ge	Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	21.6	55.6%
HeF	Hennepin loam, 18 to 50 percent slopes	5.4	14.0%
MmC2	Miami silt loam, 6 to 12 percent slopes, eroded	1.7	4.5%
OcA	Ockley silt loam, 0 to 2 percent slopes	1.5	3.8%
W	Water	7.5	19.3%
YhnF	Hennepin loam-Urban land complex, 18 to 50 percent slopes	1.1	2.9%
<b>Totals for Area of Interest</b>		<b>38.8</b>	<b>100.0%</b>

## Appendix B

### Draft Red Flag Investigation

Date: November 18, 2019

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

From: Erin Mulryan  
Green 3, LLC  
1104 Prospect St.  
Indianapolis, IN 46203

Re: RED FLAG INVESTIGATION

### PROJECT DESCRIPTION

**Brief Description of Project:** Two trail sections (North Trail and South Trail) near the White River.

**Bridge and/or Culvert Project:** Yes  No  **Structure #** N/A; new pedestrian bridge

If this is a bridge project, is the bridge Historical? Yes  No  , Select  Non-Select

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

**Proposed right of way:** Temporary  **# Acres** N/A (undetermined) Permanent  **# Acres** N/A (undetermined). It is currently anticipated that no new right-of-way will be required.

**Type of excavation:** Undetermined

**Maintenance of traffic:** N/A

**Work in waterway:** Yes  No  **Below ordinary high water mark:** Yes  No

**State Project:**  LPA:

**Any other factors influencing recommendations:** N/A

### INFRASTRUCTURE TABLE AND SUMMARY

<b>Infrastructure</b>			
Indicate the number of items of concern found <b>within the 0.5 mile</b> search radius. If there are no items, please indicate N/A:			
Religious Facilities	<b>N/A</b>	Recreational Facilities	<b>4</b>
Airports <sup>1</sup>	<b>1 (1.6 miles north)</b>	Pipelines	<b>2 (0.1 mile south of South Trail terminus at Allisonville/126<sup>th</sup> St)</b>
Cemeteries	<b>1 (Heady Cemetery, 0.5 mile southeast of South Trail terminus at Allisonville/126<sup>th</sup> St)</b>	Railroads	<b>N/A</b>
Hospitals	<b>N/A</b>	Trails	<b>12 (multiple adjacent to and inside of project area)</b>
Schools	<b>1 (Prairie Trace Elementary)</b>	Managed Lands	<b>1 (River Road Park)</b>

<sup>1</sup>In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

**WATER RESOURCES TABLE AND SUMMARY**

<b>Water Resources</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	<b>1</b>	Canal Routes - Historic	<b>N/A</b>
Karst Springs	<b>N/A</b>	NWI - Wetlands	<b>45</b>
Canal Structures – Historic	<b>N/A</b>	Lakes	<b>23</b>
NPS NRI Listed	<b>4</b>	Floodplain - DFIRM	<b>28</b>
NWI-Lines	<b>8</b>	Cave Entrance Density	<b>N/A</b>
IDEM 303d Listed Streams and Lakes (Impaired)	<b>6 (White River)</b>	Sinkhole Areas	<b>N/A</b>
Rivers and Streams	<b>24</b>	Sinking-Stream Basins	<b>N/A</b>

**URBANIZED AREA BOUNDARY SUMMARY**

Indianapolis (Marion Co.)

**MINING AND MINERAL EXPLORATION TABLE AND SUMMARY**

<b>Mining/Mineral Exploration</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	<b>1 (0.26 mile west of the western South Trail terminus)</b>	Mineral Resources	<b>N/A</b>
Mines – Surface	<b>N/A</b>	Mines – Underground	<b>N/A</b>

**HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY**

<b>Hazardous Material Concerns</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	<b>N/A</b>	Manufactured Gas Plant Sites	<b>N/A</b>
RCRA Generator/ TSD	<b>N/A</b>	Open Dump Waste Sites	<b>N/A</b>
RCRA Corrective Action Sites	<b>N/A</b>	Restricted Waste Sites	<b>N/A</b>
State Cleanup Sites	<b>N/A</b>	Waste Transfer Stations	<b>N/A</b>
Septage Waste Sites	<b>N/A</b>	Tire Waste Sites	<b>N/A</b>
Underground Storage Tank (UST) Sites	<b>1</b>	Confined Feeding Operations (CFO)	<b>N/A</b>
Voluntary Remediation Program	<b>N/A</b>	Brownfields	<b>N/A</b>
Construction Demolition Waste	<b>N/A</b>	Institutional Controls	<b>N/A</b>
Solid Waste Landfill	<b>N/A</b>	NPDES Facilities	<b>16</b>
Infectious/Medical Waste Sites	<b>N/A</b>	NPDES Pipe Locations	<b>1</b>
Leaking Underground Storage (LUST) Sites	<b>N/A</b>	Notice of Contamination Sites	<b>N/A</b>

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An Equal Opportunity Employer*



## **ECOLOGICAL INFORMATION SUMMARY**

The project is within range of the federally endangered Indiana bat and the federally threatened Northern long-eared bat. It is likely that mussel and other aquatic species have been documented in the White River.

## **RECOMMENDATIONS SECTION**

- Complete a Waters of the U.S./Wetland Delineation investigation
- Coordinate with regulating agencies regarding required waterway permits
- Research the IDEM Virtual File Cabinet for records related to the UST at the northern terminus of the North Trail
- Remove trees outside of the active bat season (removal recommended between October 1 and April 1)

INDOT Environmental Services concurrence: N/A

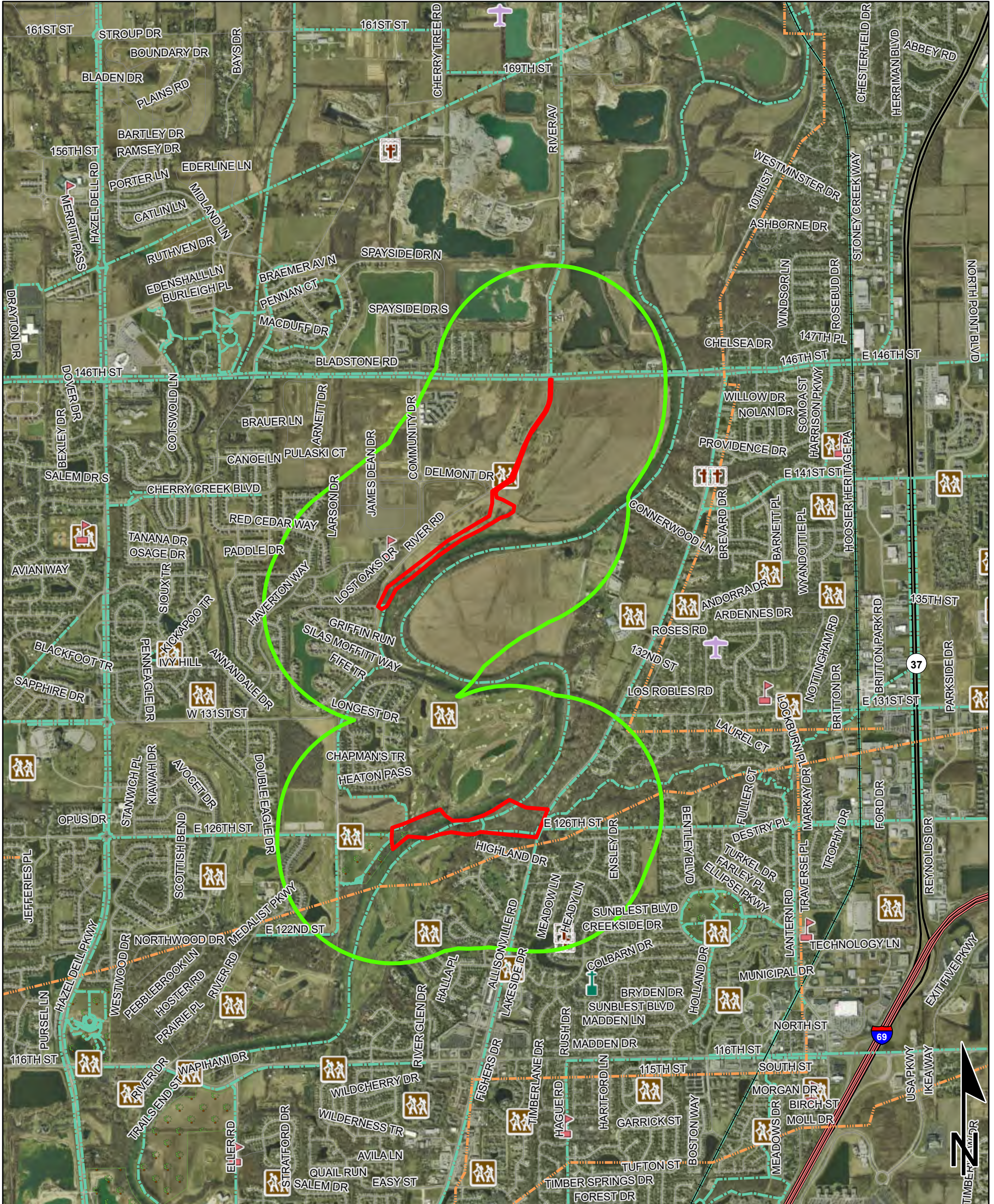
Prepared by:  
Erin Mulryan, MPA  
Green 3, LLC

# Red Flag Investigation - Infrastructure Map

## River Road and E 126th Street

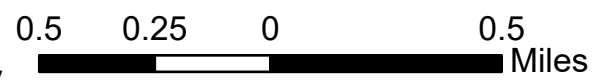
### Conner Prairie Trails

### Hamilton County, Indiana



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

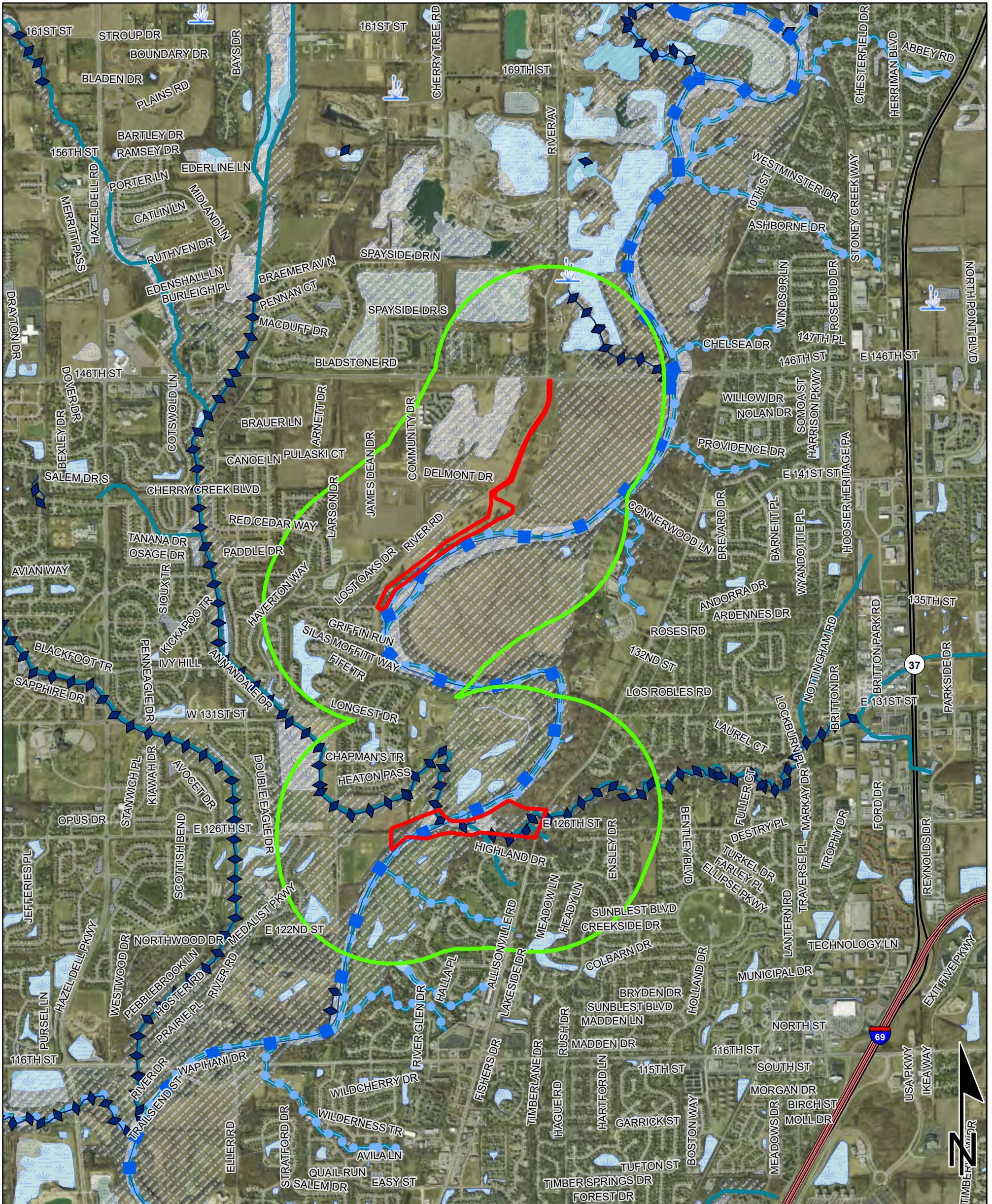
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
	County Boundary		Local Road		US Route

# Red Flag Investigation - Water Resources Map

## River Road and E 126th Street Conner Prairie Trails Hamilton County, Indiana



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

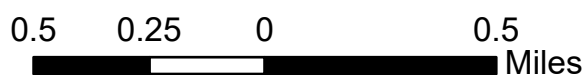
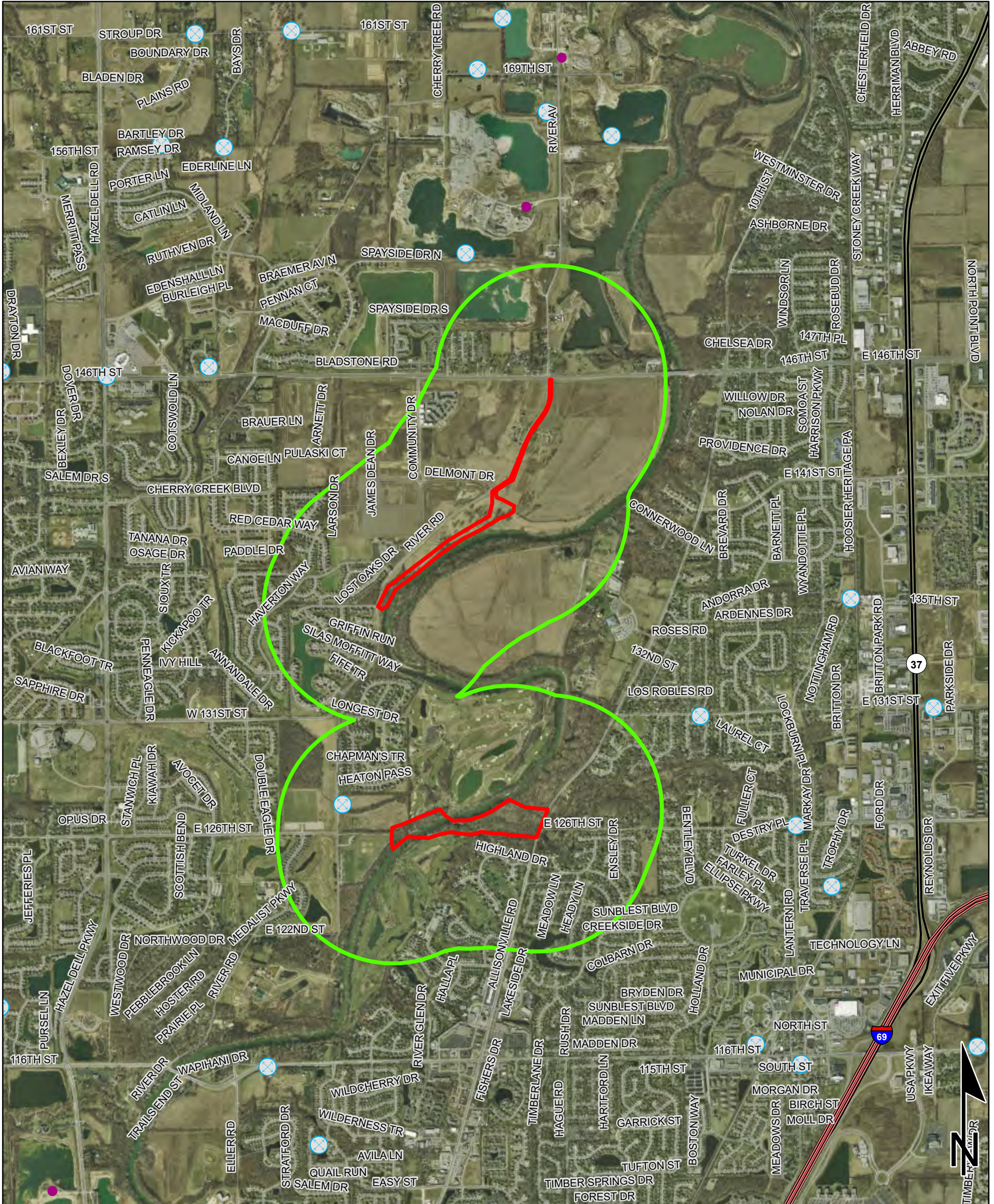
	NWI - Point		Wetlands		Project Area
	Karst Spring		Lake		Half Mile Radius
	NWI - Line		Floodplain - DFIRM		Toll
	Impaired_Stream_Lake		Cave Entrance Density		Interstate
	NPS NRI listed		Sinkhole Area		State Route
	River		Sinking-Stream Basin		US Route
	Canal Structure - Historic		County Boundary		Local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

# Red Flag Investigation - Mining and Mineral Concerns

## River Road and E 126th Street

### Conner Prairie Trails

### Hamilton County, Indiana



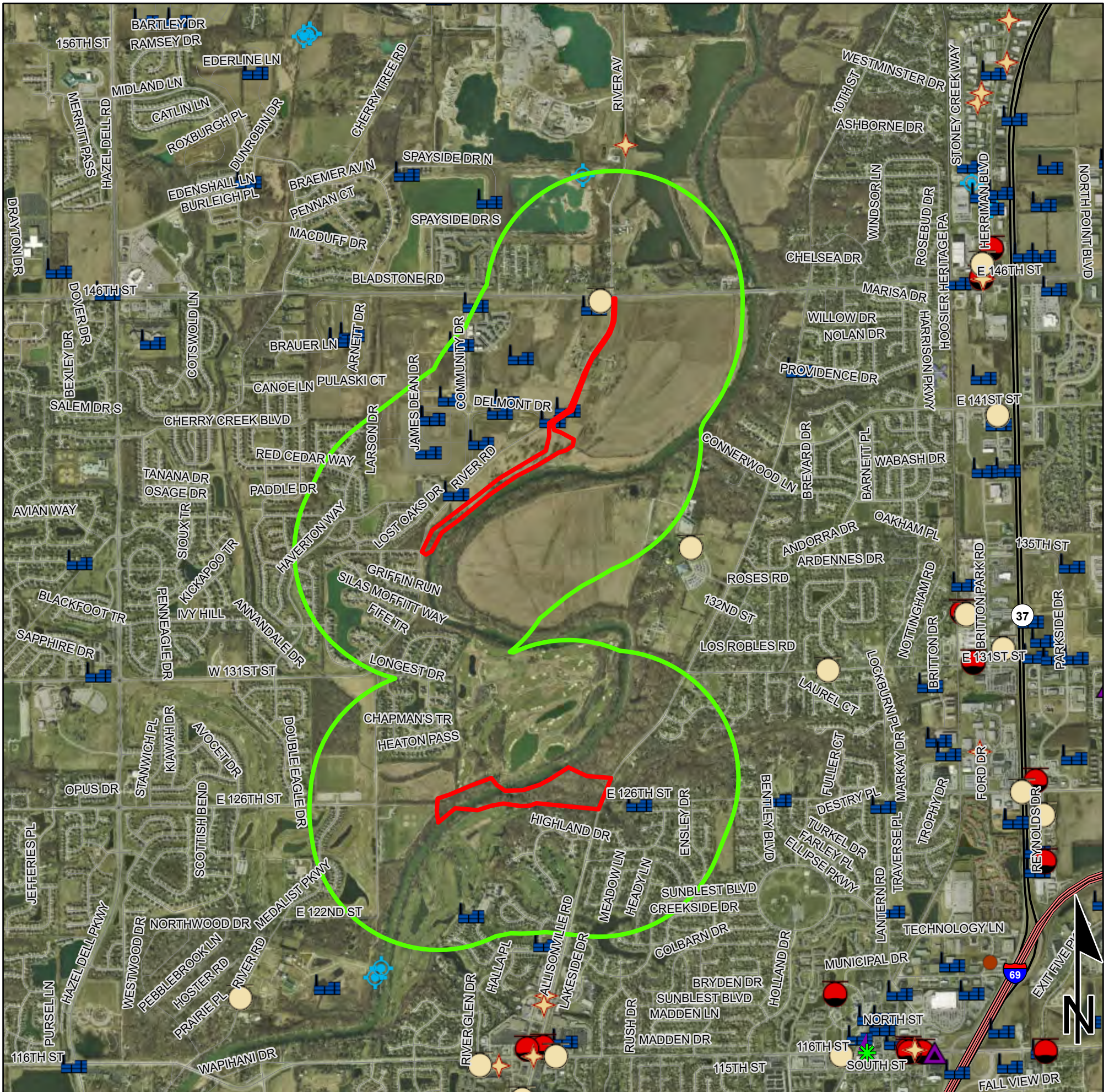
**Sources:**  
**Non Orthophotography**  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
**Map Projection:** UTM Zone 16 N **Map Datum:** NAD83

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

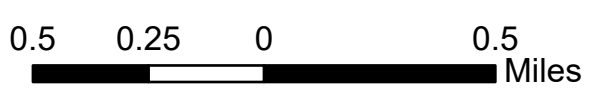
	Oil and Gas Wells		County Boundary		Toll
	Mineral Resources		Project Area		Interstate
	Mine - Surface		Half Mile Radius		State Route
	Mine - Underground				US Route
					Local Road

# Red Flag Investigation - Hazardous Material Concerns

## River Road and E 126th Street Conner Prairie Trails Hamilton County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation		Septage Waste Site		Project Area
	Notice_of_Contamination		Solid Waste Landfill		Half Mile Radius
	Construction/Demolition Site		State Cleanup Site		Toll
	Infectious/Medical Waste Site		Superfund		Interstate
	Leaking Underground Storage Tank		Tire Waste Site		State Route
	Manufactured Gas Plant		Underground Storage Tank		US Route
	NPDES Facilities		Voluntary Remediation Program		Local Road
	NPDES Pipe Locations		Waste Transfer Station		
	Open Dump Waste Site				



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

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

www.fws.gov/midwest/endangered/insects/rpbb/  
tml

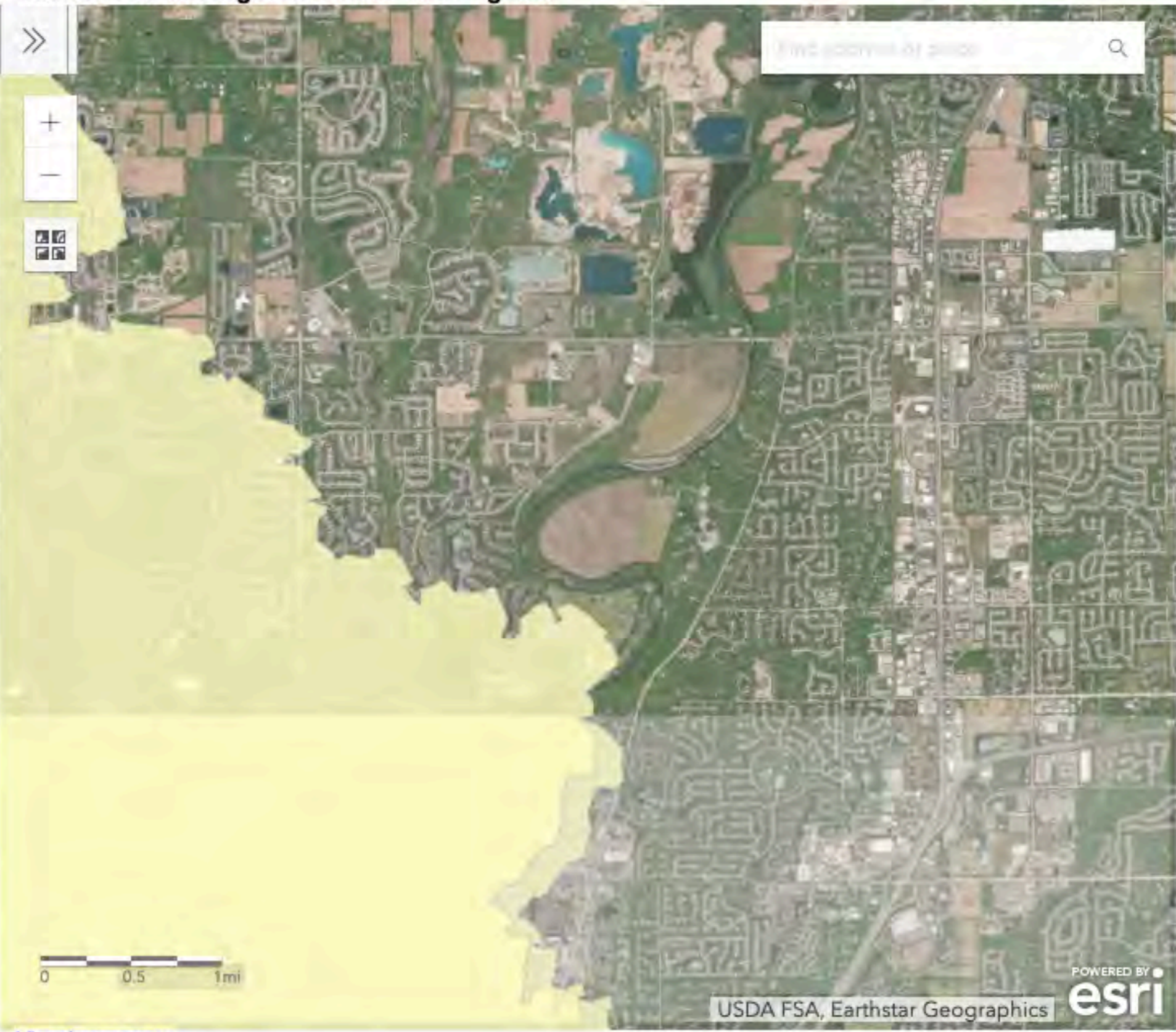
Contact Us

- What We Do**
- Midwest Endangered Species
  - Candidate Conservation
  - Listing
  - Recovery
  - Section 7 Consultation
  - Permits
  - Habitat Conservation Plans
  - Grants
  - Endangered Species Act
  - Glossary

- Listed Plants and Animals**
- Featured Species
  - All Midwest Listed Species
  - State and County Lists
  - Species of Concern
  - Extinct Species
  - Fact Sheets

**Endangered Species Program**

*The mission of the U.S. Fish and Wildlife Service's Endangered Species program is conserving and restoring threatened and endangered species and their ecosystems.*



[View larger map](#)

- Red Areas = High Potential Zones: rusty patched bumble bee likely present**
- Assume rusty patched bumble bees are present where suitable habitat is present. Additional [surveys can be done to verify presence or absence](#).
  - If my project is in this zone, what do I do? [Go back to the Rusty Patched Bumble Bee home page](#) and follow the link for your specific situation.
    - [Section 7 consultation or an Incidental Take Permit](#) may be necessary if your project or action may harm or kill rusty patched bumble bees.
    - [We recommend recovery permits for surveys](#) and non-lethal survey techniques.
- Yellow and Blue Areas = Low Potential Zones: rusty patched bumble bee not likely to be present.**
- Yellow Areas = Primary Dispersal Zones
    - These are the areas surrounding High Potential Zones (red areas).
    - The model to create the Primary Dispersal Zones considers the maximum dispersal potential of the species from sites with recent (2007- current) records. [See illustration below](#).
    - These areas are important for conservation actions and additional survey effort.
    - Section 7 consultation and Incidental Take Permits are not needed in these areas.**
    - [We recommend recovery permits for surveys](#) and non-lethal survey techniques in yellow areas.
  - Blue Areas = Urban Zones

County: **Hamilton**

Species Name	Common Name	FED	STATE	GRANK	SRANK
<b>Mollusk: Bivalvia (Mussels)</b>					
Epioblasma rangiana	Northern Riffleshell	LE	SE	G2	S1
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Ligumia recta	Black Sandshell			G4G5	S2
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cyphus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
Villosa fabalis	Rayed Bean	LE	SE	G2	S1
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
<b>Insect: Odonata (Dragonflies &amp; Damselflies)</b>					
Enallagma divagans	Turquoise Bluet		SR	G5	S3
<b>Amphibian</b>					
Acris blanchardi	Blanchard's Cricket Frog		SSC	G5	S4
Necturus maculosus	Common mudpuppy		SSC	G5	S2
<b>Reptile</b>					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Sistrurus catenatus	Eastern Massasauga	LT	SE	G3	S2
<b>Bird</b>					
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Certhia americana	Brown Creeper			G5	S2B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SSC	G5	S1B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Thryomanes bewickii	Bewick's Wren			G5	S1B
<b>Mammal</b>					
Lasionycteris noctivagans	Silver-haired Bat		SSC	G3G4	SNRN
Taxidea taxus	American Badger		SSC	G5	S2
<b>Vascular Plant</b>					
Chelone obliqua var. speciosa	Rose Turtlehead		WL	G4T3	S3
Drosera intermedia	Spoon-leaved Sundew		SR	G5	S3
Helenium virginicum	Virginia Sneezeweed	LT	ST	G3	SU

Indiana Natural Heritage Data Center  
Division of Nature Preserves  
Indiana Department of Natural Resources  
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting  
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list  
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank  
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Hamilton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Magnolia acuminata	Cucumber Magnolia		SE	G5	S1
Platanthera leucophaea	Prairie White-fringed Orchid	LT	SE	G2G3	S1
Rorippa aquatica	Lake Cress		SE	G4?	S1
<b>High Quality Natural Community</b>					
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest		SG	GNR	S3

Indiana Natural Heritage Data Center  
Division of Nature Preserves  
Indiana Department of Natural Resources  
This data is not the result of comprehensive county surveys.

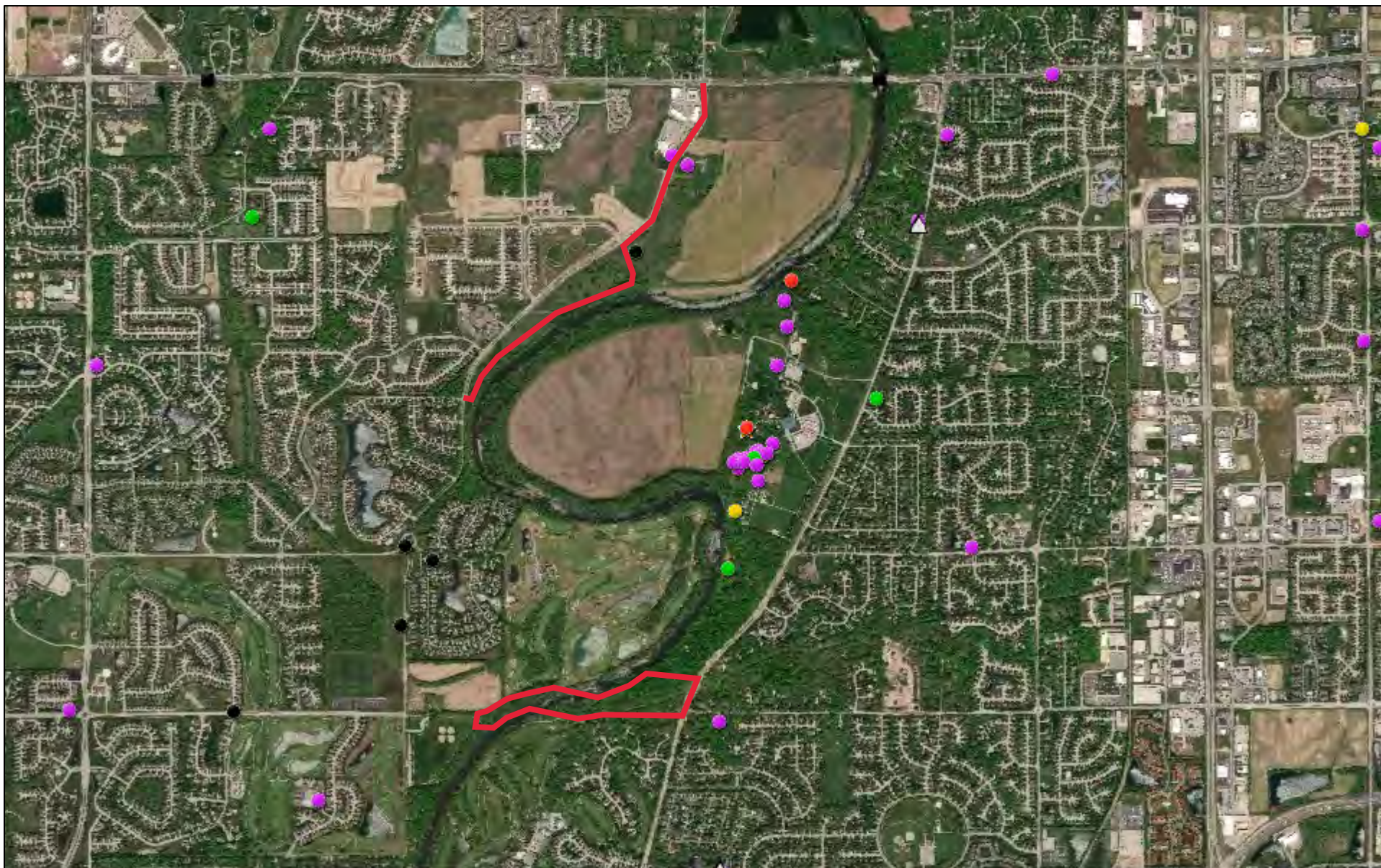
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 SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked



## Appendix C

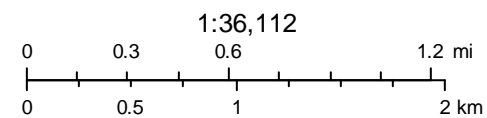
### Aboveground Historic Resources

# Carmel Clay Parks- Conner Prairie NLT Trail



11/12/2019, 6:34:20 PM

- |                            |               |                           |                         |
|----------------------------|---------------|---------------------------|-------------------------|
| △ Cemeteries               | ● Outstanding | ● Contributing            | <b>Historic Bridges</b> |
| <b>County Survey Sites</b> | ● Notable     | ● Demolished              | ■ Demolished            |
| ● Other                    |               | ★ National Register Sites |                         |



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

IHSSI (County Survey)



Survey Number: 057-206-55001

Rating: Contributing

Historic Name: Farm

Year Dataset Compiled: 1991

National Register File  
Number: -

Survey County

County	Legal Township(s)	Quad Name(s)
Hamilton	Clay	Fishers

Address: River Ave.

City: -

Location Notes: E. side of Rd. approximately 1/4 mile S. of E. 146 St. and River Ave. intersection.

Coordinates

Easting	Northing
-	-

Common Name: -

Category: Building

Visible?:

Historic District?:

Historic District Name: -

Ownership: private

Use: Present

Residence:

Commercial:

Vacant:

Other:

Describe: agricultural

Other:

Use: Past

Residence:

Commercial:

Vacant:

Other:

Describe: agricultural

Other:

Surveys/Legal Protections

National Register:

State Register:

Hoosier Homestead:

National Historic Landmark:

Local Designation:

Protective Covenants:

Other:

Areas of Significance: ARCHITECTURE, VERNACULAR/CONSTRUCTION

Other Significance: -

Endangered: No

Explanation: -

Number of Contributing Resources: 8

Number of Non-contributing Resources: 2

Environment: -

Bibliography: -

Structure Type

Bridge:

Cemetery:

Other:

Time Period(s): c. 1940

Condition: Fair

Year Demolished: -  
 Integrity: Slightly Altered  
 Date Moved: -  
 Alterations: -  
 Style: Colonial Revival  
 Type/Vernacular: -

Architect/Builder	Architectural Firm	Affiliation
-	-	-

Replacement

Windows:  Roof:   
 Other:

Additions

Siding:  Wings:   
 Other:  Description: perma stone  
 Removals: -

Stories

1:  1 1/2:  2:  2 1/2:   
 Other:

Plan

Rectangular:  Polygonal:   
 L:  T:  X:  U:   
 Irregular:  Other:

Depth

Single-Pile:  Double-Pile:   
 Irregular/Massed:  Other:

Number of Bays: -

Foundation: BRICK

Foundation Description: -

Walls Description: -

Other Walls: -

Roof

Side-Gable:  Front-Gable:  Cross-Gable:   
 Hip:  Pyramidal:  Mansard:

Other:  Description: gable  
Material: -  
Features: -

Porches

Front:  Side:  Back:

Notes: see architectural description

Openings: flat 8/1 dihrs windows, 6/1 dihrs windows, multi light/6 dihrs round arch windows dormers, flat doors wood with closed transom.

Interior: -

Outbuildings: Garage,  
House,  
Livestock barn,  
Milk house,  
Other,  
Shed

Description: storage, 3 tenant houses

Notes: see architectural description

Statement of Significance: typical mid 20th century farmstead.

Architectural Description: porches- enclosed porch W., screens (wooden), shed roof, full width open W. porch, brick floor, wood doric columns, shed roof.

garage- brick construction, flat vehicle doors (4), multilight/6 dihrs round arch windows, 8/1 dihrs gable roof cornice returns, gable dormers, breezway (S).

milk storage- brick construction, wood door, hip roof, exterior rafter ends.

barn- Livestock barn- ccu foundation, wood frame, vent wood sheathing, gambrel roof, wood vents.

storage- one story wood frame, vent wood sheathing, flat windows, vehicle doors, gable roof.

Tenant house #1- wood frame, one story gable front, one story shed exterior E. side wood frame, screened in wood porch with shed roof front, flat 1/1 dihrs windows, flat in.

### IHSSI (County Survey)



Survey Number: 057-206-55003

Rating: Contributing

Historic Name: Farm

Year Dataset Compiled: 1991

National Register File  
Number: -

#### Survey County

County	Legal Township(s)	Quad Name(s)
Hamilton	Clay	Fishers

Address: River Ave.

City: -

Location Notes: W. side of Rd. approximately 1/4 mile S. of E. 146 St. and River Ave. intersection.

#### Coordinates

Easting	Northing
-	-

Common Name: White River and Cloverdale Farm

Category: Building

Visible?:

Historic District?:

Historic District Name: -

Ownership: private

Use: Present

Residence:

Commercial:

Vacant:

Other:

Describe: agricultural

Other:

Use: Past

Residence:

Commercial:

Vacant:

Other:

Describe: agricultural

Other:

Surveys/Legal Protections

National Register:

State Register:

Hoosier Homestead:

National Historic Landmark:

Local Designation:

Protective Covenants:

Other:

Areas of Significance: ARCHITECTURE, VERNACULAR/CONSTRUCTION

Other Significance: -

Endangered: No

Explanation: -

Number of Contributing Resources: 6

Number of Non-contributing Resources: 2

Environment: -

Bibliography: -

Structure Type

Bridge:

Cemetery:

Other:

Time Period(s): c. 1910

Condition: Good



Year Demolished: -  
 Integrity: Slightly Altered  
 Date Moved: -  
 Alterations: -  
 Style: Classical Revival  
 Type/Vernacular: -

Architect/Builder	Architectural Firm	Affiliation
-	-	-

Replacement

Windows:  Roof:   
 Other:

Additions

Siding:  Wings:   
 Other:   
 Removals: -

Stories

1:  1 1/2:  2:  2 1/2:   
 Other:

Plan

Rectangular:  Polygonal:   
 L:  T:  X:  U:   
 Irregular:  Other:  Description: gable front

Depth

Single-Pile:  Double-Pile:   
 Irregular/Massed:  Other:

Number of Bays: -  
 Foundation: BRICK  
 Foundation Description: -  
 Walls Description: -  
 Other Walls: -

Roof

Side-Gable:  Front-Gable:  Cross-Gable:   
 Hip:  Pyramidal:  Mansard:

Other:  Description: pedimented gable

Material: -

Features: -

Porches

Front:  Side:  Back:

Notes: see architectural description

Openings: 6/9 dihrs windows, flat multipaneled wood doorts, 4/4 dihrs windows rear

Interior: -

Outbuildings: Grain bin,  
Hog house,  
Other,  
Shed

Description: sotrage, utility

Notes: see architectural description

Statement of Significance: unusual example of the house type in a rural context. Reported to be part of Eli Lilly's Experience farm which also included Conner Prairie.

Architectural Description: porches- recessed entrance porch full width under main roof, concrete floor, fluted doric columns, frieze, entablement.

Hog Barn- combo of 2 buildings. one is a livestock barn with vent wood sheathing, gambrel roof. Other building is a lower hog barn with wood frame, vent wood sheathing, added skylights in gambrel roof.

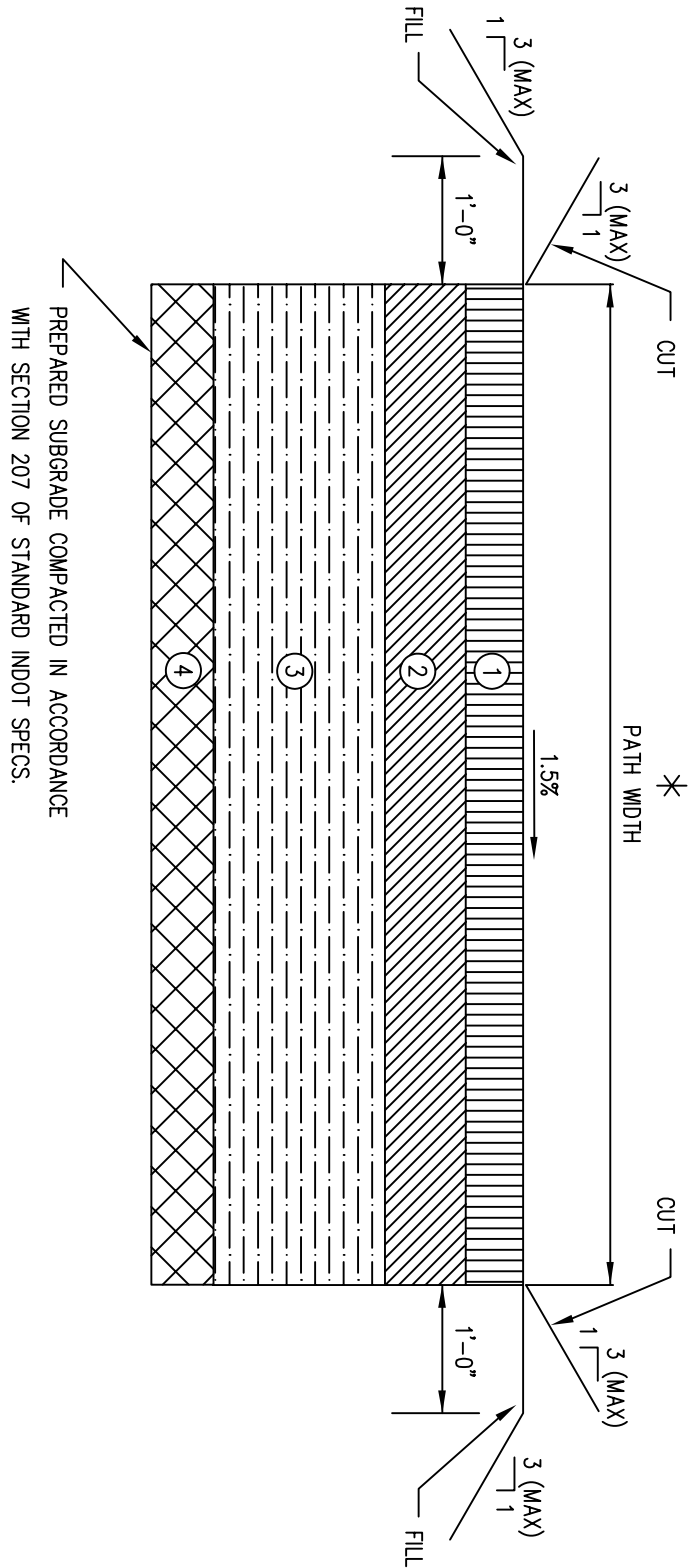
storage- one story, high concrete foundation, wood frame, vent wood sheathing, gable roof.

grain storage- combo of 2 structures, round, glazed brick c. 1940 grain silo conical roof with wood cupola, wood frame storage, vent wood sheathing, gable roof with dormer.

utility- high concrete foundation, wood frame, 6/6 dihrs, flat doros with transoms, gable roof.

storage- wood frame, vent wood sheathing, flat windows door, gable roof.

## **Appendix C**



*MULTI-USE PATH*

NO SCALE

- ① 1.5" - 165#/SYD. HMA SURFACE, TYPE 'B', 9.5 mm ON
  - ② 2.5" - 275#/SYD. HMA INTERMEDIATE, TYPE 'B', 19.0 mm ON
  - ③ 6" COMPACTED AGGREGATE #53 ON
  - ④ COMPACTED SUBGRADE
- \* WIDTH OF RECREATIONAL ASPHALT PATH AS DESIGNATED BY CARMEL CLAY COMPREHENSIVE PLAN (C3 PLAN)

STANDARD DRAWING 10-20	<i>CITY OF CARMEL STANDARDS</i>
	MULTI-USE PATH



# WHITE RIVER GREENWAY NORTH EXTENSION

Boardwalk Perspective December 31, 2019





# WHITE RIVER GREENWAY NORTH EXTENSION

Bridge Cross Section January 3, 2020

White River Greenway North Extension Feasibility Study



## **Appendix D**



SUBJECT: White River Greenway North Extension - North Trail

BY: WM

DATE: 12/20/2019

SHEET 1

CHECK: BED

DATE: 12/30/2019

JOB NO. 19EN030

Item	Description	Unit Cost	Quantity	Unit	Cost
105-06845	Construction Engineering	\$19,235.00	1	LSUM	\$19,235.00
110-01001	Mobilization & Demobilization	\$50,500.00	1	LSUM	\$50,500.00
201-52370	Clearing Right of Way	\$29,000.00	1	LSUM	\$29,000.00
203-02000	Excavation, Common	\$32.37	2598	CYS	\$84,097.26
205-03371	Sediment, Remove	\$30.00	28	CYS	\$840.00
205-06931	Temporary Check Dam, Revetment Riprap	\$60.27	20	TONS	\$1,205.40
205-08594	Filter Sock	\$6.57	15840	LFT	\$104,068.80
207-08264	Subgrade Treatment, Type II	\$15.48	9349	SYS	\$144,722.52
211-09268	Structure Backfill, Type 5	\$121.94	732	CYS	\$89,260.08
301-12234	Compacted Aggregate No. 53	\$46.77	3126	TONS	\$146,203.02
	HMA Surface, Type "B", 9.5mm	\$87.98	772	TONS	\$67,920.56
	HMA Intermediate, Type "B", 19 mm	\$74.99	1286	TONS	\$96,437.14
406-05521	Asphalt for Tack Coat	\$0.43	18699	SYS	\$8,040.57
604-95344	Hand Rail, Pedestrian	\$242.64	245	LFT	\$59,446.80
616-05688	Riprap, Class 1	\$72.39	440	TONS	\$31,851.60
616-12246	Geotextiles for Riprap Type IA	\$3.74	540	SYS	\$2,019.60
621-01004	Mobilization and Demobilization for Seeding	\$649.58	1	EACH	\$649.58
621-06559	Mulched Seeding, R	\$1.41	4675	SYS	\$6,591.75
621-06567	Water	\$11.80	17	kGAL	\$200.60
621-06574	Sodding	\$4.75	4675	SYS	\$22,206.25
723-11346	Structure, Reinforced Concrete, Three-Sided Sections, 336 in. x 120 in.	\$6,000.00	16	LFT	\$96,000.00
	Subtotal				\$1,060,496.53
	25% Contingency				\$265,124.13
	Construction Total				\$1,325,620.66
	Professional Services (12%)				\$159,074.48
	Construction Inspection (10%)				\$132,562.07
	<b>Total</b>				<b>\$1,617,257.21</b>





SUBJECT: White River Greenway North Extension - South Trail

BY: WM

DATE: 12/20/2019

SHEET 1

CHECK: BED

DATE: 12/30/2019

JOB NO. 19EN030

Item	Description	Unit Cost	Quantity	Unit	Cost
105-06845	Construction Engineering	\$26,850.00	1	LSUM	\$26,850.00
110-01001	Mobilization & Demobilization	\$275,209.90	1	LSUM	\$275,209.90
201-52370	Clearing Right of Way	\$40,250.00	1	LSUM	\$40,250.00
203-02000	Excavation, Common	\$32.37	1278	CYS	\$41,368.86
203-02070	Borrow	\$15.59	3953	CYS	\$61,622.07
205-03371	Sediment, Remove	\$30.00	28	CYS	\$840.00
205-06931	Temporary Check Dam, Revetment Riprap	\$60.27	20	TONS	\$1,205.40
205-08594	Filter Sock	\$6.57	6900	LFT	\$45,333.00
207-08264	Subgrade Treatment, Type II	\$15.48	4600	SYS	\$71,208.00
211-09268	Structure Backfill, Type 5	\$121.94	732	CYS	\$89,260.08
301-12234	Compacted Aggregate No. 53	\$46.77	1532	TONS	\$71,651.64
	HMA Surface, Type "B", 9.5mm	\$87.98	380	TONS	\$33,432.40
	HMA Intermediate, Type "B", 19 mm	\$74.99	633	TONS	\$47,468.67
406-05521	Asphalt for Tack Coat	\$0.43	9200	SYS	\$3,956.00
604-95344	Hand Rail, Pedestrian	\$242.64	720	LFT	\$174,700.80
616-05688	Riprap, Class 1	\$72.39	440	TONS	\$31,851.60
616-12246	Geotextiles for Riprap Type IA	\$3.74	540	SYS	\$2,019.60
621-01004	Mobilization and Demobilization for Seeding	\$649.58	1	EACH	\$649.58
621-06559	Mulched Seeding, R	\$1.41	2300	SYS	\$3,243.00
621-06567	Water	\$11.80	8	KGAL	\$94.40
621-06574	Sodding	\$4.75	2300	SYS	\$10,925.00
711-02554	Pedestrian Bridge	\$6,500.00	650	LFT	\$4,225,000.00
712-09730	Boardwalk	\$1,236.26	300	LFT	\$370,878.00
731-93947	Leveling Pad, Concrete	\$35.02	600	LFT	\$21,012.00
732-11810	Modular Block Wall	\$29.59	5000	SFT	\$147,950.00
732-11811	Modular Block Wall Erection	\$22.25	5000	SFT	\$111,250.00
	Subtotal				\$5,909,230.00
	25% Contingency				\$1,477,307.50
	Construction Total				\$7,386,537.50
	Professional Services (12%)				\$886,384.50
	Construction Inspection (10%)				\$738,653.75
	<b>Total</b>				<b>\$9,011,575.76</b>