Aaron Kochlinger

1/21/2022

Note: Duplicate mapping and photographs were included in the Waters Report, but were intentionally removed. Please see Appendix B for maps and photographs.

Waters Report

SR 3 and Waits Road City of Kendallville, Noble County, Indiana Intersection Improvement Project

DES No: 1900138

Completed Date: JANUARY 10, 2022 INDOT EWPO Approval Date:



PREPARED BY: CRAWFORD, MURPHY & TILLY, INC. 8790 PURDUE ROAD INDIANAPOLIS, INDIANA 46268



PREPARED FOR:

INDIANA DEPARTMENT OF TRANSPORTATION FORT WAYNE DISTRICT OFFICE

Waters Report SR 3 and Waits Road in Noble County, Indiana Intersection Improvement DES No: 1900138 Prepared by: Claudia McAllister-Peterson Contact Information: cmcallister-peterson@cmtengr.com, 317-808-9466 Company: Crawford, Murphy & Tilly, Inc. Completed Date: January 10, 2022

PROJECT INFORMATION

Dates of Field Reconnaissance: June 23, 2021; August 6, 2021

Location:

Sections 4, 5, and 9, Township 34 North, Range 11 East Kendallville Indiana, Quadrangle Noble County, Indiana 41.425108 Latitude, -85.268119 Longitude

PROJECT DESCRIPTION

Per the U.S Geological Survey (USGS) Kendallville, Indiana Quadrangle Map, the investigated area is situated within Sections 4, 5, and 9, Township 34 North, and Range 11 East.

Proposed improvements include converting the project intersection of State Road 3 (SR 3) and Waits Road to a Closed Median Reduced Conflict Intersection (RCI). The approaches on Waits Road will be updated to right turn only movement. Vehicles wishing to travel through or turn left from Waits Road will be required to turn right onto SR 3 and then complete a U-turn movement. Vehicles wishing to turn left onto Waits Road from SR 3 will be required to complete a U-turn movement at the Median U-Turn (MUT) location. The spacing of the MUT along SR 3 will be 1,500 feet north of the existing intersection due to the existing curve on SR 3. The MUT will be unsignalized. Lighting at the MUT may need to be provided for adequate visibility at the intersection. There will not be a south MUT, instead vehicles will need to travel to the intersection of SR 3 and Main Street, which is located approximately 0.33 mile south of the SR 3 and Waits Road intersection.

Land use in the vicinity of the project is primarily residential and agricultural with small patches of forest.

The project has been programmed by INDOT as SR 3 and Waits Road Intersection Improvement, DES No: 1900138.

The investigated area was established using the anticipated project footprint to construct the proposed improvements. The location of the project within Noble County and the investigated area are shown on the attached mapping.

DESKTOP RECONNAISSANCE

SOILS

According to the Soil Survey Geographic (SSURGO) Database for Noble County, Indiana, the investigated area does contain soil areas with nationally listed hydric soils.

Map Abbreviation	Soil Name	NRCS Hydric Soil Category	Hydric Range		
BIA	Blount loam, interlobate moraines, 0 to 2 percent slopes	Predominantly Nonhydric	Hydric (1 to 32%)		
MrB2	Glynwood silt loam, 2 to 6 percent slopes, eroded	Predominantly Nonhydric	Hydric (1 to 32%)		
MsC3	Morley silty clay loam, 6 to 12 percent slopes, severely eroded	Nonhydric	Not Hydric (0%)		
Pe	Pewamo silty clay loam, 0 to 1 percent slopes	Predominantly Hydric	Hydric (66 to 99%)		
RbB	Rawson loam, 2 to 6 percent slopes	Predominantly Nonhydric	Hydric (1 to 32%)		
RdB2	Rawson, Morley, and Miami loams, 2 to 6 percent slopes, eroded	Predominantly Nonhydric	Hydric (1 to 32%)		

NATIONAL WETLAND INVENTORY (NWI) INFORMATION

There is one (1) NWI feature identified within the investigated area. There are four (4) NWI features, including one (1) freshwater forested/shrub wetland, two (2) freshwater ponds, and one (1) freshwater emergent wetland, identified near the investigated area.

Wetland Type	Location			
Riverine (R4SBC)	Within the south leg of the investigated area			
Freshwater Forested/Shrub Wetland (PFO1/EM1C)	0.01 mile east of the investigated area			
Freshwater Pond (PUBGx)	0.01 mile west of the investigated area			
Freshwater Pond (PUBGx)	0.01 mile southwest of the investigated area			
Freshwater Emergent Wetland (PEM1A)	0.02 mile west of the investigated area			

12 DIGIT HUC

040500011504 – Waterhouse Ditch-Henderson Lake Ditch

USGS NATIONAL HYDROGRAPHY DATASET (NHD)

According to the USGS National Hydrography Dataset (NHD layer), three (3) stream flowlines, two (2) ditch flowlines, and one (1) connector flowline are identified within the investigated area.

One (1) stream (corresponding to unnamed tributary (UNT) 1 to Bixler Lake Ditch) located east of SR 3 at Waits Road, eventually flows southeast to the St. Joseph River. Two (2) mapped stream flowlines located within the southern leg of the investigated area, were identified as UNT 2 to Bixler Lake Ditch, which eventually flows southeast to the St. Joseph River. Two (2) mapped ditch flowlines located along the west side of SR 3, north of Waits Road, were identified as a wetland (Wetland D) and stream (UNT 3 to Bixler Lake Ditch) during the on-site investigation. One (1) connector is located within the southern leg of the investigated area, connecting a stream from west to east underneath SR 3, which eventually drains to the St. Joseph River.

FEMA FLOOD INSURANCE RATE MAP (FIRM)

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the investigated area is not located within or adjacent to a floodplain.

ATTACHED DOCUMENTS

- Project Mapping (Project Location, Aerial, Topographic, NRCS Soils, NWI, USGS NHD, 12 Digit HUC, and Floodplain)
- Photographs with Photo Location Map
- Wetland Data Sheets

FIELD RECONNAISSANCE

Nine (9) wetlands, three (3) streams, and six (6) drainage swales were identified within the investigated area during the onsite investigation for the presence of wetlands and other Waters of the United States (WOTUS) by Crawford, Murphy and Tilly, Inc (CMT).

The investigation for wetlands was conducted in accordance with the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual and the August 2010 Midwest Regional Supplement (Version 2.0) Manual. Supporting materials used for identifying, delineating, and verifying wetlands included the soil survey report and hydric soil list for Noble County, the State of Indiana 2016 Wetland Plant List and indicator status for the Midwest Region, topography, USGS topo map, NWI map, and the Field Indicators for Hydric Soils of the United States V 8.1, 2017. The wetland boundaries were flagged and surveyed using a handheld GPS device with sub-foot accuracy.

Streams were evaluated according to the definition of a Water of the United States in 40 CFR 230.3(s). The attached WOTUS Map depicts the location of identified surface water resources, including the wetland and upland data point locations, on an aerial photograph. Routine Wetland Determination data forms are attached. Representative photographs are provided.

3

STREAMS

Three (3) streams were identified within the investigated area. A summary of the streams are provided in the table below. Photographs of the streams are attached within the WOTUS Photolog.

	Stream Summary Table										
Water Feature Name	WOTUS Photos	Lat/Long	OHWM Width (ft)	OHWM Depth (in)	USGS Blue- Line? Type?	Stream Type	Riffles? Pools?	Quality	Substrate	Likely Water of the U.S.?	Total Linear Feet within Investigated Area
UNT 1 to Bixler Lake Ditch	90-91	41.425146°N -85.268653°W	2	2	No	Ephemeral	No	Poor	silt, sand	Yes	28
UNT 2 to Bixler Lake Ditch	52-54	41.424641°N -85.268365°W	3.5	4	Yes, Intermittent	Intermittent	No	Poor	silt, sand	Yes	436
UNT 3 to Bixler Lake Ditch	41-44	41.425146°N -85.268653°W	1.75	4	No	Intermittent	No	Poor	silt, muck	Yes	331
	Total Linear Feet of Stream								795		

UNT 1 TO BIXLER LAKE DITCH

An unnamed tributary to Bixler Lake Ditch (UNT 1 to Bixler Lake Ditch), was located east of SR 3 and south of Waits Road at the outlet of an existing culvert underneath Waits Road that originates outside of the investigated area. UNT 1 to Bixler Lake Ditch flows generally south through an open channel for 28 linear feet within the investigated area. The drainage area upstream of the investigated area is estimated to be 0.06 square miles. Although UNT 1 to Bixler Lake Ditch is not mapped on the USGS topographic quadrangle as a 'blue-line' feature, it exhibits connectivity to UNT 2 to Bixler Lake Ditch, a mapped intermittent 'blue-line' feature. UNT 1 to Bixler Lake Ditch flows through UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch to the Elkhart River, which is a tributary to the St. Joseph River. Based on the ultimate connection to the St. Joseph River, a Section 10 Traditional Navigable Water (TNW), UNT 1 to Bixler Lake Ditch is likely to fall under the jurisdiction of the USACE. The USACE will make the final determination of jurisdiction.

Within the investigated area, UNT 1 to Bixler Lake Ditch has ephemeral flow, and silt and sand substrate. This stream was visually observed on June 23, 2021 to have a low flow with a prior rain event occurring within the past 48 hours and the stream was determined to begin at the culvert outlet; therefore, it was determined to have ephemeral flow within the investigated area. The width of the ordinary high water mark (OHWM) ranges from 1-2 feet with an average width of 1.1 feet within the investigated area. The maximum depth of the OHWM is 2 inches within the

investigated area. This stream has no riffle/pool complexes within the investigated area. An oil sheen was visible on the surface of the water near the culvert outlet.

Based on an ephemeral flow regime, predominately silt and sand substrate, presence of oil sheen, 90% opacity, and stream channel modifications from the construction of SR 3 and Waits Road, UNT1 to Bixler Lake Ditch is a poor-quality stream.

UNT 2 TO BIXLER LAKE DITCH

An unnamed tributary to Bixler Lake Ditch (UNT 2 to Bixler Lake Ditch), was located south of Waits Road flowing west to east underneath SR 3. UNT 2 to Bixler Lake Ditch flows generally north through an open channel for 50 linear feet within the investigated area, then generally east through an existing culvert as an encapsulated stream underneath SR 3 for 258 linear feet, and then flows generally east through an open channel for 128 linear feet before exiting the investigated area. UNT 2 to Bixler Lake Ditch flows through the investigated area for a total of 436 linear feet. The drainage area upstream of the investigated area is estimated to be 0.62 square miles. UNT 2 to Bixler Lake Ditch is mapped on the USGS topographic quadrangle as an intermittent 'blue-line' feature. UNT 2 to Bixler Lake Ditch flows through Bixler Lake Ditch to Henderson Lake Ditch to the Elkhart River, which is a tributary to the St. Joseph River. Based on the ultimate connection to the St. Joseph River, a Section 10 TNW, UNT 2 to Bixler Lake Ditch is likely to fall under the jurisdiction of the USACE. The USACE will make the final determination of jurisdiction.

Within the investigated area, UNT 2 to Bixler Lake Ditch has intermittent flow, and silt and sand substrate. This stream was visually observed on August 6, 2021 to be flowing without any prior rain events within 48 hours; therefore, it was determined to have intermittent flow within the investigated area. The width of the OHWM ranges from 2.2-3.5 feet with an average width of 2.3 feet within the investigated area. The maximum depth of the OHWM is 4 inches within the investigated area. This stream has no riffle/pool complexes within the investigated area.

Based on predominately silt and sand substrate, 90% opacity, and stream channel modifications from the construction of SR 3 and Waits Road, UNT2 to Bixler Lake Ditch is a poor-quality stream.

UNT 3 TO BIXLER LAKE DITCH

An unnamed tributary to Bixler Lake Ditch (UNT 3 to Bixler Lake Ditch), was located west of SR 3 flowing north to south underneath Waits Road. UNT 3 to Bixler Lake Ditch flows generally south within the investigated area through an open channel for 159 linear feet, then generally south through an existing culvert as an encapsulated stream underneath Waits Road for 83 *69 linear feet, and then generally south through an open channel again for 89 linear feet. UNT 3 to Bixler Lake Ditch flows through the investigated area for a total of 331 linear feet. The drainage area upstream of the investigated area is estimated to be 0.02 square miles. Although UNT 3 to Bixler Lake Ditch is not mapped on the USGS topographic quadrangle as a 'blue-line' feature, it exhibits connectivity to UNT 2 to Bixler Lake Ditch, a mapped perennial 'blue-line' feature. UNT 3 to Bixler Lake Ditch flows through UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch to the Elkhart River, which is a tributary to the St. Joseph River. Based

*Survey came back with the exact length of the existing culvert, which is 69 feet.

on the ultimate connection to the St. Joseph River, a Section 10 TNW, UNT 3 to Bixler Lake Ditch is likely to fall under the jurisdiction of the USACE. The USACE will make the final determination of jurisdiction.

Within the investigated area, UNT 3 to Bixler Lake Ditch has intermittent flow and silt and muck substrate. This stream was visually observed on August 6, 2021 to be flowing without any prior rain events within 48 hours; therefore, it was determined to have intermittent flow within the investigated area. The width of the OHWM ranges from 1.0-2.4 feet with an average width of 1.75 feet within the investigated area. The maximum depth of the OHWM is 4 inches within the investigated area. This stream has no riffle/pool complexes within the investigated area.

Based on predominately silt and muck substrate, 80% opacity, and stream channel modifications from the construction of SR 3 and Waits Road, UNT3 to Bixler Lake Ditch is a poor-quality stream.

WETLANDS

Nine (9) wetlands were identified in the investigated area. A summary of the data points and the wetlands are provided in the tables below. Details on the soil, hydrology and dominant vegetation for the wetlands are provided on the attached Routine Wetland Determination data forms. Photographs of the wetlands are attached within the WOTUS Photolog.

Data Point Summary Table								
Data Point	Vegetation	Soils	Hydrology	Wetland				
A1	Yes	Yes	Yes	Yes				
A2	No	No	No	No				
B1	Yes	Yes	Yes	Yes				
B2	No	No	No	No				
C1	Yes	Yes	Yes	Yes				
C2	No	No	No	No				
D1	Yes	Yes	Yes	Yes				
D2	No	No	No	No				
E1	Yes	Yes	Yes	Yes				
E2	No	No	No	No				
F1	Yes	Yes	Yes	Yes				
F2	No	No	No	No				
G1	Yes	Yes	Yes	Yes				
G2	No	No	No	No				
H1	Yes	Yes	Yes	Yes				
H2	No	No	No	No				
1	Yes	Yes	Yes	Yes				
12	No	No	No	No				

Wetland Summary Table									
Wetland Name	WOTUS Photos	Lat/Long	Туре	Quality	Likely Water of the U.S.?	lsolated Wetland Class	Exempt Isolated Wetland?	Length (LF)	Total Area within Investigated Area (acres)
Wetland A	1-9	41.425391°N -85.267768°W	Palustrine Emergent (PEM1)	Poor	Yes	NA	NA	836	0.530
Wetland B	15-20	41.428177°N -85.271537°W	PEM1	Poor	Yes	NA	NA	184	0.017
Wetland C	24-29	41.428459°N -85.272069°W	PEM1	Poor	Yes	NA	NA	41	0.002
Wetland D	32-38	41.428065°N -85.272393°W	PEM1	Poor	Yes	NA	NA	1510	0.343
Wetland E	45-49	41.424749°N -85.268425°W	PEM1	Poor	Yes	NA	NA	18	0.003
Wetland F	58-62	41.423319°N -85.267414°W	PEM1	Poor	Yes	NA	NA	565	0.071
Wetland G	65-69	41.423296°N -85.266512°W	PEM1	Poor	Yes	NA	NA	247	0.044
Wetland H	73-77	41.424216°N -85.267047°W	PEM1	Poor	Yes	NA	NA	23	0.002
Wetland I	82-87	41.425028°N 85.267489°W	PEM1	Poor	Yes	NA	NA	275	0.078
		1	1	1	1	, ,	Total Acres o	f Wetlands	1.090

WETLAND A

Wetland A is a 0.530-acre, palustrine emergent persistent (PEM1) wetland located in a depression to the northeast of the intersection of SR 3 and Waits Road. This wetland extends beyond the investigated area. This wetland drains south into an existing culvert underneath Waits Road, which drained to Wetland I to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT A1

The vegetation was dominated by tall scouring-rush (*Equisetum hyemale*, FACW, 20%), hybrid cattail (Typha x glauca, OBL, 15%), reed canary grass (Phalaris arundinacea, FACW, 15%), field horsetail (Equisetum arvense, FAC, 10%), dark-green bulrush (Scirpus atrovirens, OBL, 10%), lamp rush (Juncus effusus, OBL, 10%), and soft-stem club-rush (Schoenoplectus tabemaemontani, OBL, 10%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 4 inches deep, the soil matrix had a color of 10YR 3/2 with 10% redox features with a color of 10YR 5/6. From 4 inches deep to 18 inches deep, the soil matrix had a color of 10YR 5/2 with 15% redox features with a color of 10YR 4/6. The soil at this site was loamy/clayey and met the depleted below dark surface, depleted matrix, and redox dark surface hydric soil indicators. Wetland A exhibited three primary hydrology indicators including 0.25 inches of surface water, a high water table at a depth of 9 inches, and saturation to the surface. Wetland A also exhibited two secondary wetland hydrology indicators including drainage patterns and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology were met at this data point; therefore, data point A1 is within a wetland. Some wetland vegetation had been sprayed with herbicide. Based on hydrology and vegetation modifications from the construction of SR 3 and Waits Road and the dominance of invasive species, Wetland A is a poor-quality wetland.

UPLAND DATA POINT A2

Upland point A2 was taken on a hillslope near Wetland A, to determine the boundary of Wetland A. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point A2 is not within a wetland. The boundary of Wetland A was determined by the presence of hydrophytic plants and hydrology indicators. The shape of Wetland A was defined by a depression and the presence of hydrophytic vegetation.

WETLAND B

Wetland B is a 0.017-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the east of SR 3 and north of Waits Road. This wetland drains south through a drainage swale to Wetland A to Wetland I to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT B1

The vegetation was dominated by lesser poverty rush (*Juncus tenuis*, FAC, 30%) and hybrid cattail (*Typha x glauca*, OBL, 25%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 8 inches deep, the soil matrix had a color of 10YR 4/1 with 25% redox features with a color of 10YR 4/6 and 5% redox features with a color of 2.5YR 2.5/1. From 8 inches deep to 18 inches deep, the soil matrix had a color of 10YR 6/1 with 20% redox features with a color of 10YR 5/6. The soil at this site was loamy/clayey and met the depleted matrix hydric soil indicator. Wetland B exhibited three primary hydrology indicators including 0.5 inches of surface water, a high water table at a depth of 11 inches, and saturation to the surface. Wetland B also exhibited three secondary wetland hydrology indicators including drainage patterns, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology were met at this data point; therefore, data point B1 is within a wetland. Most wetland vegetation had been sprayed with herbicide. Based on hydrology and vegetation modifications from the construction of SR 3, mown grass buffer, low species diversity, and the dominance of invasive species, Wetland B is a poor-quality wetland.

UPLAND DATA POINT B2

Upland point B2 was taken on a hillslope near Wetland B, to determine the boundary of Wetland B. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point B2 is not within a wetland. The boundary of Wetland B was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland B was defined by a depression and the presence of hydrophytic vegetation.

WETLAND C

Wetland C is a 0.002-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the east of SR 3 and north of Waits Road. This wetland drains south through a drainage swale into Wetland B which drains through a drainage swale to Wetland A to Wetland I UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to the Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT C1

The vegetation was dominated by dark-green bulrush (*Scirpus atrovirens*, OBL, 30%) and Torrey's rush (*Juncus torreyi*, FACW, 20%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 4 inches deep, the soil matrix had a color of 10YR 4/3. From 4 inches deep to 18 inches deep, the soil matrix had a color of 10YR 3/2 with 10% redox features with a color of 10YR 5/6. The soil at this site was loamy/clayey and met the redox dark surface hydric soil indicator. Wetland C exhibited one primary hydrology indicator of sparsely vegetated concave surface. Wetland C also exhibited four secondary wetland hydrology indicators including, drainage patterns, surface soil cracks, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology were met at this data point; therefore, data point C1 is within a wetland. Based on hydrology modifications from the construction of SR 3, mown grass buffer, and low species diversity, Wetland C is a poor-quality wetland.

UPLAND DATA POINT C2

Upland point C2 was taken on a hillslope near Wetland C, to determine the boundary of Wetland C. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point C2 is not within a wetland. The boundary of Wetland C was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland C was defined by a depression and the presence of hydrophytic vegetation.

WETLAND D

Wetland D is a 0.343-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the west of SR 3 and north of Waits Road, abutting UNT 3 to Bixler Lake Ditch. This wetland drains south to UNT 3 to Bixler Lake Ditch to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT D1

The vegetation was dominated by lesser poverty rush (*Juncus tenuis*, FAC, 60%) and common fox sedge (*Carex vulpinoidea*, FACW, 25%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 3 inches deep, the soil matrix had a color of 10YR 4/1 with 15% redox features with a color of 10YR 5/8. From 3 inches deep to 18 inches deep, the soil matrix had a color of 10YR 5/8. From 3 inches deep to 18 inches deep, the soil at this site was loamy/clayey and met the hydric soil indicators of depleted matrix and hydrogen sulfide. Wetland D exhibited seven primary hydrology indicators including 2 inches of surface water, saturation to the surface, agal crust, sparsely vegetation concave surface, aquatic fauna, hydrogen sulfide odor, and thin muck surface. Wetland D also exhibited four secondary wetland hydrology indicators including drainage patterns, crayfish burrows, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology modifications from the construction of SR 3, mown grass buffer, and low species diversity, Wetland D is a poor-quality wetland.

UPLAND DATA POINT D2

Upland point D2 was taken on a hillslope near Wetland D, to determine the boundary of Wetland D. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point D2 is not within a wetland. The boundary of Wetland D was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland D was defined by a depression and the presence of hydrophytic vegetation.

WETLAND E

Wetland E is a 0.003-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the southwest of the intersection of SR 3 and Waits Rd, abutting UNT 3 to Bixler Lake Ditch. This wetland drains south to UNT 3 to Bixler Lake Ditch to UNT 2 to Bixler Lake Ditch Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT E1

The vegetation was dominated by spotted touch-me-not (*Impatiens capensis*, FACW, 30%), reed canary grass (*Phalaris arundinacea*, FACW, 15%), and rice cut grass (*Leersia oryzoides*, OBL, 15%) in the herbaceous layer and dominated by gray dogwood (*Cornus racemosa*, FAC, 10%) in the sapling/shrub layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 18 inches deep, the soil matrix had a color of 10YR 3/1 with 10% redox features with a color of 10YR 5/8 and 10% redox features with a gley color of N 5/. The soil at this site was loamy/clayey and met the hydric soil indicators of redox dark surface and hydrogen sulfide. Wetland E exhibited four primary hydrology indicators including 0.5 inches of surface water, a high water table at a depth of 18 inches, saturation to the surface, and hydrogen sulfide odor. Wetland E also exhibited three secondary wetland hydrology indicators including drainage patterns, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology modifications from the construction of SR 3 and Waits Road, low species diversity, and the dominance of invasive species, Wetland E is a poor-quality wetland.

Data point E1 is identified on the NWI map as a riverine (R4SBC) wetland. Wetland E abuts UNT 3 to Bixler Lake Ditch, but is not contained within the channel. While data point E1 is located within a wetland, Wetland E is a Freshwater Emergent Wetland (PEM1A) wetland rather than a riverine wetland.

UPLAND DATA POINT E2

Upland point E2 was taken on a hillslope near Wetland E, to determine the boundary of Wetland E. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil

indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point E2 is not within a wetland. The boundary of Wetland E was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland E was defined by a depression and the presence of hydrophytic vegetation.

WETLAND F

Wetland F is a 0.071-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the west of SR 3 and south of Waits Road. This wetland drains north through a drainage swale to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT F1

The vegetation was dominated by hybrid cattail (*Typha x glauca*, OBL, 30%), dark-green bulrush (*Scirpus atrovirens*, OBL, 30%), chufa (*Cyperus esculentus*, FACW, 20%) and rufous bulrush (*Scirpus pendulus*, OBL, 20%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 8 inches deep, the soil matrix had a color of 10YR 3/1 with 10% redox features with a color of 10YR 5/6. From 8 inches deep to 18 inches deep, the soil matrix had a color of 10YR 6/3 at 30% with 10% redox features with a color of 10YR 5/6. The soil at this site was loamy/clayey and met the redox dark surface hydric soil indicator. Wetland F exhibited one primary hydrology indicator of saturation to the surface. Wetland F also exhibited five secondary wetland hydrology indicators including drainage patterns, surface soil cracks, crayfish burrows, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology modifications from the construction of SR 3, mown grass buffer, low species diversity, and the dominance of invasive species, Wetland F is a poor-quality wetland.

UPLAND DATA POINT F2

Upland point F2 was taken on a hillslope near Wetland F, to determine the boundary of Wetland F. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point F2 is not within a wetland. The boundary of Wetland F was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland F was defined by a depression and the presence of hydrophytic vegetation.

WETLAND G

Wetland G is a 0.044-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the east of SR 3 and south of Waits Road. This wetland drains north through a

drainage swale to Wetland H, through another drainage swale to Wetland I, to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT G1

The vegetation was dominated by hybrid cattail (*Typha x glauca*, OBL, 45%) and chufa (*Cyperus esculentus*, FACW, 25%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 18 inches deep, the soil matrix had a color of 10YR 3/2 with 10% redox features with a color of 10YR 5/8. The soil at this site was loamy/clayey and met the redox dark surface hydric soil indicator. Wetland G exhibited no primary hydrology indicators. Wetland G exhibited five secondary wetland hydrology indicators including surface soil cracks, crayfish burrows, drainage patterns, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology were met at this data point; therefore, data point G1 is within a wetland. Based on hydrology modifications from the construction of SR 3, mown grass buffer, low species diversity, and the dominance of invasive species, Wetland G is a poor-quality wetland.

UPLAND DATA POINT G2

Upland point G2 was taken on a hillslope near Wetland G, to determine the boundary of Wetland G. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point G2 is not within a wetland. The boundary of Wetland G was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland G was defined by a depression and the presence of hydrophytic vegetation.

WETLAND H

Wetland H is a 0.002-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch to the east of SR 3 and south of Waits Road. This wetland drains north through a drainage swale to Wetland I to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT H1

The vegetation was dominated by cut-leaf water-horehound (*Lycopus americanus*, OBL, 30%), Torrey's rush (*Juncus torreyi*, FACW, 30%), and tall fescue (*Festuca arundinacea*, FACU, 20%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 4 inches deep, the soil matrix had a color of 10YR 3/1. From 4 inches deep to 18 inches deep, the soil matrix had a color of 10YR 6/2 with 20% redox features with a color of 10YR 5/6. The soil at this site was mostly sandy and met the

sandy redox and depleted below dark surface hydric soil indicators. Wetland H exhibited no primary hydrology indicators. Wetland H exhibited two secondary wetland hydrology indicators of drainage patterns and geomorphic position. All three wetland criteria including, vegetation, soils, and hydrology were met at this data point; therefore, data point H1 is within a wetland. Based on hydrology modifications from the construction of SR 3, mown grass buffer, and low species diversity, Wetland H is a poor-quality wetland.

UPLAND DATA POINT H₂

Upland point H2 was taken on a hillslope near Wetland H, to determine the boundary of Wetland H. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point H2 is not within a wetland. The boundary of Wetland H was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland H was defined by a depression and the presence of hydrophytic vegetation.

WETLAND I

Wetland I is a 0.078-acre, palustrine emergent persistent (PEM1) wetland located within a roadside ditch abutting UNT 2 to Bixler Lake Ditch to the southeast of the intersection of SR 3 and Waits Road. This wetland drains to UNT 2 to Bixler Lake Ditch to Bixler Lake Ditch to Henderson Lake Ditch, which is a tributary to the St Joseph River, a Section 10 TNW. Based on the connection to a downstream TNW, this wetland is likely federally jurisdictional.

WETLAND DATA POINT I1

The vegetation was dominated by reed canary grass (*Phalaris arundinacea*, FACW, 45%) and hybrid cattail (*Typha x glauca*, OBL, 30%) in the herbaceous layer. The vegetative community had a dominance test of >50%; therefore, the vegetation is hydrophytic. From the surface to 18 inches deep, the soil matrix had a color of 10YR 3/2 with 15% redox features with a color of 7.5YR 4/6. The soil at this site was loamy/clayey and met the redox dark surface hydric soil indicator. Wetland I exhibited two primary hydrology indicators including 3 inches of surface water and saturation to 11 inches. Wetland I also exhibited four secondary wetland hydrology indicators including crayfish burrows, drainage patterns, geomorphic position, and a positive FAC-neutral test. All three wetland criteria including, vegetation, soils, and hydrology were met at this data point; therefore, data point I1 is within a wetland. Based on hydrology modifications from the construction of SR 3 and Waits Road, mown grass buffer, low species diversity, and the dominance of invasive species, Wetland I is a poor-quality wetland.

Data point I1 is identified on the NWI map as a riverine (R4SBC) wetland. Wetland I abuts UNT 2 to Bixler Lake Ditch, but is not contained within the channel. While data point I1 is located within a wetland, Wetland I is a Freshwater Emergent Wetland (PEM1A) wetland rather than a riverine wetland.

UPLAND DATA POINT I2

Upland point I2 was taken on a hillslope near Wetland I, to determine the boundary of Wetland I. The vegetation in this area failed to meet the requirements for the dominance test or the prevalence index and, therefore, is not hydrophytic. The soil profile failed to meet any hydric soil indicators. No wetland hydrology indicators were observed. None of the three wetland criteria were met; therefore, data point I2 is not within a wetland. The boundary of Wetland I was determined by geomorphic position, the presence of hydrophytic plants and hydrology indicators. The shape of Wetland I was defined by a depression and the presence of hydrophytic vegetation.

OPEN WATER

No open water areas were observed within the investigated area.

OTHER FEATURES

ROADSIDE DITCHES

No roadside ditches were observed within the investigated area.

DRAINAGE FEATURES WITHOUT OHWM

Six (6) drainage swales without an ordinary high water mark (OHWM) were located throughout the investigated area. These drainage swales were mostly vegetated. Minimal surface water, if any, was observed within the drainage swales. A grass-lined and concrete-lined drainage swale located along the east side of SR 3, north of Waits Road drains generally southeast for 462 linear feet within a grass-lined drainage swale and then 133 linear feet within a concrete-lined drainage swale within the investigated area, connecting Wetland B to Wetland C. A grass-lined drainage swale located along the east side of SR 3, north of Waits Road drains generally southeast for 21 linear feet within the investigated area, connecting Wetland C to Wetland B. A grass-lined and concrete-lined drainage swale located along the west side of SR 3, south of Waits Road drains generally north for 35 linear feet within a grass-lined drainage swale, 49 linear feet within a concrete-line drainage swale, and then 36 linear feet within a grass-lined drainage swale within the investigated area, connecting Wetland F to UNT 2 to Bixler Lake Ditch. A grass-lined drainage swale located along the east side of SR 3, south of Waits Road drains generally north for 122 linear feet within a grass-lined drainage swale within the investigated area, connecting Wetland G to Wetland H. A grass-lined drainage swale located along the east side of SR 3, south of Waits Road drains generally north for 117 linear feet within a grass-lined drainage swale within the investigated area, connecting Wetland H to Wetland I. A sediment-filled, concrete-lined drainage swale located along the south side of Waits Road, east of SR 3 drains generally west for 86 linear feet within a sediment-filled, concrete-lined drainage swale within the investigated area, draining into UNT 1 to Bixler Lake Ditch.

The drainage swales were man-made and created from the construction of SR 3 and Waits Road. These drainage swales are expected to contain water only during heavy rain events. All of the drainage swales ultimately drain into the St. Joseph River, a Section 10 TNW. Although

the drainage swales connect wetlands and drain into streams and could impact the chemical, physical and/or biological integrity of the TNW, they do not have an OHWM or bed and bank and do not transport relatively permanent flow; therefore, the drainage swales are likely not jurisdictional.

CONCLUSIONS

Three (3) streams, nine (9) wetlands, and six (6) non-jurisdictional drainage swales were identified within the investigated area. All of the wetlands, a total of nine (9) wetlands (1.09 acres) are likely Waters of the U.S.

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

ACKNOWLEDGEMENT

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

land Milling

Claudia McAllister-Peterson Ecological Engineer Crawford, Murphy & Tilly, Inc.

Date: January 10, 2022

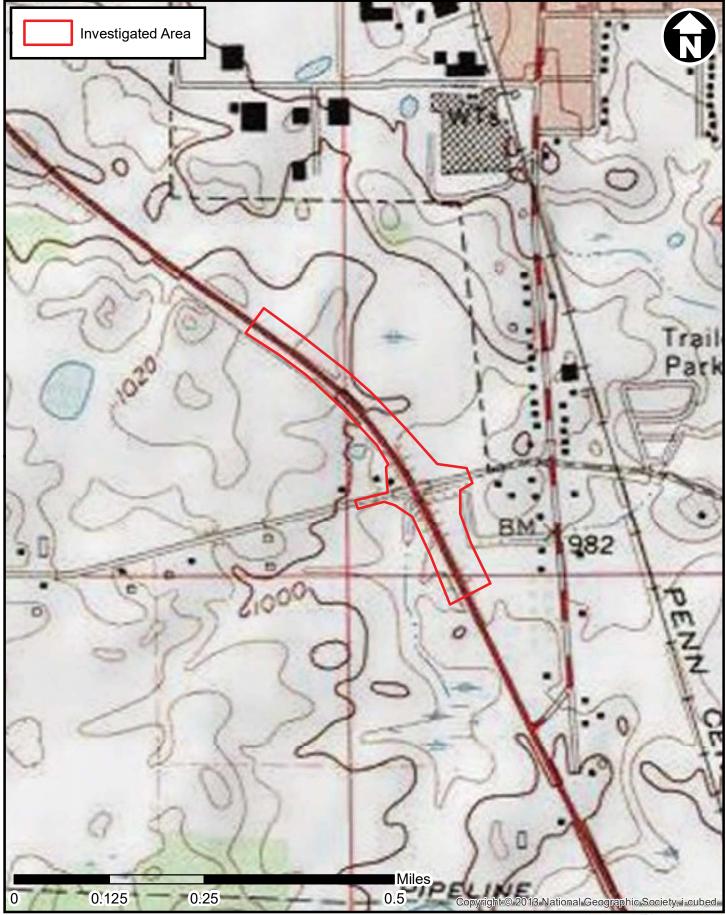
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Marion Wells - Reviewer Environmental Scientist Crawford, Murphy & Tilly, Inc.

Date: January 10, 2022

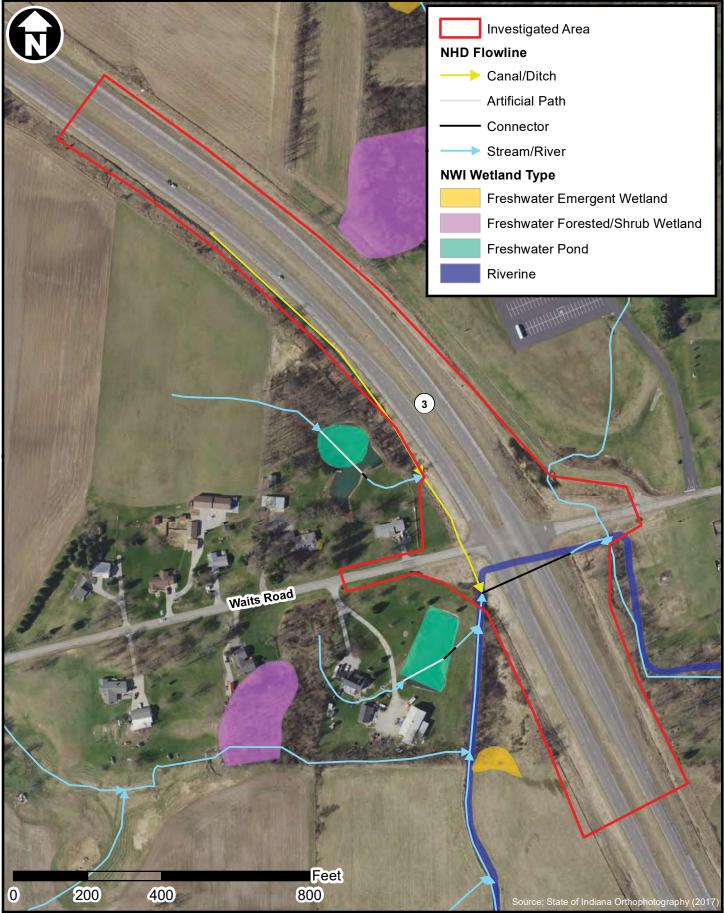
SUPPORTING DOCUMENTATION

- Maps
- Photos
- Wetland Delineation Data Sheets



SR 3 and Waits Road Intersection Improvement (Des No 1900138)

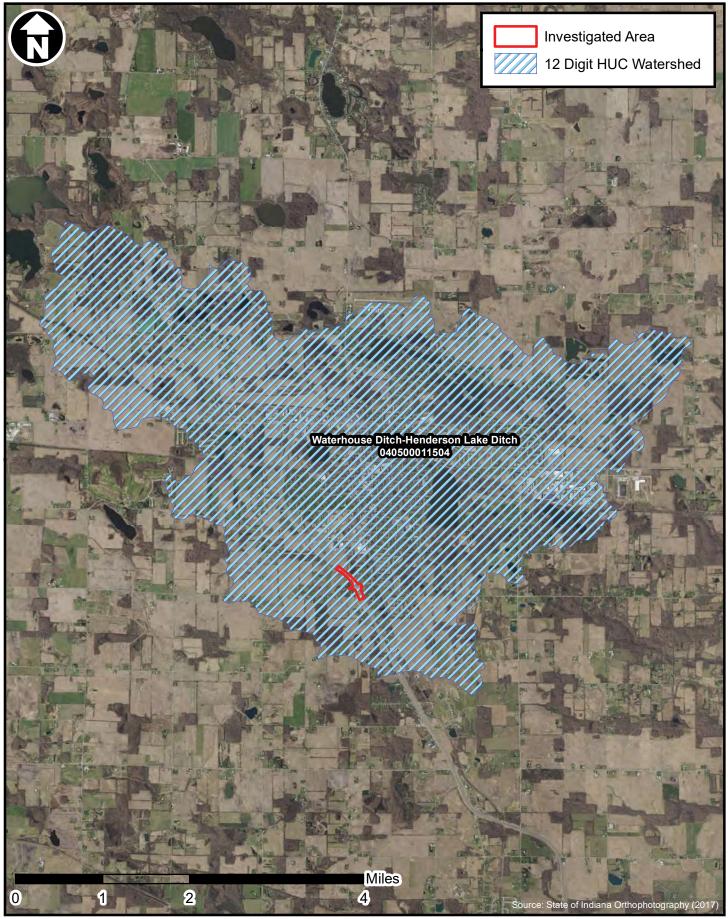




SR 3 and Waits Road Intersection Improvement (Des No 1900138) - Noble Co., IN

National Wetland Inventory (NWI) and National Hydrography Dataset (NHD) Map F-20





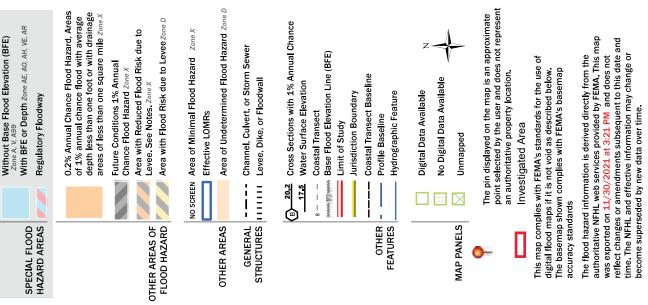
SR 3 and Waits Road Intersection Improvement (Des No 1900138) - Noble Co., IN 12 Digit Hydrologic Unit Code (HUC) Watershed Map

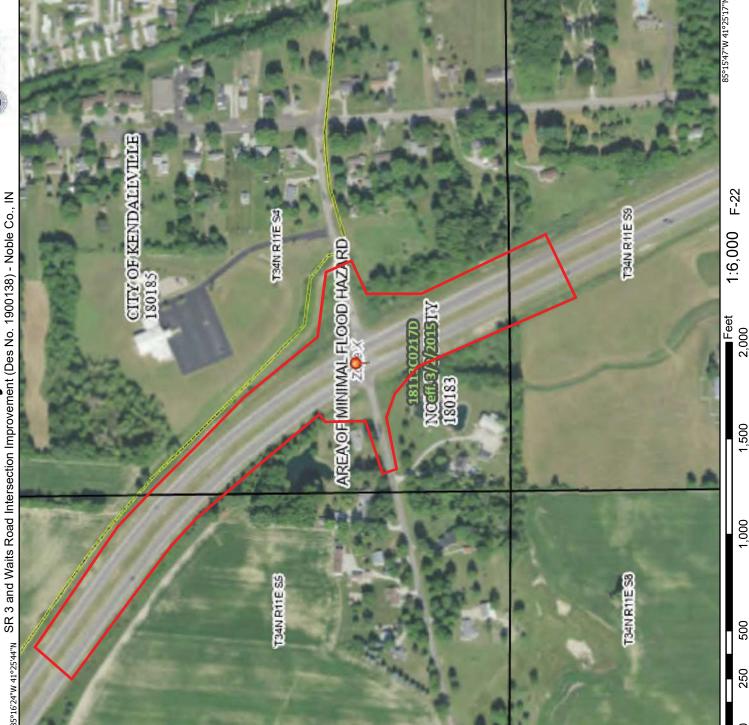


National Flood Hazard Layer FIRMette





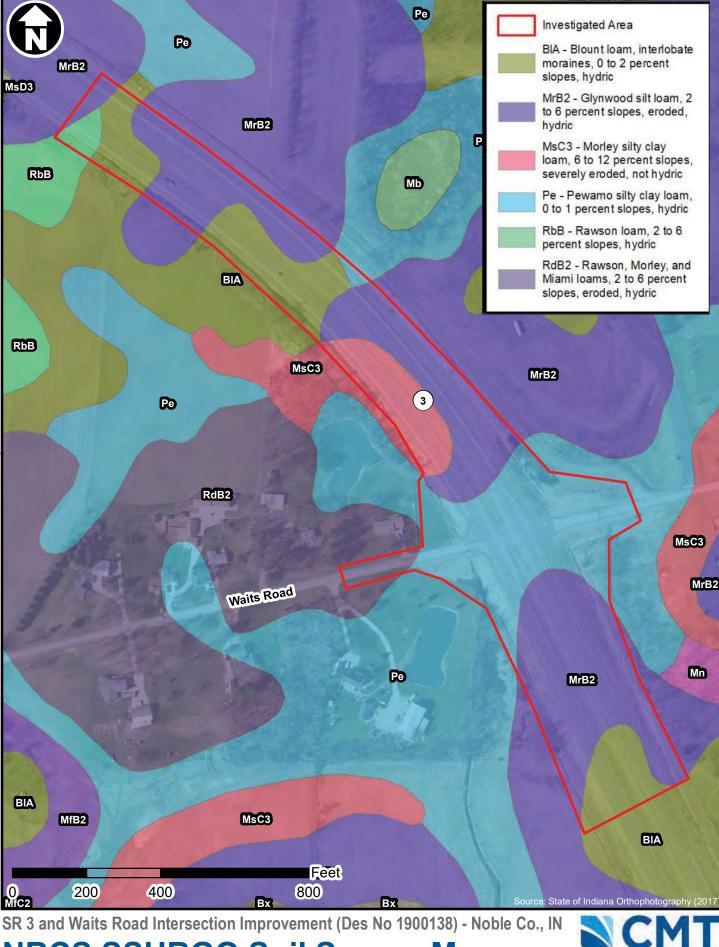




2,000 `` Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

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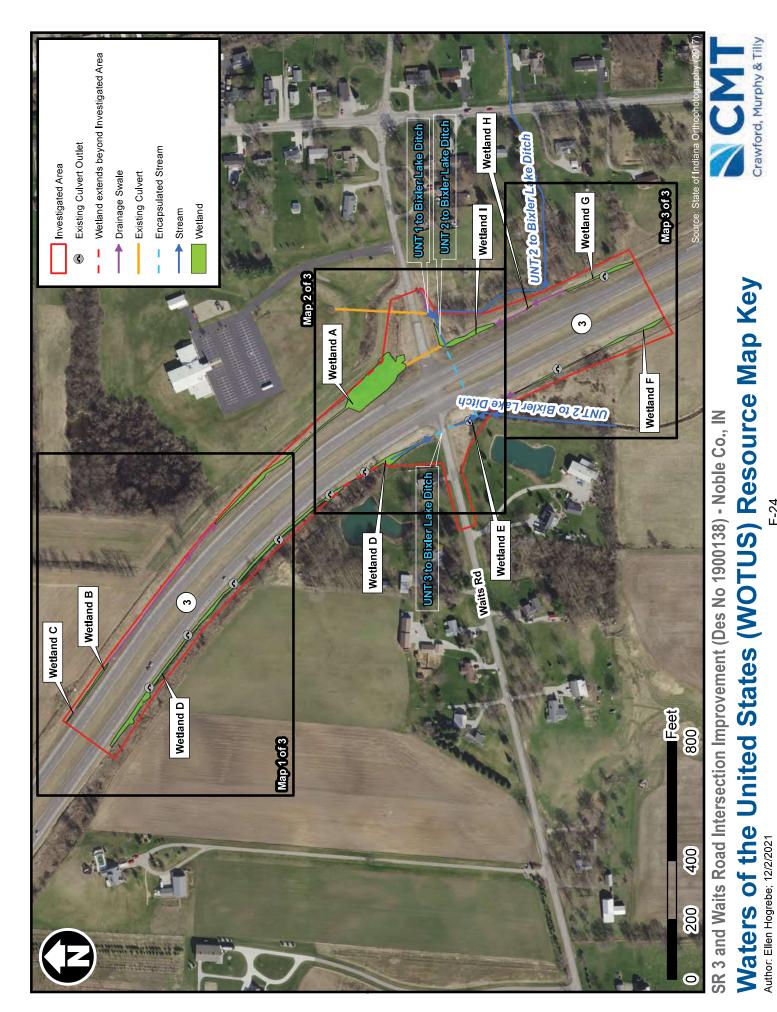
legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes. elements do not appear: basemap imagery, flood zone labels,

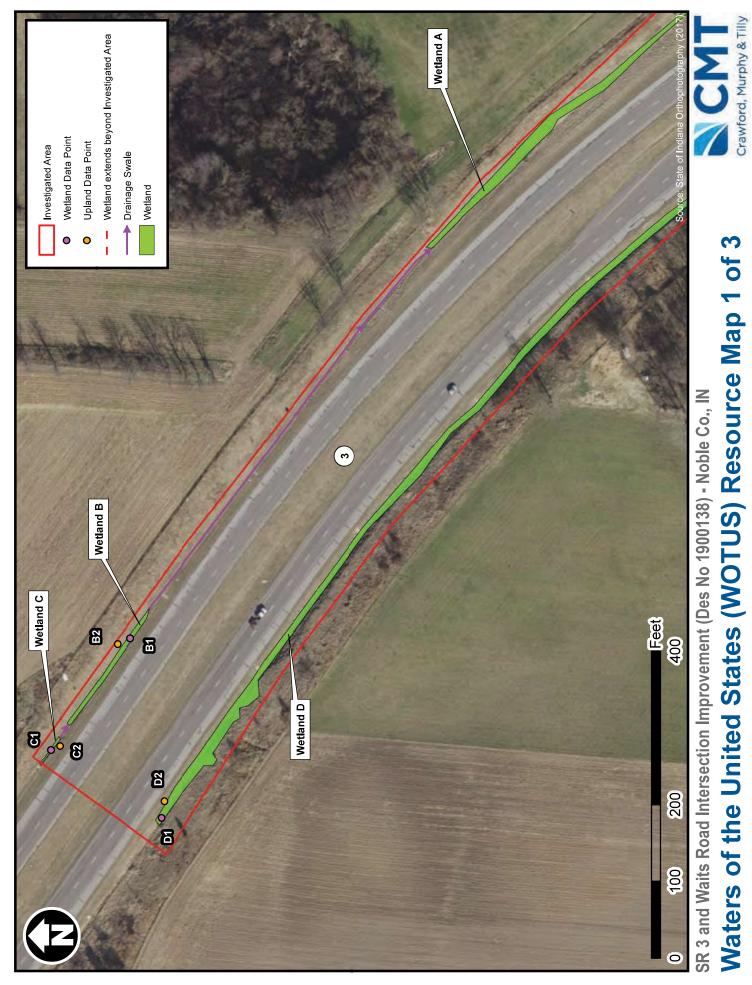


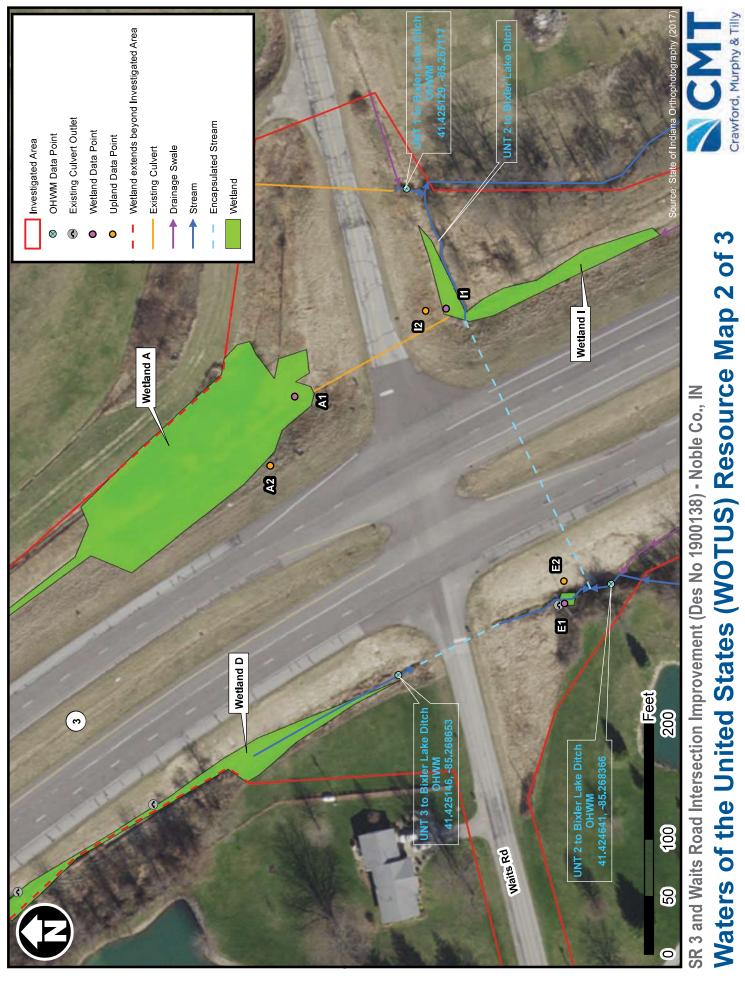
NRCS SSURGO Soil Survey Map

Author: Claudia McAllister-Peterson, 11/30/2021

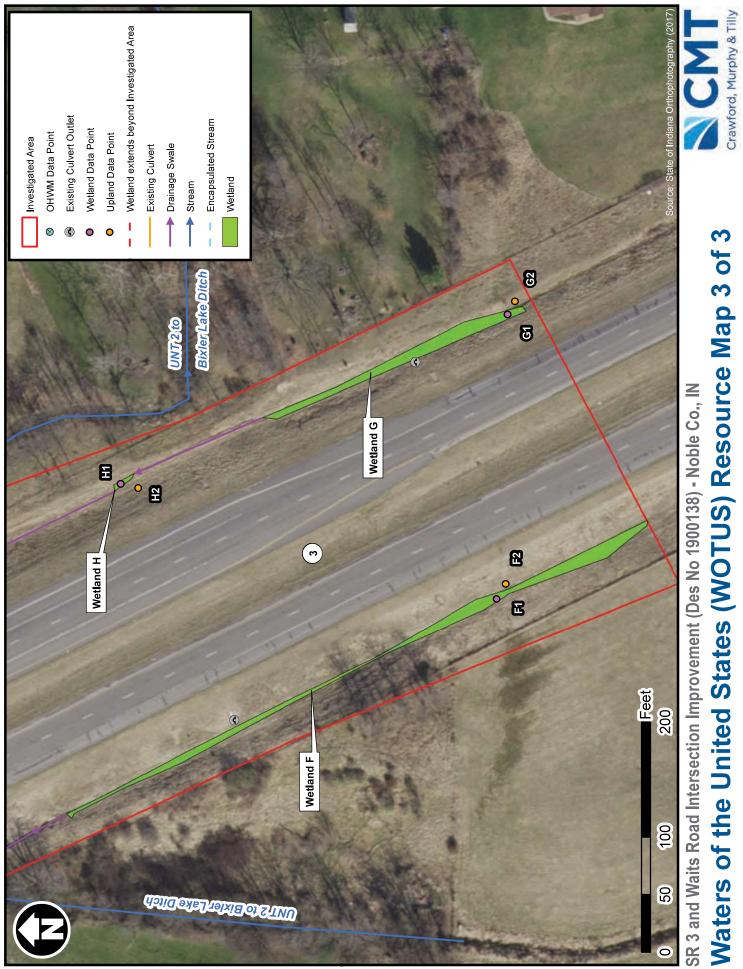
Crawford, Murphy & Tilly



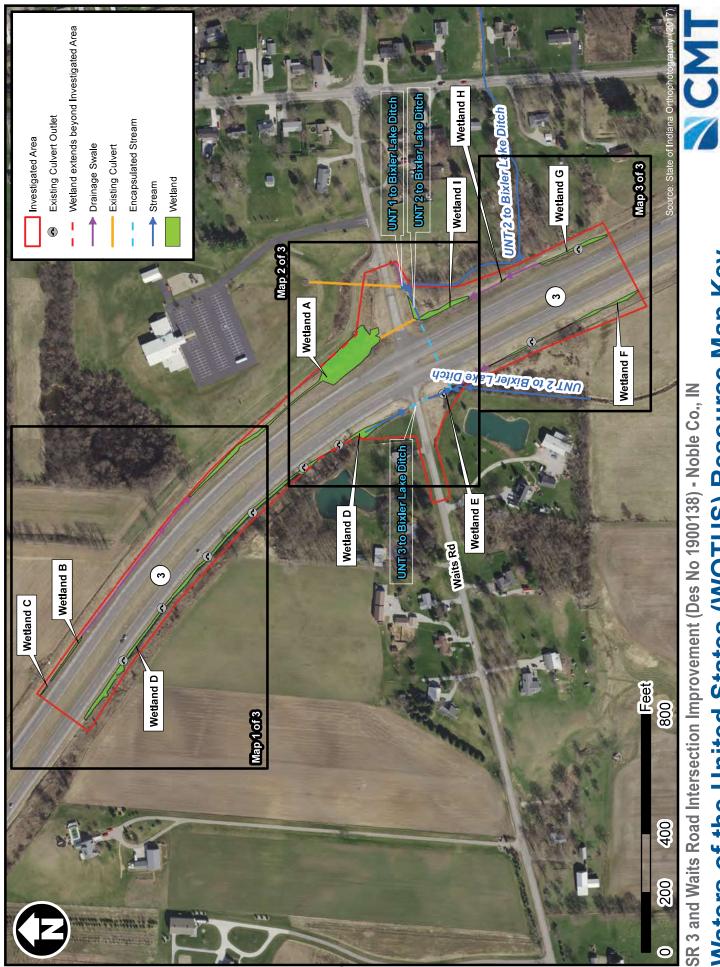




Author: Ellen Hogrebe; 12/2/2021



Author: Ellen Hogrebe; 12/2/2021

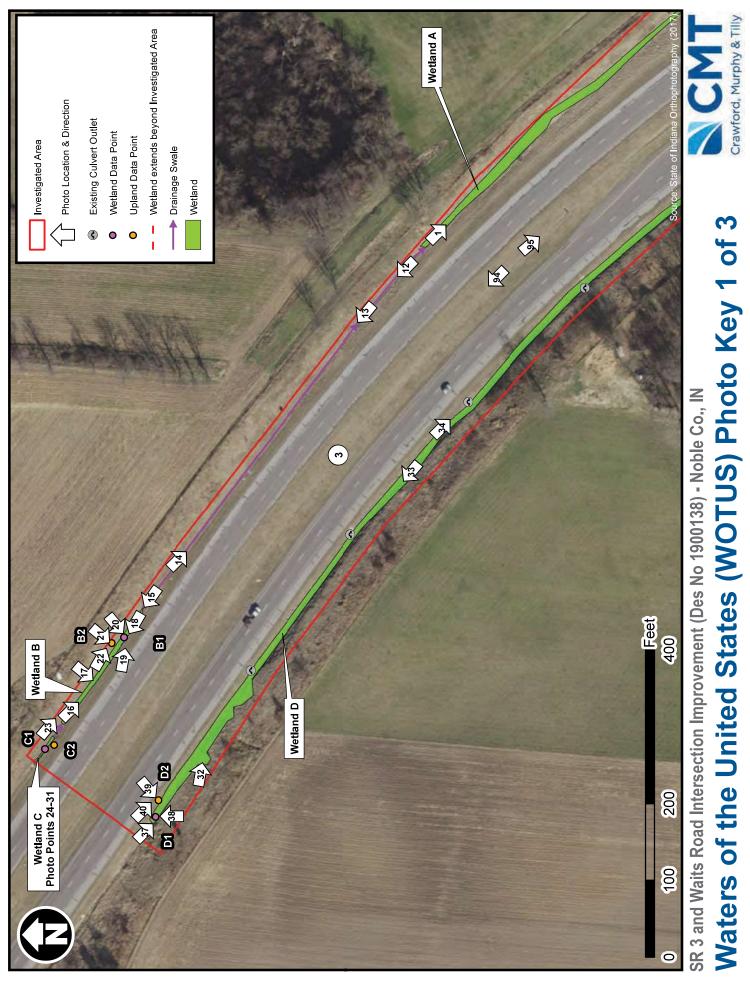


Waters of the United States (WOTUS) Resource Map Key

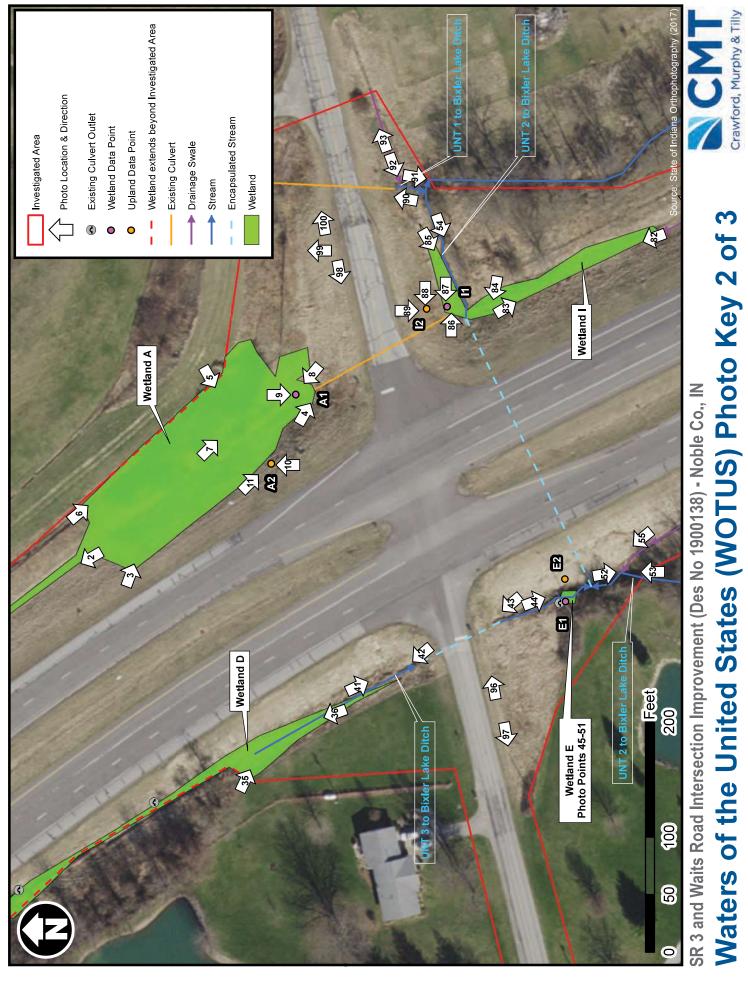
Author: Ellen Hogrebe; 12/2/2021

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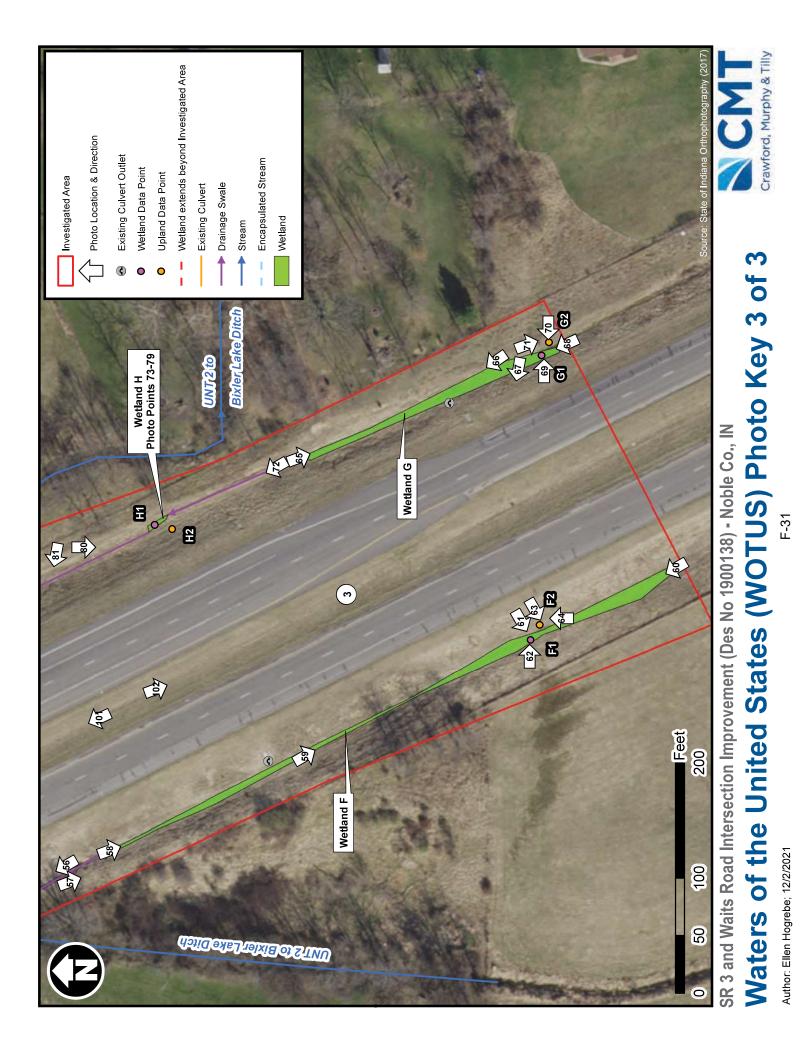
Crawford, Murphy & Tilly



Author: Ellen Hogrebe; 12/2/2021



Author: Ellen Hogrebe; 12/2/2021







1. View of Wetland A, located in a depression to the northeast of the SR 3 and Waits Road intersection, looking southeast. 6/23/2021



2. View of Wetland A and surrounding terrain, looking northwest. 6/23/2021



3. View of Wetland A and surrounding terrain, looking southeast. 6/23/2021



4. View of Wetland A and drainage culvert inlet under Waits Road, looking southeast. 6/23/2021





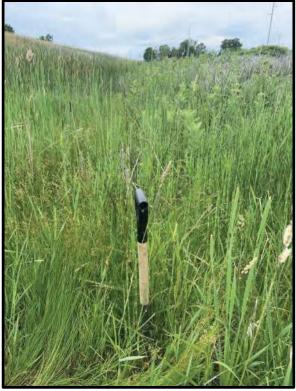
5. View of Wetland A looking southwest. 6/23/2021



6. View of Wetland A looking southeast. 6/23/2021



7. View from within Wetland A looking out towards surrounding terrain, looking southeast. 6/23/2021



8. View of Wetland A, with shovel located at wetland datapoint A1, looking northwest. A1 passed the dominance test for hydrophytic vegetation. 6/23/2021





9. Wetland data point A1 and close-up of hydric features. 6/23/2021



10. Upland data point A2. No indicators of hydric soils were present. 6/23/2021



11. View of upland area near upland data point A2, looking southeast. 6/23/2021



12. View of concrete-lined drainage swale located northeast of SR 3 between Wetland A and Wetland B, looking northwest. 6/23/2021





13. View of grass-lined drainage swale transitioning to concrete-lined drainage swale located northeast of SR
 3 between Wetland A and Wetland B, looking northwest. 6/23/2021



14. View of grass-lined drainage swale located northeast of SR 3 between Wetland A and Wetland B, looking southeast. 6/23/2021.



15. View of Wetland B, located in a depression northeast of SR 3, looking northwest. 6/23/2021



16. View of Wetland B and surrounding terrain, looking southeast. 6/23/2021





17. View of Wetland B, looking southwest. 6/23/2021



18. View from within Wetland B looking out towards surrounding terrain, looking northwest. 6/23/2021



 View of Wetland B, with shovel located at wetland datapoint B1, looking southeast. B1 passed the dominance test for hydrophytic vegetation. 6/23/2021



20. Wetland data point B1 and close-up of hydric features. 6/23/2021





21. Upland data point B2. No indicators of hydric soils were present. 6/23/2021



22. View of upland area near upland data point B2, looking southeast. 6/23/2021



23. View of partially vegetated drainage swale between Wetland B and Wetland C, looking southeast. 6/23/2021



24. View of Wetland C, located in a depression northeast of the SR 3, looking northwest. 6/23/2021





25. View of Wetland C and surrounding terrain, looking northwest. 6/23/2021



26. View of Wetland C, looking southeast. 6/23/2021



27. View from within Wetland C looking out towards surrounding terrain, looking south. 6/23/2021



 View of Wetland C, with shovel located at wetland datapoint C1, looking southeast. C1 passed the dominance test for hydrophytic vegetation. 8/4/2021





29. Wetland data point C1 and close-up of hydric features. 8/4/2021



30. Upland data point C2. No indicators of hydric soils were present. 8/4/2021



31. View of upland area near upland data point C2, looking southeast. 8/4/2021



32. View of Wetland D, located in a depression southwest of SR 3, looking east. 8/4/2021





33. View of Wetland D and surrounding terrain, looking northwest. 8/4/2021



34. View of Wetland D, looking southeast. 8/4/2021



35. View of Wetland D, abutting UNT 3 to Bixler Lake Ditch, looking southeast. 8/4/2021



36. View from within Wetland D, abutting UNT 3 to Bixler Lake Ditch, looking out towards surrounding terrain, looking north. 8/4/2021





37. View of Wetland D, with shovel located at wetland datapoint D1, looking southeast. D1 passed the dominance test for hydrophytic vegetation. 8/4/2021



38. Wetland data point D1 and close-up of hydric features. 8/4/2021



39. Upland data point D2. No indicators of hydric soils were present. 8/4/2021



40. View of upland area near upland data point D2, looking southeast. 8/4/2021





41. View of UNT 3 to Bixler Lake Ditch, abutting Wetland D, looking southeast (downstream). Blue arrow signifies flow direction. 8/4/2021



42. View of UNT 3 to Bixler Lake Ditch from drainage culvert inlet under Waits Road, looking northwest (upstream). The OHWM in this area measured 1.75 feet wide and 4 inches deep. 8/4/2021

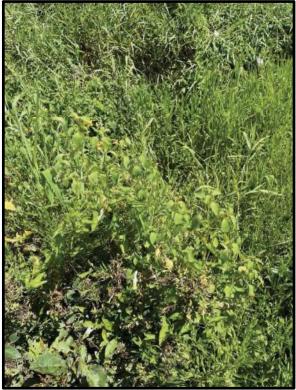


43. View of UNT 3 to Bixler Lake Ditch and drainage culvert outlet under Waits Road, looking northwest (upstream). 8/4/2021



44. View of UNT 3 to Bixler Lake Ditch, looking south (downstream). 8/4/2021

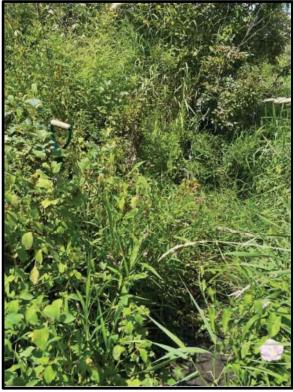




45. View of Wetland E, located in a depression west of the SR 3 and abutting UNT 3 to Bixler Lake Ditch, looking southeast. 8/4/2021



46. View of Wetland E, looking north. 8/4/2012



47. View of Wetland E, with shovel located at wetland datapoint E1, looking southwest. E1 passed the dominance test for hydrophytic vegetation. 8/4/2021



48. View from within Wetland E looking out towards surrounding terrain, looking northeast. 8/4/2021





49. Wetland data point E1 and close-up of hydric features. 8/4/2021



50. Upland data point E2. No indicators of hydric soils were present. 8/4/2021



51. View of upland area near upland data point E2, looking north. 8/4/2021



52. View of UNT 2 to Bixler Lake Ditch, west of SR 3, from drainage culvert inlet under SR 3, looking south (upstream). The OHWM in this area measured 3.5 feet wide and 4 inches deep. 8/4/2021





53. View of UNT 2 to Bixler Lake Ditch, west of SR 3, looking north (downstream). 8/4/2021



54. View of UNT 2 to Bixler Lake Ditch, east of SR 3, looking southwest (upstream). 6/23/2021



55. View of grass-lined drainage swale located west of SR 3 between Wetland F and UNT 2 to Bixler Lake Ditch, looking northwest. 8/4/2021



56. View of concrete-lined drainage swale located west of SR 3 between Wetland F and UNT 2 to Bixler Lake Ditch, looking northwest. 8/4/2021





57. View of grass-lined drainage swale transitioning to concrete-lined drainage swale located west of SR 3 between Wetland F and UNT 2 to Bixler Lake Ditch, looking southeast. 8/4/2021



58. View of Wetland F, located in a depression west of the SR 3 and south of Waits Road, looking southeast. \$8/4/2021



59. View from within Wetland F looking out towards surrounding terrain, looking southeast. 8/4/2021



60. View of Wetland F and surrounding terrain, looking northwest. 8/4/2021





61. View of Wetland F, with shovel located at wetland datapoint F1, looking southwest. F1 passed the dominance test for hydrophytic vegetation. 8/4/2021



62. Wetland data point F1 and close-up of hydric features. 8/4/2021



63. Upland data point F2. No indicators of hydric soils were present. 8/4/2021



64. View of upland area near upland data point F2, looking north. 8/4/2021

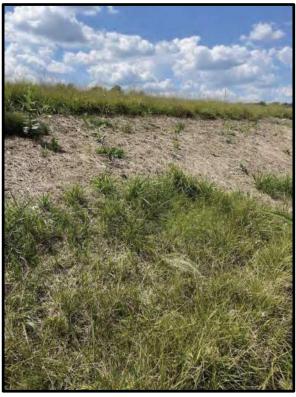




65. View of Wetland G, located in a depression east of the SR 3, looking south. 8/4/2021



66. View of Wetland G and surrounding terrain, looking northwest. 8/4/2021



67. View from within Wetland G looking out towards surrounding terrain, looking west. 8/4/2021



68. View of Wetland G, with shovel located at wetland datapoint G1, looking north. G1 passed the dominance test for hydrophytic vegetation. 8/4/2021





69. Wetland data point G1 and close-up of hydric features. 8/4/2021



70. Upland data point G2. No indicators of hydric soils were present. 8/4/2021



71. View of upland area near upland data point G2, looking south. 8/4/2021



72. View of grass-lined drainage swale between Wetland G and Wetland H, looking northwest.





73. View of Wetland H, located in a depression east of SR 3 and south of Waits Road, looking northeast. 8/4/2021



74. View of Wetland H and surrounding terrain, looking north. 8/4/2021



75. View of Wetland H, looking south. 8/4/2021



76. View of Wetland H, with shovel located at wetland datapoint H1, looking southwest. H1 passed the dominance test for hydrophytic vegetation. 8/4/2021





77. Wetland data point H1 and close-up of hydric features. 8/4/2021



78. Upland data point H2. No indicators of hydric soils were present. 8/4/2021



79. View of upland area near upland data point H2, looking west. 8/4/2021



80. View of grass-lined drainage swale between Wetland H and Wetland I, looking south. 8/4/2021





 View of grass-lined drainage swale between Wetland H and Wetland I, looking northwest. 8/4/2021.



82. View of Wetland I, located in a depression east of SR 3, looking north. 8/4/2021



83. View of Wetland I, looking south. 8/4/2021



84. View of Wetland I and surrounding terrain, looking west. 8/4/2021





85. View from within Wetland I, looking out towards surrounding terrain, looking west. 8/4/2021



 View of Wetland I, with shovel located at wetland datapoint I1, looking southwest. I1 passed the dominance test for hydrophytic vegetation. 8/4/2021.



87. Wetland data point I1 and close-up of hydric features. 8/4/2021



 Upland data point I2. No indicators of hydric soils were present. 8/4/2021





89. View of upland area near upland data point I2, looking south. 8/4/2021



90. View of UNT 1 to Bixler Lake Ditch at drainage culvert outlet under Waits Road, looking north (upstream). 6/23/2021



91. View of UNT 1 to Bixler Lake Ditch, looking south (downstream). The OHWM in this area measured 2 feet wide and 2 inches deep. 6/23/2021



92. View of sediment-filled, concrete-lined drainage swale to UNT 1 to Bixler Lake Ditch, looking west. 6/23/2021





93. View of sediment-filled, concrete-lined drainage swale to UNT 1 to Bixler Lake Ditch, looking east. 6/23/2021



94. View of mowed grass median along SR 3, north of Waits Road, looking northwest. 6/23/2021



95. View of mowed grass median along SR 3, north of Waits Road, looking southeast. 6/23/2021



96. View of mowed right-of-way (ROW) along the south side of Waits Road, looking east towards SR 3. 8/4/2021





97. View of mowed ROW along the south side of Waits Road, looking west. 8/4/2021



98. View of mowed ROW and upland along the north side of Waits Road, east of SR 3, looking west. 6/23/2021



99. View of un-mown grass upland area along the north side of Waits Road, east of SR 3, looking north. 6/23/2021



100. View of mowed ROW along the north side of Waits Road, east of SR 3, looking east. 6/23/2021.





101. View of mowed grass median along SR 3, south of Waits Road, looking northwest. 6/23/2021



102. View of mowed grass median along SR 3, south of Waits Road, looking southeast. 6/23/2021 103.

Project/Site: SR 3 & Waits Road Intersection Improvement (Des No. 1900138) City/County: Noble C	ounty Sampling Date: <u>6/23/2021</u>							
Applicant/Owner: INDOT	State: IN Sampling Point: A1							
Investigator(s): Marion Wells & Claudia McAllister-Peterson, CMT Inc. Section, Township, Ran	nge: S4 T34N R11E							
Landform (hillside, terrace, etc.): Hillslope Local relief (c	oncave, convex, none): <u>Concave</u>							
Slope (%): 25% Lat: 41.425391 Long: -85.267768	Datum: NAD 83							
Soil Map Unit Name: Pe - Pewamo silty clay loam, 0 to 1 percent slopes	NWI classification: N/A							
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X	No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal C	 Circumstances" present? Yes _X No							
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, exp	plain any answers in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	cations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydrosoil Present? Yes X No within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area No Is the Sampled Area Wetland Hydrology Present? Yes X No Is the Sampled Area No Is the Sampled Area Remarks: Yes X No Is the Sampled Area Yes X No Is the Sampled Area Wetland Hydrology Present? Yes X No Is the Sampled Area Yes Yes								
VEGETATION – Use scientific names of plants.								
Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size:) % Cover Species? Status	Dominance Test worksheet:							
1. 2.	Number of Dominant Species That Are OBL, FACW, or FAC:7(A)							
3. 4.	Total Number of Dominant Species Across All Strata: 7 (B)							
5=Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)							
1.	Prevalence Index worksheet:							

J				Percent of Dominant Specie			
		=Total Cover		Are OBL, FACW, or FAC:	10	00.0% (A/B)
<u>Sapling/Shrub Stratum</u> (Plot size:)							
1				Prevalence Index workshe	et:		
2.				Total % Cover of:	Multiply	y by:	
3.				OBL species 45	x 1 =	45	
4.				FACW species 45	x 2 =	90	
5.				FAC species 10	x 3 =	30	
		=Total Cover		FACU species 0	x 4 =	0	
Herb Stratum (Plot size:)		-		UPL species 0	x 5 =	0	
1. Equisetum hyemale	20	Yes	FACW	Column Totals: 100	(A)	165 (B)	
2. Typha X glauca	15	Yes	OBL	Prevalence Index = B/A =	= 1.6	5	
3. Phalaris arundinacea	15	Yes	FACW				
4. Equisetum arvense	10	Yes	FAC	Hydrophytic Vegetation In	dicators:		
5. Scirpus atrovirens	10	Yes	OBL	1 - Rapid Test for Hydro	phytic Vege	tation	
6. Juncus effusus	10	Yes	OBL	X 2 - Dominance Test is >	·50%		
7. Schoenoplectus tabernaemontani	10	Yes	OBL	X 3 - Prevalence Index is :	≤3.0 ¹		
8. Carex vulpinoidea	5	No	FACW	4 - Morphological Adapt	ations ¹ (Prov	vide supportin	ng
9. Carex cristatella	5	No	FACW	data in Remarks or or	n a separate	sheet)	
10.				Problematic Hydrophytic	c Vegetation	¹ (Explain)	
	100	=Total Cover		¹ Indicators of hydric soil and	wetland hvo	drology must	
Woody Vine Stratum (Plot size:)		-		be present, unless disturbed	,	0,	
1.				Hydrophytic			
2.				Vegetation			
		=Total Cover		Present? Yes X	No		
Remarks: (Include photo numbers here or on a separa	to shoot	<u> </u>					_

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Depth	Matrix		Redo	x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/2	90	10YR 5/6	10	C	M	Loamy/Clayey	Prominent redox concentration
4-18	10YR 5/2	85	10YR 4/6	15	<u> </u>	<u>M</u>	Loamy/Clayey	Prominent redox concentration
Type: C=C	oncentration, D=Dep		=Reduced Matrix	 MS=Mas		d Grains		PL=Pore Lining, M=Matrix.
	Indicators:							rs for Problematic Hydric Soils ³ :
Black Hi Hydroge Stratified 2 cm Mu X Depleted Thick Da Sandy M	pipedon (A2)	~ /	Sandy Gle Sandy Re Stripped M Dark Surfa Loamy Mu Loamy Gle X Depleted I X Redox Da Depleted I Redox De	dox (S5) Matrix (S6 ace (S7) Icky Mine eyed Mat Matrix (F rk Surfac Dark Surfac	5) eral (F1) trix (F2) 3) ee (F6) face (F7)		Iron- Red Very Othe ³ Indicator weta	at Prairie Redox (A16) Manganese Masses (F12) Parent Material (F21) Shallow Dark Surface (F22) r (Explain in Remarks) rs of hydrophytic vegetation and and hydrology must be present, ss disturbed or problematic.
Type: Depth (ir	Layer (if observed):						Hydric Soil Presen	:? Yes <u>X</u> No_
Type: Depth (ir Remarks: YDROLO	nches):						Hydric Soil Presen	:? Yes <u>X</u> No_
Type: Depth (ir Remarks: IYDROLC Wetland Hy Primary India	nches): DGY drology Indicators: cators (minimum of c						<u>Seconda</u>	ry Indicators (minimum of two requi
Type: Depth (ir Remarks: IYDROLC Vetland Hy Primary India X_Surface	DGY drology Indicators: cators (minimum of c Water (A1)		Water-Sta	ined Lea	()		<u>Seconda</u> Surfa	ry Indicators (minimum of two requin
Type: Depth (ir Remarks: IYDROLO Netland Hy Primary India X Surface X High Wa	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2)		Water-Sta Aquatic Fa	ined Lea auna (B1	3)		<u>Seconda</u> Surfa X Drair	ry Indicators (minimum of two requin nce Soil Cracks (B6) nage Patterns (B10)
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary India X Surface X High Wa X Saturatio	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3)		Water-Sta Aquatic Fa	ined Lea auna (B1 itic Plant	3) s (B14)		Seconda Surfa Drair Dry-S	ry Indicators (minimum of two requinates and the second se
Type: Depth (ir Remarks: YDROLC Vetland Hy Primary India X Surface X High Wa X Saturatic Water M	DGY drology Indicators: cators (minimum of c Water (A1) tter Table (A2) on (A3) larks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Ddor (C1)	<u>Seconda</u> Surfa Drair Dry-5 Cray	ry Indicators (minimum of two requinates and the second se
Type: Depth (ir Remarks: YDROLC Ydrimary India X Surface X High Wa X Saturatio Water M Sedimer	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 itic Plant Sulfide (Rhizosph	3) s (B14) Ddor (C1 eres on) Living Re	<u>Seconda</u> Surfa Dry-S Dry-S Cray pots (C3)Satu	ry Indicators (minimum of two requin nce Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9
Type: Depth (ir temarks: YDROLC Yetland Hy rimary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on ced Iron) Living Ro (C4)	<u>Seconda</u> Surfa Surfa Dry-5 Cray pots (C3)Satu Stun	ry Indicators (minimum of two requir ice Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ied or Stressed Plants (D1)
Type: Depth (ir Remarks: YDROLC Yetland Hy Primary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on ced Iron tion in Ti) Living Ro (C4)	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requir ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2)
Type: Depth (ir Remarks: YDROLC Yetland Hy Primary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1 eres on ced Iron tion in Ti (C7)) Living Ro (C4)	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requin ice Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ied or Stressed Plants (D1)
Type: Depth (ir Remarks: YDROLC Yetland Hy Primary India X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	DGY drology Indicators: cators (minimum of c Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 Sulfide (Rhizosph of Reduc in Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on ced Iron (tion in Ti (C7) a (D9)) Living Re (C4) illed Soil	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requir ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2)
Type: Depth (ir Remarks: YDROLC Yetland Hy Primary India X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 Sulfide (Rhizosph of Reduc in Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on ced Iron (tion in Ti (C7) a (D9)) Living Re (C4) illed Soil	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requir ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2)
Type: Depth (ir Remarks: YDROLC YdRADLO Ydrmary India X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely iield Obser	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I v Vegetated Concave vations:	me is reque magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on ced Iron (tion in Ti (C7) a (D9) temarks)) Living Ri (C4) illed Soil	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requir ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2)
Type: Depth (ir Remarks: YDROLO Vetland Hy Primary India X Surface X High Wa X Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatid Sparsely Field Obser Surface Wat	DGY drology Indicators: cators (minimum of c Water (A1) ater Table (A2) on (A3) larks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I v Vegetated Concave vations: ter Present? Ye	magery (B Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on ced Iron (tion in Ti (C7) a (D9) temarks) nches):) Living Ri (C4) illed Soil 0	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requir ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2)
Type: Depth (ir Remarks: Primary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat	DGY drology Indicators: cators (minimum of c Water (A1) tter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I / Vegetated Concave vations: ter Present? Ye	magery (B Surface (s X s X	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No No	ined Lea auna (B1 sulfide (Rhizosph of Reduc r Reduc s Surface Well Dat blain in R Depth (i Depth (i	3) s (B14) Ddor (C1 eres on ced Iron of tion in Ti (C7) a (D9) temarks) nches): _) Living Ri (C4) illed Soil 0 0.25 9	Seconda Surfa X Drair Dry-S Cray Dots (C3) Satu Stun s (C6) X FAC	ry Indicators (minimum of two requin ince Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Type: Depth (ir Remarks: YDROLO Vetland Hy Primary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Vater Table Saturation P	DGY drology Indicators: cators (minimum of c Water (A1) ter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I / Vegetated Concave vations: ter Present? Ye Present? Ye	magery (B Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc r Reduc s Surface Well Dat blain in R Depth (i Depth (i	3) s (B14) Ddor (C1 eres on ced Iron (tion in Ti (C7) a (D9) temarks) nches):) Living Ri (C4) illed Soil 0 0.25 9	Seconda Surfa X Drair Dry-5 Cray pots (C3) Satu Stun s (C6) Geor	ry Indicators (minimum of two requin ince Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Type: Depth (ir Remarks: YDROLO Yetland Hy Primary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wat Vater Table Saturation P includes ca	DGY drology Indicators: cators (minimum of c Water (A1) ter Table (A2) on (A3) larks (B1) at or Crust (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I / Vegetated Concave vations: ter Present? Ye Present? Ye pillary fringe)	magery (B s Surface (s X s X s X	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No No No No	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in R Depth (i Depth (i	3) s (B14) Odor (C1 eres on ced Iron of tion in Ti (C7) a (D9) emarks) nches):) Living R (C4) iilled Soil 0 0.25 9 18	Seconda	ry Indicators (minimum of two requin ince Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
Type: Depth (ir Remarks: Primary India X Surface X High Wa X Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wate Vater Table Saturation P includes ca	DGY drology Indicators: cators (minimum of c Water (A1) ter Table (A2) on (A3) larks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aerial I / Vegetated Concave vations: ter Present? Ye Present? Ye	magery (B s Surface (s X s X s X	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No No No No	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in R Depth (i Depth (i	3) s (B14) Odor (C1 eres on ced Iron of tion in Ti (C7) a (D9) emarks) nches):) Living R (C4) iilled Soil 0 0.25 9 18	Seconda	ry Indicators (minimum of two requin ince Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9 ted or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

Project/Site: SR 3 & V	Vaits Road Inters	ection Improven	nent (Des	s No. 190013	8) City/Co	unty: Noble Co	ounty			Sampling Date:	6/23/2021
Applicant/Owner:	INDOT State: IN									Sampling Point:	A2
Investigator(s): Maric	n Wells & Clau	udia McAllister	-Peters	on, CMT In	c. Section,	Township, Rang	ge: S	64 T34N	NR11E		
Landform (hillside, te	errace, etc.): H	illslope				Local relief (co	ncave	, conve	x, none):	None	
Slope (%): 30%	Lat: <u>41.4254</u>	52			Long:	-85.267986				Datum: NAD 83	
Soil Map Unit Name:	Pe - Pewamo	silty clay loan	n, 0 to 1	percent slo	opes			N	WI classi	fication: N/A	
Are climatic / hydrolc	gic conditions	on the site typ	oical for	this time of	year?	Yes X	No_		(If no, ex	plain in Remarks.)	
Are Vegetation	, Soil, c	or Hydrology_	sig	nificantly d	isturbed?	Are "Normal Cir	rcumst	tances"	present	Yes <u>X</u> No)
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)											
SUMMARY OF I	INDINGS -	Attach sit	e map	o showin	g sampli	ng point loc	atior	ns, tra	nsects	, important fea	tures, etc.
Hydrophytic Vegeta	tion Present?	Yes	No	х	ls th	e Sampled Are	a				
Hydric Soil Present	?	Yes	No	Х	with	in a Wetland?		Y	es	No <u>×</u>	
Wetland Hydrology	Present?	Yes	No	Х							
Remarks:											
		~									
VEGETATION -	Use scienti	tic names o	of plant	ts.							
Tree Stratum	(Plot size:	_)		Absolute % Cover	Dominant Species?	Indicator Status	Dom	inance	Test wo	rksheet:	

Tree Stratum	(Plot size:	_) _%	Cover	Species?	Status	Dominance Tes	t workshe	et:		
1. 2.						Number of Domi Are OBL, FACW		ies That -	1	(A)
4						Total Number of Across All Strata		Species	2	(B)
5				=Total Cover		Percent of Domin Are OBL, FACW		es That -	50.0%	(A/B)
Sapling/Shrub Stra	tum (Plot size:)								
						Prevalence Inde		eet:		
2						Total % Cov	/er of:	Mu	ltiply by:	_
3						OBL species		x 1 = _	-	_
4						FACW species		x 2 =	0	_
5.						FAC species	40	x 3 =	120	_
				=Total Cover		FACU species	55	x 4 =	220	_
Herb Stratum	(Plot size:)				UPL species	0	x 5 =	0	
1. Festuca rubra			40	Yes	FACU	Column Totals:	95	(A)	340	(B)
2. Poa pratensis			40	Yes	FAC	Prevalence In	dex = B/A	.= -	3.58	-
3. Asclepias syria	са		15	No	FACU					-
4.						Hydrophytic Ve	getation I	ndicators	:	
5						1 - Rapid Te	st for Hyd	ophytic V	egetation	
6						2 - Dominan	ce Test is	>50%	-	
7						3 - Prevalen	ce Index is	s ≤3.0 ¹		
0						4 - Morpholo	gical Ada	otations ¹ (F	Provide su	pporting
0						data in Re	emarks or	on a sepa	rate sheet)
10						Problematic	Hydrophy	tic Vegeta	tion ¹ (Expl	ain)
			95	=Total Cover		¹ Indicators of hyd		•		,
Woody Vine Stratu	m (Plot size:)				be present, unles				musi
1						Hydrophytic				
2.						Vegetation				
				=Total Cover		Present?	Yes	No	Х	
Remarks: (Include	photo numbers here or o	n a separate	sheet.)							

	• •	-				ator or o	confirm the absence	of indicators.)	
Depth (incluse)	Matr			x Featur		Loc ²	Taataa	Demode	
(inches)	Color (moist	<u> </u>	Color (moist)	%	Type ¹	LOC	Texture	Remarks	
0-12	10YR 4/3	100					Loamy/Clayey		
¹ Type: C=C	oncentration, D=	Depletion, RM=	Reduced Matrix, N	MS=Mas	ked San	d Grains	s. ² Locatior	n: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicato	rs for Problematic Hydric S	oils ³ :
Histosol	(A1)		Sandy Gle	yed Mat	trix (S4)		Coas	st Prairie Redox (A16)	
Histic Ep	oipedon (A2)		Sandy Red	dox (S5)			Iron-	Manganese Masses (F12)	
Black Hi	stic (A3)		Stripped N	latrix (S	6)		Red	Parent Material (F21)	
Hydroge	en Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)	
Stratified	d Layers (A5)		Loamy Mu	cky Min	eral (F1)		Othe	er (Explain in Remarks)	
2 cm Mu	ıck (A10)		Loamy Gle	eyed Ma	trix (F2)				
Deplete	d Below Dark Sur	face (A11)	Depleted I	Matrix (F	3)				
Thick Da	ark Surface (A12)	1	Redox Da	rk Surfac	ce (F6)		³ Indicato	rs of hydrophytic vegetation a	and
Sandy N	/ucky Mineral (S1	1)	Depleted [Dark Sur	face (F7))	wetla	and hydrology must be preser	nt,
5 cm Mu	icky Peat or Peat	: (S3)	Redox De	pression	is (F8)		unle	ss disturbed or problematic.	
Restrictive	Layer (if observ	ed):							
Type:		avel							
Depth (i		12					Hydric Soil Presen	t? Yes	No X
Remarks:	·						-		
	laver of gravel w	as encountered	at 12 inches Mul	tiple atte	emots we	re made	e at multiple locations	and restrictive gravel was end	countered
at or above				ipie utte	mpto we	no maac			Journered
HYDROLO	OGY								
Wetland Hy	drology Indicate	ors:							
-			ed; check all that	(vlage			Seconda	ry Indicators (minimum of two	o required)
	Water (A1)		Water-Sta		aves (B9)			ace Soil Cracks (B6)	
—	ater Table (A2)		Aquatic Fa		• • •			nage Patterns (B10)	
Saturatio			True Aqua					Season Water Table (C2)	
	larks (B1)		Hydrogen		• •)	/	fish Burrows (C8)	
	nt Deposits (B2)		Oxidized F		•	,		ration Visible on Aerial Image	erv (C9)
	posits (B3)		Presence			-		ted or Stressed Plants (D1)	, ,
	at or Crust (B4)		Recent Iro			• •		morphic Position (D2)	
	oosits (B5)		Thin Muck				· · · —	-Neutral Test (D5)	
	on Visible on Aer	ial Imagery (B7			. ,				
	Vegetated Cond	0,0	/ °		. ,				
Field Obser	vations:	,	, <u> </u>		,				
Surface Wat		Yes	No X	Denth (i	nches):				
Water Table		Yes			nches):				
Saturation P		Yes			nches):		Wetland Hydrolo	gy Present? Yes	No X
	pillary fringe)	103 <u> </u>		Depui (i	-		Wettand Hydroio	gy 116361111 163	
		eam daude mo	nitoring well aeria	l photos	previou	s inspec	tions), if available:		
					, proviou				
Remarks:									

Project/Site: SR 3 & Waits Road Intersection Improvement (Des No. 1900138)	City/County: Noble C	County	Sampling Date: 6/23/2021	1
Applicant/Owner: INDOT			State: IN	Sampling Point: B1	
Investigator(s): Marion Wells & Claudia McAllister-Pete	erson, CMT Inc.	Section, Township, Ra	ange: S5 T34N R11E		
Landform (hillside, terrace, etc.): Roadside Ditch		Local relief (concave, convex, none):	Concave	
Slope (%): 5 Lat: 41.428177		Long: -85.271537	· -	Datum: NAD 83	
Soil Map Unit Name: MrB2 - Glynwood silt loam, 2 to (6 percent slopes	_	NWI classif		
Are climatic / hydrologic conditions on the site typical f			No (If no, exp		
Are Vegetation, Soil, or Hydrology	-				
Are Vegetation, Soil, or Hydrology Are Vegetation, Soil, or Hydrology					
SUMMARY OF FINDINGS – Attach site m					c.
		1			
	°	Is the Sampled A within a Wetland		No	
	o o	within a wettand	? Yes <u>X</u>	No	
Remarks:	<u> </u>				
Roadside trash throughout wetland.					
VEGETATION - Use scientific names of pla	ants.				
		ominant Indicator	Denting Trate		
Tree Stratum (Plot size:) 1.	% Cover S	pecies? Status	Dominance Test wor		
2.			Number of Dominant S Are OBL, FACW, or F	•)
3			Total Number of Domi	•	
4			Across All Strata:	(B)	'
5	=To:	tal Cover	Percent of Dominant S Are OBL, FACW, or F	•	В)
Sapling/Shrub Stratum (Plot size:)				
1			Prevalence Index wo	rksheet:	
2			Total % Cover of	: Multiply by:	
3			OBL species 30		
4			FACW species 10		
5			FAC species 40		
	=To	tal Cover	FACU species 0		
Herb Stratum (Plot size:) 1. Juncus tenuis	30	Yes FAC	UPL species 0 Column Totals: 80		
2. Typha X glauca	25	Yes OBL	Prevalence Index =	(/ /	
3. Juncus torreyi	10	No FACW	Frevalence index -	- D/A - 2.13	
4. Equisetum arvense	10	No FAC	Hydrophytic Vegetat	ion Indicators:	
5. Scirpus atrovirens	5	No OBL		Hydrophytic Vegetation	
6			X 2 - Dominance Te		
7.			X 3 - Prevalence Inc		
8.			4 - Morphological	Adaptations ¹ (Provide support	ting
9.			data in Remark	s or on a separate sheet)	-
10.			Problematic Hydro	ophytic Vegetation ¹ (Explain)	
Woody Vino Stratum (Diat size:	80 =To	tal Cover	¹ Indicators of hydric so be present, unless dis	bil and wetland hydrology must	st
Woody Vine Stratum (Plot size: 1.)				
2.			Hydrophytic		
	=To	tal Cover	Vegetation Present? Yes	X No	
Remarks: (Include photo numbers here or on a sepa					
	nate sheet.)				

Vegetation mostly dead/sprayed.

Profile Desc	cription: (Describe	to the dept	h needed to docu	ument tl	ne indica	tor or o	confirm the abser	nce of indicators.)		
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-8	10YR 4/1	70	10YR 4/6	25	С	М	Loamy/Clayey	Prominent redox concentrations		
			2.5YR 2.5/1	5	С	М		Prominent redox concentrations		
8-18	10YR 6/1	80	10YR 5/6	20	С	М	Sandy	Prominent redox concentrations		
——										
——										
¹ Type: C=C	oncentration, D=De	oletion, RM=	Reduced Matrix, N	//S=Mas	ked Sano	d Grains		tion: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:						Indic	ators for Problematic Hydric Soils ³ :		
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)			Coast Prairie Redox (A16)		
Histic Ep	oipedon (A2)		Sandy Rec	dox (S5)			Ir	ron-Manganese Masses (F12)		
Black Hi	stic (A3)		Stripped M	latrix (S6	5)		F	Red Parent Material (F21)		
Hydroge	n Sulfide (A4)		Dark Surfa	ice (S7)			V	/ery Shallow Dark Surface (F22)		
Stratified	l Layers (A5)		Loamy Mu	cky Mine	eral (F1)			Other (Explain in Remarks)		
2 cm Mu	ick (A10)		Loamy Gle	eyed Mat	rix (F2)					
Depleted	Below Dark Surfac	e (A11)	X Depleted N	Matrix (F	3)					
Thick Da	ark Surface (A12)		Redox Dar	rk Surfac	e (F6)		³ Indic	ators of hydrophytic vegetation and		
Sandy M	lucky Mineral (S1)		Depleted D	Dark Sur	face (F7)		v	vetland hydrology must be present,		
5 cm Mu	cky Peat or Peat (S	3)	Redox Dep	oression	s (F8)		u	nless disturbed or problematic.		
Restrictive	Layer (if observed)	:								
Type:										
Depth (ir	nches):						Hydric Soil Pres	sent? Yes ^X No		
Remarks:										
r tomarito.										
HYDROLO	GY									
Wetland Hy	drology Indicators									
-	cators (minimum of		ed: check all that a	apply)			Seco	ndary Indicators (minimum of two required)		
X Surface			Water-Stai		ves (B9)		Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)			
I —	ter Table (A2)		Aquatic Fa		• • •			Drainage Patterns (B10)		
X Saturatio			True Aqua		-			Dry-Season Water Table (C2)		
	arks (B1)		Hydrogen)		Crayfish Burrows (C8)		
	nt Deposits (B2)		Oxidized R					Saturation Visible on Aerial Imagery (C9)		
	oosits (B3)		Presence of			-		Stunted or Stressed Plants (D1)		
	it or Crust (B4)		Recent Iro					Geomorphic Position (D2)		
	osits (B5)		Thin Muck					AC-Neutral Test (D5)		
	on Visible on Aerial	Imagery (B7)			. ,					
I —	Vegetated Concav	0,0,0,	<u> </u>							
Field Obser	5	(,					
Surface Wat		es X	No	Depth (ii	nches):	0.5				
Water Table		es X		Depth (i	· -	11				
Saturation P		es X		Depth (i	· · · ·	18	Wetland Hydr	ology Present? Yes X No		
(includes ca		<u> </u>	·····			.0				
`	corded Data (strean	n daude moi	nitoring well aeria	photos	previou	s inspec	tions), if available			
		3		F.1000			,,			
Remarks:										

Project/Site: SR 3 & V	Vaits Road Inters	ection Improveme	ent (Des No. 1900138)	City/County: Noble County	y		Sampling Date:	6/23/2021	
Applicant/Owner:	INDOT		Sampling Point:	B2					
Investigator(s): Mario	on Wells & Clau	udia McAllister-I	Peterson, CMT Inc.	Section, Township, Range:	S5 T34N F	R11E			
Landform (hillside, te	errace, etc.): <u>H</u>	illslope		Local relief (concave, c	onvex, none	e):	None		
Slope (%): 15	Lat: 41.4282	220		Long: -85.271565			Datum: NAD 83		
Soil Map Unit Name: MrB2 - Glynwood silt loam, 2 to 6 percent slopes, eroded NWI classification: N/A									
Are climatic / hydrolo	gic conditions	on the site typic	cal for this time of yea	ar? Yes <u>X</u> No	o (If	no, ex	plain in Remarks.)		
Are Vegetation	, Soil, o	or Hydrology	significantly distu	rbed? Are "Normal Circun	nstances" p	resent	? Yes X No	<u> </u>	
Are Vegetation	, Soil, o	or Hydrology	naturally problem	natic? (If needed, explain	any answer	rs in Re	emarks.)		
SUMMARY OF F	FINDINGS -	- Attach site	∍ map showing ຄ	sampling point location	ons, tran	sects	s, important fea	tures, etc.	
Hydrophytic Vegeta	ation Present?	Yes	No <u>X</u>	Is the Sampled Area					
Hydric Soil Present	?	Yes	No X	within a Wetland?	Yes	;	<u>No X</u>		
Wetland Hydrology	Present?	Yes	No X						

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species
4.				Across All Strata: <u>2</u> (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: 50.0% (A/B)
Sapling/Shrub Stratum (Plot size:)			
1. Juniperus virginiana	2	No	FACU	Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species 0 x 1 = 0
4.				FACW species $0 x 2 = 0$
5.				FAC species 65 x 3 = 195
	2	=Total Cover		FACU species 27 x 4 = 108
Herb Stratum (Plot size:)				UPL species 10 x 5 = 50
1. Poa pratensis	60	Yes	FAC	Column Totals 102 (A) 353 (B)
2. Festuca rubra	20	Yes	FACU	Prevalence Index = $B/A = 3.46$
3. Daucus carota	10	No	UPL	
4. Equisetum arvense	5	No	FAC	Hydrophytic Vegetation Indicators:
5. Asclepias syriaca	5	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7		·		3 - Prevalence Index is ≤3.0 ¹
8.		·		4 - Morphological Adaptations ¹ (Provide supporting
0				data in Remarks or on a separate sheet)
9 10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1	•			· · ·
2.				Hydrophytic Vegetation
		=Total Cover		Vegetation Present? Yes No X
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Profile Desc	cription: (Describe	to the dept	h needed to docu	ument tl	he indica	tor or o	confirm the absence o	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-7	10YR 4/4	100					Loamy/Clayey		
7-18	10YR 3/6	100					Sandy		
¹ Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains	a. ² Location:	PL=Pore Lining, M=Matrix	-
Hydric Soil	Indicators:						Indicators	s for Problematic Hydric S	Soils ³ :
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coast	Prairie Redox (A16)	
Histic Ep	ipedon (A2)		Sandy Red	dox (S5)			Iron-M	/langanese Masses (F12)	
Black Hi	stic (A3)		Stripped N	latrix (S6	3)		Red F	Parent Material (F21)	
Hydroge	n Sulfide (A4)		Dark Surfa	ice (S7)			Very S	Shallow Dark Surface (F22)	
Stratified	l Layers (A5)		Loamy Mu	cky Mine	eral (F1)		Other	(Explain in Remarks)	
2 cm Mu	ck (A10)		Loamy Gle	eyed Mat	trix (F2)				
Depleted	Below Dark Surface	e (A11)	Depleted N	/atrix (F	3)				
Thick Da	rk Surface (A12)		Redox Dar	k Surfac	e (F6)		³ Indicators	s of hydrophytic vegetation a	and
Sandy M	lucky Mineral (S1)		Depleted [Dark Sur	face (F7)		wetlar	nd hydrology must be prese	nt,
5 cm Mu	cky Peat or Peat (S3	3)	Redox Dep	pression	s (F8)		unless	s disturbed or problematic.	
Restrictive	Layer (if observed):	1							
Type:									
Depth (ir	nches):						Hydric Soil Present	? Yes	No X
Remarks:									
HYDROLO	GY								
Wetland Hy	drology Indicators:								
-	cators (minimum of c	ne is require	ed; check all that a	apply)			Secondar	y Indicators (minimum of tw	o required)
-	Water (A1)		Water-Stai		ves (B9)		Surfac	ce Soil Cracks (B6)	
High Wa	ter Table (A2)		Aquatic Fa	iuna (B1	3)		Draina	age Patterns (B10)	
Saturatio	on (A3)		True Aqua	tic Plant	s (B14)		 Dry-S	eason Water Table (C2)	
Water M	arks (B1)		Hydrogen	Sulfide 0	Odor (C1)	Crayfi	ish Burrows (C8)	
Sedimer	it Deposits (B2)		Oxidized F	Rhizosph	eres on l	iving R	oots (C3) Satura	ation Visible on Aerial Image	ery (C9)
Drift Dep	oosits (B3)		Presence	of Reduc	ced Iron (C4)	Stunte	ed or Stressed Plants (D1)	
Algal Ma	t or Crust (B4)		Recent Iro	n Reduc	tion in Ti	lled Soil	s (C6) Geom	norphic Position (D2)	
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		FAC-N	Neutral Test (D5)	
Inundatio	on Visible on Aerial I	magery (B7))Gauge or \	Well Dat	a (D9)				
Sparsely	Vegetated Concave	e Surface (B	8)Other (Exp	lain in F	(emarks				
Field Obser	vations:								
Surface Wat	er Present? Ye	s	No <u>X</u>	Depth (i	nches):				
Water Table	Present? Ye	s	No <u>X</u>	Depth (i	nches):				
Saturation P	resent? Ye	s	No X	Depth (i	nches):		Wetland Hydrolog	y Present? Yes	No X
(includes cap									
Describe Re	corded Data (stream	gauge, mo	nitoring well, aeria	l photos	, previou	s inspec	tions), if available:		
Remarks:									

Project/Site: SR 3 & Waits Road Intersection Improvement (Des No. 1900	138) City/Co	unty: Noble (County	Sampling Da	ate: <u>8/4/</u> 2	2021
Applicant/Owner: INDOT				State: IN	Sampling Po	oint:	C1
Investigator(s): Austin Clarridge & Claudia McAllister-Pet	erson, CMT	Inc. Section,	Township, Ra	ange: S5 T34N R11E			
Landform (hillside, terrace, etc.): Roadside Ditch			Local relief (concave, convex, none):	Concave		
Slope (%): 5 Lat: 41.428459		Long:	-85.272069	· ·	Datum: NAD 8	33	
Soil Map Unit Name: MrB2 - Glynwood silt loam, 2 to	6 percent sl	Ŭ.			fication: N/A		
Are climatic / hydrologic conditions on the site typical t			Yes X	No (If no, exp		(5)	
Are Vegetation , Soil , or Hydrology		-					
						NO	-
Are Vegetation, Soil, or Hydrology				plain any answers in Re		. .	
SUMMARY OF FINDINGS – Attach site m	ap show	ing sampli	ng point lo	cations, transects	, important	features	s, etc.
Hydric Soil Present? Yes X N	o o		e Sampled A in a Wetland		No		
VECETATION Lies scientific names of pl	anto						
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator				
Tree Stratum (Plot size:)	% Cover		Status	Dominance Test wo	rksheet:		
1				Number of Dominant	Species That		
2				Are OBL, FACW, or F	AC:	2	(A)
3				Total Number of Dom	inant Species		
4				Across All Strata:		2	_ ^(B)
5		=Total Cover		Percent of Dominant	•	100.0%	(A/D)
Sapling/Shrub Stratum (Plot size:	<u>، </u>			Are OBL, FACW, or F	AU	100.0 %	_(A/B)
)			Prevalence Index wo	orksheet:		
1 2.				Total % Cover of		Iltiply by:	
3.				OBL species 4	0 x 1 =	40	-
4.				FACW species 2	0 x 2 =	40	
5.				FAC species 0) x 3 =	0	
		=Total Cover	ſ	FACU species 5	5 x 4 =	20	
Herb Stratum (Plot size:)				UPL species () x 5 =	0	
1. Scirpus atrovirens	30	Yes	OBL	Column Totals: 6	5 (A)	100	(B)
2. Juncus torreyi	20	Yes	FACW	Prevalence Index	= B/A =	1.54	_
3. Typha X glauca	10	No	OBL				
4. Festuca rubra	5	No	FACU	Hydrophytic Vegeta	tion Indicators	6:	
5				1 - Rapid Test for	·Hydrophytic V	egetation	
6				X 2 - Dominance Te	est is >50%		
7.				X 3 - Prevalence In			
8.				4 - Morphological			
9.				data in Remark	ks or on a sepa	rate sheet)
10				Problematic Hydr	ophytic Vegeta	ition ¹ (Expl	ain)
	65	=Total Cover	r –	¹ Indicators of hydric s			r must
Woody Vine Stratum (Plot size:)			be present, unless dis	sturbed or prob	iematic.	

Hydrophytic Vegetation Present? Yes X

Remarks: (Include photo numbers here or on a separate sheet.)

1.

2.

=Total Cover

No

Depth (inches)	Matrix		Redo	x Featur			confirm the absence	,
<u>\</u> /	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/3	100					Loamy/Clayey	
4-18	10YR 3/2	90	10YR 5/6	10	С	M	Loamy/Clayey	Prominent redox concentrations
4-10	1011X 3/2		1011X 3/0				Loanny/Clayey	Fromment redox concentrations
¹ Type: C=Cc	oncentration, D=Dep	letion, RM	Reduced Matrix, I	MS=Mas	ked Sand	d Grains		: PL=Pore Lining, M=Matrix.
Hydric Soil I								rs for Problematic Hydric Soils ³ :
Histosol (()		Sandy Gle	-				st Prairie Redox (A16)
	ipedon (A2)		Sandy Re	• •				Manganese Masses (F12)
Black His	()		Stripped N	•	6)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa					Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	-			Othe	r (Explain in Remarks)
2 cm Muo			Loamy Gle	-				
	Below Dark Surface	e (A11)	Depleted I	-	-		3	
	rk Surface (A12)		X Redox Da					rs of hydrophytic vegetation and
	ucky Mineral (S1) cky Peat or Peat (S3	•	Depleted I Redox De					and hydrology must be present, ss disturbed or problematic.
		,		pression	s (го)		une	ss disturbed of problematic.
	_ayer (if observed):							
Type: Depth (in	vehee):						Hydric Soil Presen	t? Yes ^X No
Remarks:	<u> </u>						Tiyane Son Fresen	
HYDROLO	GY							
	drology Indicators:	ne is requi	red: check all that	apply)			Seconda	ny Indicators (minimum of two required
Primary Indic	ators (minimum of o	ne is requi			ves (B9)			ry Indicators (minimum of two required)
Primary Indic	<u>cators (minimum of o</u> Water (A1)	ne is requi	Water-Sta	ined Lea	```		X Surfa	ace Soil Cracks (B6)
Primary Indic Surface V High Wat	cators <u>(minimum of o</u> Water (A1) ter Table (A2)	ne is requi	Water-Sta Aquatic Fa	ined Lea auna (B1	3)		X Surfa X Draii	ace Soil Cracks (B6) nage Patterns (B10)
Primary Indic Surface V High Wat Saturatio	cators (minimum of o Water (A1) ter Table (A2) n (A3)	ne is requi	Water-Sta	ined Lea auna (B1 atic Plant	3) s (B14))	X Surfa X Drain Dry-5	ace Soil Cracks (B6)
Primary Indic Surface V High Wat Saturatio Water Ma	cators (minimum of o Water (A1) ter Table (A2) n (A3)	ne is requi	Water-Sta Aquatic Fa	ined Lea auna (B1 atic Plant Sulfide (3) s (B14) Ddor (C1)		X Surfa X Drain Dry-1 Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Primary Indic Surface V High Wat Saturatio Water Ma Sediment	<u>cators (minimum of o</u> Water (A1) ter Table (A2) n (A3) arks (B1)	ne is requi	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Ddor (C1) eres on I	_iving R	X Surfa X Drain Dry-1 Cray soots (C3) Satu	ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Dep	cators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	ne is requi	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Ddor (C1) eres on I ced Iron (₋iving R C4)	X Surfa X Drain Dry-1 Cray satu Stun	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat	ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3)	ne is requi	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti	₋iving R C4)	oots (C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat	ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc s Surface	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7)	₋iving R C4)	oots (C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo	ators (minimum of o Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	nagery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on I ced Iron (tion in Ti (C7) a (D9)	₋iving R C4)	oots (C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Primary Indic Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo	ators (minimum of o Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial In Vegetated Concave	nagery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or	ined Lea auna (B1 atic Plant Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on I ced Iron (tion in Ti (C7) a (D9)	₋iving R C4)	oots (C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
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Project/Site: SR 3 & W	Vaits Road Interse	ection Improvemer	nt (Des No. 1900138)	City/County: Noble County	/		Sampling Date:	8/4/2021
Applicant/Owner:	INDOT				State:	IN	Sampling Point:	C2
Investigator(s): Austin	1 Clarridge & Cla	audia McAllister-F	^o eterson, CMT Inc.	Section, Township, Range:	S5 T34N	N R11E		
Landform (hillside, te	rrace, etc.): <u>Hi</u>	llslope		Local relief (concave, co	onvex, no	one):	None	
Slope (%): 15	Lat: <u>41.4284</u> 2	25		Long: <u>-85.272047</u>			Datum: NAD 83	
Soil Map Unit Name:	MrB2 - Glynwo	ood silt loam, 2 t	to 6 percent slopes.	, eroded	N	WI class	sification: N/A	
Are climatic / hydrolo	gic conditions of	on the site typica	al for this time of ye	ear? Yes <u>X</u> No)	(If no, e>	xplain in Remarks.)	
Are Vegetation	, Soil, o	r Hydrology	significantly dist	urbed? Are "Normal Circum	nstances"	' present	? Yes <u>X</u> No)
Are Vegetation	, Soil, o	r Hydrology	naturally problen	matic? (If needed, explain a	any answ	vers in R	emarks.)	
SUMMARY OF F	INDINGS –	Attach site	map showing	sampling point location	ons, tra	insects	s, important feat	tures, etc.
Hydrophytic Vegetat	tion Present?	Yes	No X	Is the Sampled Area				
Hydric Soil Present?	?		No X	within a Wetland?	Y	'es	<u>No X</u>	
Wetland Hydrology	Present?	Yes	No X					
Remarks:								

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species
4.				Across All Strata: <u>2</u> (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: 0.0% (A/B)
Sapling/Shrub Stratum (Plot size:)			
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species 0 x 1 = 0
4.				FACW species 0 x 2 = 0
5.				FAC species 0 x 3 = 0
		=Total Cover		FACU species 95 x 4 = 380
Herb Stratum (Plot size:)				UPL species $0 \times 5 = 0$
1. Festuca arundinacea	50	Yes	FACU	Column Totals: 95 (A) 380 (B)
2. Festuca rubra	40	Yes	FACU	Prevalence Index = $B/A = 4.00$
3. Ambrosia artemisiifolia	5	No	FACU	
4.				Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	95	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1.				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes No X
Remarks: (Include photo numbers here or on a se	eparate sheet.)			

Profile Desci Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-18	10YR 4/3	100					Loamy/Clayey			
¹ Type: C=Co	ncentration, D=De	oletion, RM	I=Reduced Matrix, N	MS=Mas	ked Sand	d Grains	. ² Locatior	: PL=Pore Lin	ing, M=Matrix	ζ.
Hydric Soil I	ndicators:							rs for Problem	•	Soils ³ :
Histosol (A1)		Sandy Gle	-				st Prairie Redo		
Histic Epi	pedon (A2)		Sandy Red					Manganese Ma		
Black His	()		Stripped N	`	5)			Parent Materia	()	
	i Sulfide (A4)		Dark Surfa	• • •				Shallow Dark)
	Layers (A5)		Loamy Mu	-			Othe	r (Explain in Re	emarks)	
2 cm Muc	()		Loamy Gle	-						
	Below Dark Surfac	e (A11)	Depleted N		-		3			
	k Surface (A12)		Redox Da		• •			rs of hydrophyti	•	
	ucky Mineral (S1)	•	Depleted [and hydrology r	•	ent,
	ky Peat or Peat (S	,	Redox De	pression	s (F8)		unie	ss disturbed or	problematic.	
	ayer (if observed)	:								
Type:								10	N	
Type: Depth (ind Remarks:	ches):						Hydric Soil Presen	t?	Yes	No <u>X</u>
Depth (ind							Hydric Soil Presen	t?	Yes	No <u>X</u>
Depth (ind Remarks:	GY						Hydric Soil Presen	t?	Yes	No <u>X</u>
Depth (ind Remarks: HYDROLOO Wetland Hyd	GY Irology Indicators									
Depth (ind Remarks: HYDROLO(Wetland Hyd Primary Indica	GY Irology Indicators ators (minimum of		ired; check all that a				Seconda	ry Indicators (m	ninimum of tw	
Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V	GY Irology Indicators ators (minimum of o Vater (A1)		Water-Sta	ined Lea	、 ,		Surfa	ry Indicators (m ace Soil Cracks	ninimum of tw	
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Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap)	GY rology Indicators ators (minimum of a Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial Vegetated Concav vations: er Present? Present? Ye esent? Ye	Imagery (B e Surface (es es	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in F Depth (i Depth (i	3) s (B14) Ddor (C1) eres on I ced Iron (titon in Ti (C7) a (D9) Remarks) nches): nches):	Living R C4) lled Soil	Seconda Surfa Drain Dry Dry Cray Stun Wetland Hydrolo	ry Indicators (m ace Soil Cracks nage Patterns (Season Water ⁻ fish Burrows (C ration Visible o ted or Stressed morphic Positio -Neutral Test (I	ninimum of tw s (B6) (B10) Table (C2) C8) n Aerial Imag d Plants (D1) on (D2) D5)	ro required
Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap)	GY rology Indicators ators (minimum of a Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial Vegetated Concav vations: er Present? Present? Ye esent? Ye	Imagery (B e Surface (es es	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence f Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp No X No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in F Depth (i Depth (i	3) s (B14) Ddor (C1) eres on I ced Iron (titon in Ti (C7) a (D9) Remarks) nches): nches):	Living R C4) lled Soil	Seconda Surfa Drain Dry Dry Cray Stun Wetland Hydrolo	ry Indicators (m ace Soil Cracks nage Patterns (Season Water ⁻ fish Burrows (C ration Visible o ted or Stressed morphic Positio -Neutral Test (I	ninimum of tw s (B6) (B10) Table (C2) C8) n Aerial Imag d Plants (D1) on (D2) D5)	ro required
Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap)	GY rology Indicators ators (minimum of a Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial Vegetated Concav vations: er Present? Present? Ye esent? Ye	Imagery (B e Surface (es es	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in F Depth (i Depth (i	3) s (B14) Ddor (C1) eres on I ced Iron (titon in Ti (C7) a (D9) Remarks) nches): nches):	Living R C4) lled Soil	Seconda Surfa Drain Dry Dry Cray Stun Wetland Hydrolo	ry Indicators (m ace Soil Cracks nage Patterns (Season Water ⁻ fish Burrows (C ration Visible o ted or Stressed morphic Positio -Neutral Test (I	ninimum of tw s (B6) (B10) Table (C2) C8) n Aerial Imag d Plants (D1) on (D2) D5)	ro required

Project/Site: SR 3 & Waits Road Intersection Improvement (D	es No. 1900138) City/Co	unty: Noble Co	ounty	_ Sampling Date	e: <u>8/4/2021</u>
Applicant/Owner: INDOT		_		State: IN	- Sampling Poir	nt: D1
Investigator(s): Austin Clarridge & Claudia McAllister-Pete	rson, CMT Inc.	Section,	Township, Rar	nge: S5 T34N R11E	-	
Landform (hillside, terrace, etc.): Roadside Ditch		_	Local relief (co	oncave, convex, none)	: Concave	
Slope (%): 5 Lat: 41.428065		Long:	-85.272393		Datum: NAD 83	
Soil Map Unit Name: RbB - Rawson loam, 2 to 6 perce	nt slopes			NWI class	- ification: N/A	
Are climatic / hydrologic conditions on the site typical for		/ear?	Yes X	No (If no, ex		.)
Are Vegetation , Soil , or Hydrology s	-		Are "Normal C	ircumstances" present	•	No
Are Vegetation, Soil, or Hydrologyr				blain any answers in R		
				-		
SUMMARY OF FINDINGS – Attach site ma	ip snowing	g sampli	ng point loo	cations, transects	s, important f	eatures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No			e Sampled Ar in a Wetland?		No	
Remarks:						
VEGETATION – Use scientific names of pla						
Tree Stratum (Plot size:)		Dominant Species?	Indicator Status	Dominance Test wo	orksheet:	
1.				Number of Dominant		
2.				Are OBL, FACW, or	•	2(A)
3				Total Number of Dor	ninant Species	
4				Across All Strata:	_	2(B)
5				Percent of Dominant	•	400.00/ (A/D)
<u>Sapling/Shrub Stratum</u> (Plot size:)	=	Fotal Cove		Are OBL, FACW, or	FAC:	100.0% (A/B)
1.			ŀ	Prevalence Index w	orksheet.	
2.				Total % Cover of		iply by:
3.				OBL species	15 x 1 =	15
4.				FACW species	25 x 2 =	50
5				FAC species	60 x 3 =	180
	=1	Fotal Cove	r		0 x 4 =	0
Herb Stratum (Plot size:)					0 x 5 =	0
1. Juncus tenuis	60	Yes	FAC		00 (A)	245 (B)
2. Carex vulpinoidea		Yes	FACW	Prevalence Index	= B/A =2	2.45
3. Typha X glauca	15	No	OBL			
4				Hydrophytic Vegeta		
5				X 2 - Dominance T	or Hydrophytic Ve	getation
6 7.				X 3 - Prevalence Ir		
8.			——			rovide supporting
9.					rks or on a separa	
10.				Problematic Hyd	Irophytic Vegetation	on ¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

No

Hydrophytic Vegetation Present? Yes X

Remarks: (Include photo numbers here or on a separate sheet.)

(Plot size:

)

Woody Vine Stratum

1.

2.

100 =Total Cover

=Total Cover

Depth (inches)			Redo	x Featur	00		onfirm the absence o	· · · · · · · · · · · · · · · · · · ·
(inches)	Matrix Color (moist)	%	Color (moist)	% %	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/1	85	10YR 5/8	15	<u>- 1)po</u> C	 M	Mucky Loam/Clay	Prominent redox concentrations
3-18	10YR 4/1	90	10YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Co	oncentration, D=Dep	letion, RM	I=Reduced Matrix, I	MS=Mas	ked Sand	d Grains	. ² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							s for Problematic Hydric Soils ³ :
Histosol (,		Sandy Gle	-				Prairie Redox (A16)
	ipedon (A2)		Sandy Re	• •				/anganese Masses (F12)
Black His	()		Stripped M	•	5)			Parent Material (F21)
	n Sulfide (A4)		Dark Surfa	` '				Shallow Dark Surface (F22)
2 cm Mu	Layers (A5)		Loamy Mu Loamy Gle	-				(Explain in Remarks)
	Below Dark Surface	Δ11)	X Depleted I	-				
	rk Surface (A12)	(ATT)	Redox Da				³ Indicators	s of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted I		• •			nd hydrology must be present,
	cky Peat or Peat (S3)	Redox De	pression	s (F8)		unles	s disturbed or problematic.
Restrictive I	ayer (if observed):			•	UNT 2 t	o Bixler	·	
Type:	,		L	ake Dito	:n.			
Depth (in	ches):						Hydric Soil Present	? Yes X No
Remarks:								
	07							
HYDROLO								
HYDROLO Wetland Hyd	Irology Indicators:							
HYDROLO Wetland Hyd	Irology Indicators: ators (minimum of o	ne is requ						y Indicators (minimum of two required)
HYDROLO Wetland Hyd Primary Indic X Surface V	Irology Indicators: ators (minimum of o Water (A1)	ne is requ	Water-Sta	ined Lea	• • •		Surfa	ce Soil Cracks (B6)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat	trology Indicators: ators (minimum of o Water (A1) eer Table (A2)	ne is requ	Water-Sta X Aquatic Fa	ined Lea auna (B1	3)		Surfa X Drain	ce Soil Cracks (B6) age Patterns (B10)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio	trology Indicators: ators (minimum of o Nater (A1) rer Table (A2) n (A3)	ne is requ	Water-Sta X Aquatic Fa	ined Lea auna (B1 itic Plant	3) s (B14))	Surfa X Drain Dry-S	age Patterns (B6) eason Water Table (C2)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma	trology Indicators: ators (minimum of o Nater (A1) rer Table (A2) n (A3)	ne is requ	Water-Sta X Aquatic Fa	ined Lea auna (B1 itic Plant Sulfide (3) s (B14) Ddor (C1)		Surfa Drain Dry-S X_Crayfi	ce Soil Cracks (B6) age Patterns (B10)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen	trology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1)	ne is requ	Water-Sta X Aquatic Fa True Aqua X Hydrogen	ined Lea auna (B1 itic Plant Sulfide (Rhizosph	3) s (B14) Ddor (C1) eres on I	_iving Ro	Surfa X Drain: Dry-S X Crayfi Sots (C3) Satur	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat	trology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	ne is requ	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 sulfide (Sulfide (Rhizosph of Reduc n Reduc	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti	_iving Ro C4)	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat Iron Depd	trology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)		Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7)	_iving Ro C4)	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat Iron Depe	trology Indicators: ators (minimum of o Nater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir	nagery (B	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or	ined Lea auna (B1 Sulfide C Rhizosph of Reduc n Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on I ced Iron (tion in Ti (C7) a (D9)	_iving Ro C4)	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Depa X Algal Mat Iron Depa Inundatio X Sparsely	Arology Indicators: ators (minimum of o Water (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave	nagery (B	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or	ined Lea auna (B1 Sulfide C Rhizosph of Reduc n Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on I ced Iron (tion in Ti (C7) a (D9)	_iving Ro C4)	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat Iron Depa Inundatio X Sparsely Field Observ	Arology Indicators: ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave vations:	nagery (B Surface (Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks)	₋iving Ro C4) lled Soils	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat Iron Depu Inundatio X Sparsely Field Observ Surface Wate	Arology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye	nagery (B Surface (s <u>X</u>	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) temarks) nches):	Living Ro C4) Iled Soils	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat Iron Depe Inundatio X Sparsely Field Observ Surface Water Water Table	Arology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye Present? Ye	nagery (B Surface (s s	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck (7) Gauge or (B8) Other (Exp No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) temarks) nches): _ nches): _	Living Ro C4) lled Soils	s (C6)	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Mat Iron Depu Inundatio X Sparsely Field Observ Surface Water Surface Water Saturation Pr	Arology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye resent? Ye	nagery (B Surface (s <u>X</u>	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck (7) Gauge or (B8) Other (Exp No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) temarks) nches):	Living Ro C4) lled Soils	Surfact X Drain: Dry-S X Crayfi pots (C3) Saturi Sturte s (C6) X Geom	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Maa Iron Depo Inundatio X Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap	Arology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aerial Ir Vegetated Concave vations: er Present? Ye Present? Ye esent? Ye iillary fringe)	magery (B Surface (s s s	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks) nches): nches):	Living Ro C4) Iled Soil: 2 18	Surfax X Drain: Dry-S X Crayfi Saturt s (C6) X Georr X FAC-I	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Maa Iron Depo Inundatio X Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap	Arology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) n Visible on Aerial Ir Vegetated Concave vations: er Present? Ye resent? Ye	magery (B Surface (s s s	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks) nches): nches):	Living Ro C4) Iled Soil: 2 18	Surfax X Drain: Dry-S X Crayfi Saturt s (C6) X Georr X FAC-I	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)
HYDROLO Wetland Hyd Primary Indic X Surface V High Wat X Saturatio Water Ma Sedimen Drift Dep X Algal Maa Iron Depo Inundatio X Sparsely Field Observ Surface Wate Water Table Saturation Pr (includes cap	Arology Indicators: ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aerial Ir Vegetated Concave vations: er Present? Ye Present? Ye esent? Ye iillary fringe)	magery (B Surface (s s s	Water-Sta X Aquatic Fa True Aqua X Hydrogen Oxidized F Presence Recent Iro X Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks) nches): nches):	Living Ro C4) Iled Soil: 2 18	Surfax X Drain: Dry-S X Crayfi Saturt s (C6) X Georr X FAC-I	ce Soil Cracks (B6) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5)

Project/Site: SR 3 & W	aits Road Inters	ection Improveme	ent (Des No. 1900138)	City/County: Noble County	1		Sampling Date:	8/4/2021
Applicant/Owner:	INDOT				State:	IN	Sampling Point:	D2
Investigator(s): Austin	Clarridge & Cla	audia McAllister-	Peterson, CMT Inc.	Section, Township, Range:	S5 T341	N R11E		
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None								
Slope (%): 15	Lat: 41.4280	53		Long: -85.272312			Datum: NAD 83	
Soil Map Unit Name:	Soil Map Unit Name: RbB - Rawson loam, 2 to 6 percent slopes NWI classification: N/A							
Are climatic / hydrolo	gic conditions	on the site typic	cal for this time of ye	ar? Yes <u>X</u> No		(If no, e	xplain in Remarks.)	
Are Vegetation	, Soil, d	or Hydrology	significantly distu	urbed? Are "Normal Circun	nstances"	presen	t? Yes <u>X</u> No)
Are Vegetation	, Soil, c	or Hydrology	naturally problem	natic? (If needed, explain	any answ	/ers in R	Remarks.)	
SUMMARY OF F	INDINGS -	- Attach site	map showing s	sampling point location	ons, tra	insect	s, important fea	tures, etc.
Hydrophytic Vegetal Hydric Soil Present? Wetland Hydrology		Yes Yes Yes	No <u>X</u> No <u>X</u> No X	Is the Sampled Area within a Wetland?	Y	es	NoX	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species
4				Across All Strata: 4 (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: 0.0% (A/B)
Sapling/Shrub Stratum (Plot size:)				
1. Juniperus virginiana	5	Yes	FACU	Prevalence Index worksheet:
2. Pyrus calleryana	5	Yes	UPL	Total % Cover of: Multiply by:
3. Fraxinus pennsylvanica	2	No	FACW	OBL species0 x 1 =0
4.				FACW species 2 x 2 = 4
5.				FAC species 0 x 3 = 0
	12	=Total Cover		FACU species 100 x 4 = 400
Herb Stratum (Plot size:)				UPL species 10 x 5 = 50
1. Festuca arundinacea	60	Yes	FACU	Column Totals: 112 (A) 454 (B)
2. Festuca rubra	20	Yes	FACU	Prevalence Index = B/A = 4.05
3. Ambrosia artemisiifolia	5	No	FACU	
4. Daucus carota	5	No	UPL	Hydrophytic Vegetation Indicators:
5. Asclepias syriaca	5	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
6. Digitaria bicornis	5	No	FACU	2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:				be present, unless disturbed or problematic.
1				
2.				Hydrophytic Vegetation
		=Total Cover		Present? Yes No X
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
	,			

Profile Desc	ription: (Describe	to the dept	h needed to doc	ument t	he indica	ator or o	confirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-4	10YR 4/3	100					Loamy/Clayey			
4-18	10YR 5/3	100					Loamy/Clayey			
								·		
		·								
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, N	MS=Mas	ked San	d Grains	s. ² Locatio	n: PL=Pore Lir	ning, M=Matri	х.
Hydric Soil	Indicators:						Indicate	ors for Problem	natic Hydric	Soils ³ :
Histosol	(A1)		Sandy Gle	yed Mat	rix (S4)		Coa	st Prairie Redo	x (A16)	
Histic Ep	ipedon (A2)		Sandy Red	. ,			Iron	-Manganese M	asses (F12)	
Black His	stic (A3)		Stripped N	latrix (Se	5)		Rec	I Parent Materia	al (F21)	
	n Sulfide (A4)		Dark Surfa	• •				y Shallow Dark	-	.)
—	Layers (A5)		Loamy Mu				Oth	er (Explain in R	emarks)	
2 cm Mu	· · ·		Loamy Gle							
	Below Dark Surface	e (A11)	Depleted M				2			
	rk Surface (A12)		Redox Da		• •			ors of hydrophy	0	
·	ucky Mineral (S1)		Depleted [land hydrology		
	cky Peat or Peat (S	,	Redox Dep	pression	s (F8)		unle	ess disturbed or	problematic.	
	Layer (if observed):	:								
Туре:										
Depth (ir	nches):						Hydric Soil Prese	nt?	Yes	No <u>X</u>
Remarks:										
HYDROLO	GY									
Wetland Hy	drology Indicators:									
Primary India	cators (minimum of c	one is require	ed; check all that a	apply)			Second	ary Indicators (I	minimum of tv	vo required)
Surface	Water (A1)		Water-Stai	ined Lea	ives (B9)		Sur	face Soil Crack	s (B6)	
High Wa	ter Table (A2)		Aquatic Fa	auna (B1	3)		Dra	inage Patterns	(B10)	
Saturatio	on (A3)		True Aqua	itic Plant	s (B14)		Dry	-Season Water	Table (C2)	
Water M	arks (B1)		Hydrogen	Sulfide (Odor (C1)		yfish Burrows (,	
Sedimen	t Deposits (B2)		Oxidized F	Rhizosph	eres on l	_iving R	loots (C3) Sat	uration Visible o	on Aerial Imag	jery (C9)
	osits (B3)		Presence			. ,		nted or Stresse	()	
	t or Crust (B4)		Recent Iro			lled Soi	· · · —	omorphic Position		
	osits (B5)		Thin Muck		• •		FAC	C-Neutral Test (D5)	
	on Visible on Aerial I									
Sparsely	Vegetated Concave	e Surface (B	8)Other (Exp	plain in F	(Remarks					
Field Obser										
Surface Wat		es			nches): _					
Water Table					nches): _					
Saturation P		es	No <u>X</u>	Depth (i	nches): _		Wetland Hydrold	ogy Present?	Yes	No <u>X</u>
(includes cap										
Describe Re	corded Data (stream	gauge, mor	nitoring well, aeria	II photos	, previou	s inspec	ctions), if available:			
Remarks:										

Project/Site: SR 3 & W	Sampling Date:	8/4/2021							
Applicant/Owner:	INDOT					State:	IN	Sampling Point:	E1
Investigator(s): Austin	I Clarridge & Cla	audia McAllister-I	Peterson, CMT Inc.	Section,	, Township, Range:	S4 T34N	I R11E		
Landform (hillside, te	rrace, etc.): R	oadside Ditch			Local relief (conca	ve, conve	x, none):	Concave	
Slope (%): 5	Lat: 41.4247	'49		Long:	-85.268425			Datum: NAD 83	
Soil Map Unit Name: Pe - Pewamo silty clay loam, 0 to 1 percent slopes NWI classification: Riverine (R4SBC)									
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)									
Are Vegetation	, Soil, c	or Hydrology	significantly dist	urbed?	Are "Normal Circum	nstances"	present?	Yes <u>X</u> No)
Are Vegetation	, Soil, c	or Hydrology	naturally probler	natic?	(If needed, explain	any answ	ers in Re	marks.)	
SUMMARY OF F	INDINGS -	- Attach site	map showing	sampli	ing point locatio	ons, tra	nsects	, important feat	tures, etc.
Hydrophytic Vegeta	tion Present?	Yes X	No	ls th	ne Sampled Area				
Hydric Soil Present?	?	Yes X	No	with	nin a Wetland?	Ye	es <u>X</u>	No	
Wetland Hydrology	Present?	Yes X	No						
Remarks:									
SUMMARY OF F Hydrophytic Vegeta Hydric Soil Present? Wetland Hydrology	tion Present?	- Attach site Yes X Yes X	Map showing No No	sampli	ing point locatio	ons, tra	nsects	, important feat	tures, etc.

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 4 (A)
3				Total Number of Dominant Species
4				Across All Strata:4_(B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)			
1. Cornus racemosa	10	Yes	FAC	Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 15 x 1 = 15
4				FACW species 55 x 2 = 110
5.				FAC species 30 x 3 = 90
	10	=Total Cover		FACU species 0 x 4 = 0
Herb Stratum (Plot size:)		•		UPL species 0 x 5 = 0
1. Impatiens capensis	30	Yes	FACW	Column Totals: 100 (A) 215 (B)
2. Phalaris arundinacea	15	Yes	FACW	Prevalence Index = B/A = 2.15
3. Leersia oryzoides	15	Yes	OBL	
4. Geum canadense	10	No	FAC	Hydrophytic Vegetation Indicators:
5. Persicaria maculosa	10	No	FACW	1 - Rapid Test for Hydrophytic Vegetation
6. Calystegia sepium	10	No	FAC	X 2 - Dominance Test is >50%
7.				X 3 - Prevalence Index is ≤3.0 ¹
8.		·		4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	90	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	•		be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Profile Desc Depth	Matr	ix	Redo	ox Featur	es							
(inches)	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0-18	10YR 3/1	80	10YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations				
0.10			N 5/	10								
			10.0/	10								
				·								
T			De de ce d Mateire				21					
		Depletion, RIV	I=Reduced Matrix,	MS=Mas	ked Sand	Grains		n: PL=Pore Lining, M=Matrix.				
Hydric Soil					. (0.1)			ors for Problematic Hydric Soils ³ :				
Histosol			Sandy Glo	-				ast Prairie Redox (A16)				
	pipedon (A2)		Sandy Re	. ,				-Manganese Masses (F12)				
Black His			Stripped N	-	5)			l Parent Material (F21)				
	n Sulfide (A4)		Dark Surf	. ,				y Shallow Dark Surface (F22)				
	l Layers (A5)		Loamy M	•	• •		Oth	er (Explain in Remarks)				
2 cm Mu			Loamy GI	-								
Depleted	Below Dark Sur	face (A11)	Depleted		-							
Thick Da	ark Surface (A12)		X Redox Da	rk Surfac	e (F6)		³ Indicate	ors of hydrophytic vegetation and				
Sandy M	lucky Mineral (S1)	Depleted	Dark Sur	face (F7)		wet	land hydrology must be present,				
5 cm Mu	cky Peat or Peat	(S3)	Redox De	pression	s (F8)		unle	unless disturbed or problematic.				
		n										
Restrictive I	Layer (if observe	ed):										
Restrictive I Type:	Layer (if observe	ed):										
		ed):					Hydric Soil Prese	nt? Yes <u>X</u> No				
Type: Depth (ir		ed):					Hydric Soil Prese	nt? Yes <u>X</u> No_				
Type: _ Depth (ir Remarks:	nches):	ed):					Hydric Soil Prese	nt? Yes <u>X</u> No_				
Type: Depth (ir Remarks: IYDROLO	nches):						Hydric Soil Prese	nt? Yes <u>X</u> No_				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd	nches): OGY drology Indicato	prs:	uired; check all that	apply)				nt? Yes X No				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd	nches): DGY drology Indicato cators (minimum	prs:	uired; check all that		ves (B9)		<u>Second</u>					
Type: Depth (ir Remarks: YDROLO Vetland Hyd Primary Indic X_Surface	nches): DGY drology Indicato cators (minimum	prs:		ined Lea	```		<u>Second</u>	ary Indicators (minimum of two requir				
Type: Depth (ir Remarks: YDROLO Vetland Hyd Primary Indic X Surface V X High Wa	nches): DGY drology Indicator cators (minimum Water (A1) ter Table (A2)	prs:	Water-Sta	iined Lea auna (B1	3)		<u>Second</u> Sur X Dra	ary Indicators (minimum of two requir face Soil Cracks (B6)				
Type: Depth (ir Remarks: YDROLO Vetland Hyd Primary Indic X Surface X High Wa X Saturatic	nches): DGY drology Indicator cators (minimum Water (A1) ter Table (A2)	prs:	Water-Sta	iined Lea auna (B1 atic Plant	3) s (B14))	<u>Second</u> Sur Dra Dry	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10)				
Type: Depth (ir Remarks: Primary Indio X Surface X High Wa X Saturatio Water Ma	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3)	prs:	Water-Sta Aquatic F True Aqua	auna (B1 auna (B1 atic Plant Sulfide (3) s (B14) Ddor (C1		<u>Second</u> Sur Dra Dry Cra	<u>ary Indicators (minimum of two requir</u> face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2)				
Type: Depth (ir Remarks: YDROLO Vetland Hyp Primary Indic X Surface X High Wa X Saturatic Water M: Sedimen	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1)	prs:	Water-Sta Aquatic F True Aqua X Hydrogen	auna (B1 auna (B1 atic Plant Sulfide (Rhizosph	3) s (B14) Ddor (C1 eres on l	_iving Ro	<u>Second</u> Sur Dry Cra Cra Cra Cra	<u>ary Indicators (minimum of two requir</u> face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8)				
Type: Depth (ir Remarks: IYDROLO Vetland Hyd Primary Indic X Surface X High Wa X Saturatic Water Ma Sedimen Drift Dep	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	prs:	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on l ced Iron (_iving Ro C4)	<u>Second</u> Sur X Dra Dry Dots (C3) Stu	<u>ary Indicators (minimum of two requir</u> face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9)				
Type: Depth (ir Remarks: IYDROLO Vetland Hyd Primary Indic X Surface V X High Wa X Saturatic Water M: Sedimen Drift Dep Algal Ma	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3)	prs:	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on I ced Iron (tion in Ti	_iving Ro C4)	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1)				
Type: Depth (ir Remarks: Primary Indic X Surface X High Wa X Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) th Deposits (B2) posits (B3) at or Crust (B4)	o rs: of one is requ	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl	auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc (Surface	3) s (B14) Odor (C1 eres on I ced Iron (tion in Ti (C7)	_iving Ro C4)	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)				
Type: Depth (ir Remarks: Primary Indic X Surface X High Wa X Saturatic Water Ma X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) tt or Crust (B4) posits (B5)	ors: of one is requ ial Imagery (B	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl 37) Gauge or	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on l ced Iron (tion in Ti (C7) a (D9)	_iving Ro C4)	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)				
Type: Depth (ir Remarks: IYDROLO Wetland Hyp Primary Indic X Surface X High Wa X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aer v Vegetated Conc	ors: of one is requ ial Imagery (B	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl 37) Gauge or	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Odor (C1 eres on l ced Iron (tion in Ti (C7) a (D9)	_iving Ro C4)	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aer vegetated Conc vations:	ors: of one is requ ial Imagery (B	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl 37) Gauge or	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) remarks)	_iving Ro C4)	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd Primary Indic X Surface X High Wa X Saturatic Water Ma X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerr v Vegetated Conc vations: er Present?	ors: of one is requ ial Imagery (B cave Surface (Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl 37) Gauge or (B8) Other (Ex	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat plain in R	3) s (B14) Ddor (C1 eres on I ced Iron (tion in Ti (C7) a (D9) remarks) nches): _	Living Ro C4) lled Soils	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2)				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd Primary Indio X Surface V X High Wa X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Water	PGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aer vegetated Conc vations: er Present? Present?	ors: of one is requ ial Imagery (B cave Surface (Yes X	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl 37) Gauge or (B8) Other (Ex	ined Lea auna (B1 Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat plain in R	3) s (B14) Odor (C1 eres on I xed Iron (tion in Ti (C7) a (D9) emarks) nches):	Living Ro C4) Iled Soils	Second	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd Primary Indic X Surface V X High Wa X Saturatic Water M: Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wate Water Table Saturation P	PGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aer vegetated Conc vations: er Present? Present?	ors: of one is requ ial Imagery (B ave Surface (Yes X Yes X	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl Gauge or (B8) Other (Ex No No	ined Lea auna (B1 Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat plain in R Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on I xed Iron (tion in Ti (C7) a (D9) emarks) nches):	Living Ro C4) Iled Soil: 0.5 18	Second Sur X Dra Dry Cra Sots (C3) Sat Stu S (C6) X Geo X FAC	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)				
Type: Depth (ir Remarks: IYDROLO Wetland Hyd Primary Indic X Surface V X High Wa X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wate Water Table Saturation Pe (includes cap	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerr v Vegetated Conce vations: er Present? Present? present? present? pollary fringe)	ors: of one is requ ial Imagery (B cave Surface (Yes X Yes X Yes X	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized Presence Recent Iro Thin Mucl Gauge or (B8) Other (Ex No No	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat plain in R Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) a (D9) cemarks) nches):	Living Ro C4) Iled Soil: 0.5 18 18	Second X X	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)				
Type: Depth (ir Remarks: Primary Indic X Surface V X High Wa X Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wate Nater Table Saturation Pla	DGY drology Indicato cators (minimum Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aerr v Vegetated Conce vations: er Present? Present? present? present? pollary fringe)	ors: of one is requ ial Imagery (B cave Surface (Yes X Yes X Yes X	Water-Sta Aquatic F True Aqua X Hydrogen Oxidized I Presence Recent Ird Thin Mucl 37) Gauge or (B8) Other (Ex No No No No	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface Well Dat plain in R Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) a (D9) cemarks) nches):	Living Ro C4) Iled Soil: 0.5 18 18	Second X X	ary Indicators (minimum of two requir face Soil Cracks (B6) inage Patterns (B10) -Season Water Table (C2) yfish Burrows (C8) uration Visible on Aerial Imagery (C9) nted or Stressed Plants (D1) omorphic Position (D2) C-Neutral Test (D5)				

Project/Site: SR 3 & Waits Road Intersection Improvement (Des No. 1900138) City/County: Noble County										Sampling Date:	8/4/2021
Applicant/Owner:	INDOT							State:	IN	Sampling Point	E2
Investigator(s): Austir	n Clarridge & C	Claudia McAllister-	Peterson, CMT Inc.	Section,	Towns	hip, Rar	nge:	S4 T34N	R11E		
Landform (hillside, te	errace, etc.): I	Hillslope			Local	relief (c	oncav	e, conve	k, none):	None	
Slope (%): 10	Lat: 41.424	750		Long:	-85.268	8352				Datum: NAD 83	
Soil Map Unit Name: Pe - Pewamo silty clay loam, 0 to 1 percent slopes NWI classification: N/A											
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)											
Are Vegetation	, Soil,	, or Hydrology	significantly dist	urbed?	Are "N	ormal C	ircum	stances"	present?	Yes <u>X</u>	lo
Are Vegetation	, Soil,	, or Hydrology	naturally probler	natic?	(If need	ded, exp	plain a	ny answ	ers in Re	emarks.)	
SUMMARY OF I	INDINGS	– Attach site	map showing	sampli	ing po	oint lo	catio	ns, tra	nsects	, important fe	atures, etc.
Hydrophytic Vegeta	tion Present?	Yes	No_X	ls th	ne Sam	pled Ar	ea				
Hydric Soil Present	?	Yes	No X	with	nin a We	etland?	•	Ye	es	No X	
Wetland Hydrology	Present?	Yes	No <u>X</u>								
Remarks:											

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species
4				Across All Strata: <u>2</u> (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot size:)			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 0 x 1 = 0
4.				FACW species 40 x 2 = 80
5.				FAC species 0 x 3 = 0
		=Total Cover		FACU species 60 x 4 = 240
Herb Stratum (Plot size:)				UPL species $0 \times 5 = 0$
1. Phalaris arundinacea	40	Yes	FACW	Column Totals: 100 (A) 320 (B)
2. Solidago canadensis	40	Yes	FACU	Prevalence Index = B/A = 3.20
3. Dipsacus fullonum	10	No	FACU	
4. Festuca arundinacea	10	No	FACU	Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes No X
Remarks: (Include photo numbers here or on a se	eparate sheet.)			

Profile Desci Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-18	10YR 4/3	100					Loamy/Clay	ey		
								<u> </u>		
		· ·								
		· ·								
		· ·								
¹ Type: C=Co	ncentration, D=Dep	letion, RM	=Reduced Matrix, N	/IS=Mas	ked Sand	d Grains	. ² Lo	cation: PL	=Pore Lining, M=Mat	rix.
Hydric Soil I	ndicators:						Ind	icators for	r Problematic Hydrid	: Soils ³ :
Histosol (A1)		Sandy Gle	yed Mat	rix (S4)			Coast Pra	iirie Redox (A16)	
Histic Epi	pedon (A2)		Sandy Red	dox (S5)				- Iron-Mang	ganese Masses (F12)	
Black His	tic (A3)		Stripped N	latrix (Se	6)			Red Pare	nt Material (F21)	
Hydrogen	n Sulfide (A4)		Dark Surfa	ice (S7)				- Very Shal	low Dark Surface (F2	2)
Stratified	Layers (A5)		Loamy Mu	cky Min	eral (F1)			Other (Ex	plain in Remarks)	
2 cm Muc	ck (A10)		Loamy Gle	eyed Ma	trix (F2)			-		
Depleted	Below Dark Surface	e (A11)	Depleted N	Лatrix (F	3)					
Thick Dar	rk Surface (A12)		Redox Dar	k Surfac	ce (F6)		³ Inc	licators of I	hydrophytic vegetatio	n and
Sandy Mu	ucky Mineral (S1)		Depleted [Dark Sur	face (F7)			wetland h	ydrology must be pre	sent,
5 cm Muc	ky Peat or Peat (S3	3)	Redox Dep	pression	s (F8)			unless dis	turbed or problemation	C .
Restrictive L	ayer (if observed):	•								
Restrictive L Type:	ayer (if observed):	•								
							Hydric Soil Pr	resent?	Yes	<u>No X</u>
Type: _ Depth (ind Remarks:	ches):						Hydric Soil Pr	resent?	Yes	<u>No X</u>
Type: Depth (inc	ches):						Hydric Soil Pr	resent?	Yes	<u>No X</u>
Type: Depth (ind Remarks: HYDROLO	ches):						Hydric Soil Pr	resent?	Yes	<u>No X</u>
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd	ches):								Yes	
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica	ches): GY Irology Indicators:		Water-Stai	ned Lea	()			condary Inc	<u>dicators (minimum of</u> oil Cracks (B6)	
Type: Depth (ind Remarks: HYDROLO Wetland Hyd Primary Indica Surface V High Wat	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2)		Water-Stai	ined Lea iuna (B1	3)			condary Inc Surface S Drainage	<u>dicators (minimum of</u> oil Cracks (B6) Patterns (B10)	
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indic: Surface V High Wat Saturation	GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3)		Water-Stai Aquatic Fa True Aqua	ined Lea iuna (B1 tic Plant	3) s (B14)			condary Inc Surface S Drainage Dry-Seaso	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2)	
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wat Saturation Water Ma	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1)		Water-Stai Aquatic Fa True Aqua Hydrogen	ined Lea iuna (B1 tic Plant Sulfide (3) s (B14) Odor (C1)	,	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wat Saturation Water Ma Sediment	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea iuna (B1 tic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1) neres on I	, _iving R	<u>Sec</u>	condary Inc Surface S Drainage Dry-Seaso Crayfish E Saturatior	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3)		Water-Stai	ined Lea iuna (B1 tic Plant Sulfide (Rhizosph	3) S (B14) Odor (C1) Neres on I Ced Iron (, _iving R (C4)	<u>Sec</u>	condary Inc Surface S Drainage Dry-Seaso Crayfish E Saturatior Stunted o	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat	GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4)		Water-Stai	ined Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1) neres on I ced Iron (ction in Ti	, _iving R (C4)	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indic: Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5)	one is requ	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck	ined Lea una (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface	3) S (B14) Odor (C1) neres on I ced Iron (ction in Ti e (C7)	, _iving R (C4)	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial I	one is requ	Water-Stail Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 7) Gauge or V	ined Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat	3) S (B14) Odor (C1) neres on I ced Iron (ction in Ti ction in Ti c(C7) a (D9)	, ∟iving R C4) lled Soil	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Saturation Unift Depo Algal Mat Iron Depo Inundation Sparsely	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave	one is requ	Water-Stail Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck 7) Gauge or V	ined Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat	3) S (B14) Odor (C1) neres on I ced Iron (ction in Ti ction in Ti c(C7) a (D9)	, ∟iving R C4) lled Soil	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indic: Surface V High Wate Saturation Water Ma Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave vations:	one is requ magery (B ∋ Surface (Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp	ned Lea nuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat	3) Odor (C1) neres on I ced Iron (ction in Ti e (C7) ra (D9) Remarks)	Living R C4) Iled Soil	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Water	GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave vations: er Present? Ye	magery (B Surface (Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp	ned Lea nuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat olain in F	3) Ss (B14) Odor (C1) neres on I ced Iron (ction in Ti e (C7) a (D9) Remarks) nches): _	, C4) lled Soil	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2)	two required)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table F	GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4) osits (B5) n Visible on Aerial I Vegetated Concave vations: er Present? Ye	magery (B Surface (Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck 7) Gauge or N B8) Other (Exp No X No X	ned Lea una (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	3) Odor (C1) heres on I ced Iron (ction in Ti e (C7) (C7) a (D9) Remarks) nches): _ nches): _	, C4) lled Soil	Sec 	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	two required) agery (C9)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4) osits (B5) n Visible on Aerial I Vegetated Concave rations: er Present? Ye esent? Ye	magery (B Surface (Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck 7) Gauge or N B8) Other (Exp No X No X	ned Lea una (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	3) Ss (B14) Odor (C1) neres on I ced Iron (ction in Ti e (C7) a (D9) Remarks) nches): _	, C4) lled Soil	<u>Sec</u>	condary Inc Surface S Drainage Dry-Sease Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	two required) agery (C9)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wata Saturation Water Ma Sediment Orift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap	Ches): GY Irology Indicators: ators (minimum of consecutive Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave vations: er Present? Yee esent? Yee esent? Yee illary fringe)	magery (B ss	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp No X No X No X	ned Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	3) 3(B14) Odor (C1) heres on l ced Iron (ction in Ti (C7)	Living R C4) Iled Soil	Sec poots (C3) s (C6) Wetland Hyde	condary Inc Surface S Drainage Dry-Seaso Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	two required) agery (C9)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wata Saturation Water Ma Sediment Orift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap	Ches): GY Irology Indicators: ators (minimum of c Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4) osits (B5) n Visible on Aerial I Vegetated Concave rations: er Present? Ye esent? Ye	magery (B ss	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp No X No X No X	ned Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	3) 3(B14) Odor (C1) heres on l ced Iron (ction in Ti (C7)	Living R C4) Iled Soil	Sec poots (C3) s (C6) Wetland Hyde	condary Inc Surface S Drainage Dry-Seaso Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	two required) agery (C9)
Type: Depth (ind Remarks: HYDROLOO Wetland Hyd Primary Indica Surface V High Wata Saturation Water Ma Sediment Orift Depo Algal Mat Iron Depo Inundation Sparsely Field Observ Surface Wate Water Table F Saturation Pro (includes cap	Ches): GY Irology Indicators: ators (minimum of consecutive Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial I Vegetated Concave vations: er Present? Yee esent? Yee esent? Yee illary fringe)	magery (B ss	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 7) Gauge or V B8) Other (Exp No X No X No X	ned Lea iuna (B1 tic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F Depth (i Depth (i	3) 3(B14) Odor (C1) heres on l ced Iron (ction in Ti (C7)	Living R C4) Iled Soil	Sec poots (C3) s (C6) Wetland Hyde	condary Inc Surface S Drainage Dry-Seaso Crayfish E Saturatior Stunted o Geomorpl FAC-Neut	dicators (minimum of oil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Ima r Stressed Plants (D1 hic Position (D2) tral Test (D5)	two required) agery (C9)

Project/Site: SR 3 & Waits Road Intersection Improvement (I	Des No. 19001	38) City/Co	ounty: Noble C	ounty	Sampling Da	nte: <u>8/4/2</u>	2021
Applicant/Owner: INDOT				State: IN	Sampling Po	int:	F1
Investigator(s): Austin Clarridge & Claudia McAllister-Pete	erson, CMT Ir	nc. Section,	Township, Rai	nge: S4 T34N R11E	_		
Landform (hillside, terrace, etc.): Roadside Ditch			Local relief (c	oncave, convex, none)	: Concave		
Slope (%): 5 Lat: 41.423319		Long:	- -85.267414		Datum: NAD 8	3	
Soil Map Unit Name: MrB2 - Glynwood silt loam, 2 to 6	opercent slo	pes, eroded		NWI class	ification: N/A		
Are climatic / hydrologic conditions on the site typical f	or this time o	f year?	Yes X	No (If no, ex	plain in Remark	s.)	
Are Vegetation , Soil , or Hydrology		-		ircumstances" present			
Are Vegetation, Soil, or Hydrology				plain any answers in R			-
				-	,	footuroo	oto
SUMMARY OF FINDINGS – Attach site ma	ap shown		ing point io		s, important	reatures	s, etc.
Hydrophytic Vegetation Present? Yes X No	0	Is th	ne Sampled Ar	ea			
Hydric Soil Present? Yes X No	°	with	nin a Wetland?	Yes X	No		
Wetland Hydrology Present? Yes X No	°						
Remarks:							
VEGETATION – Use scientific names of pla							
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test wo	orksheet:		
1.				Number of Dominant			
2.				Are OBL, FACW, or	•	5	(A)
3.				Total Number of Dor	- ninant Species		_
4				Across All Strata:	_	5	_(B)
5				Percent of Dominant	•		
Quality (Qlands Qhashara) (Dlataina)		=Total Cove	er	Are OBL, FACW, or	FAC:	100.0%	_(A/B)
Sapling/Shrub Stratum (Plot size:1.)			Prevalence Index w	orkshoot:		
2.				Total % Cover of		ltiply by:	
3.					30 x 1 =	80	-
4.				FACW species	20 x 2 =	40	_
5				FAC species	10 x 3 =	30	_
		=Total Cove	er		0 x 4 =	0	_
Herb Stratum (Plot size:)					$0 \times 5 = -$	0	-
1. Typha X glauca	<u>30</u> 30	Yes	OBL		<u>10</u> (A)	150 1.36	_ ^(B)
Scirpus atrovirens Cyperus esculentus	20	Yes Yes	OBL FACW	Prevalence Index	– D/A –	1.30	_
4. Scirpus pendulus	20	Yes	OBL	Hydrophytic Vegeta	ation Indicators	:	
5.				1 - Rapid Test fo			
6.				X 2 - Dominance T		-	
7.				X 3 - Prevalence Ir			
8				4 - Morphologica			
9.				data in Rema	ks or on a sepa	rate sheet))

Problematic Hydrophytic Vegetation ¹ (Explain)	
---	--

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

No

Hydrophytic Vegetation Present? Yes X

Remarks: (Include photo numbers here or on a separate sheet.)

(Plot size:

)

Woody Vine Stratum

10.

1.

2.

100 =Total Cover

=Total Cover

8-18 10YR 3/2 60	Remarks t redox concentrations redox concentrations
0-8 10YR 3/1 90 10YR 5/6 10 C M Loamy/Clayey Prominer 8-18 10YR 3/2 60	
8-18 10YR 3/2 60	edox concentrations
10YR 6/3 30 10YR 5/6 10 C M Distinct "Indicators: Indicators: Indicators: Indicators for Problet Histic Epidedin (A1) Sandy Gleyed Matrix (S4) Coast Prairie Red Histic Epidedin (A2) Sandy Redox (S5) Iron-Manganese M Black Histic (A3) Stripped Matrix (S6) Red Parent Materi Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Stratified Layres (A5) Loamy Mucky Mineral (F1) Other (Explain in F 2 cm Muck (A10) Loamy Gleyed Matrix (F2) Other (Explain in F 2 sandy Mucky Mineral (S1) Depleted Dark Surface (F6) ³ Indicators of hydrophy Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland hydrology 5 om Mucky Peat or Peat (S3) Redox Depressions (F8) unless disturbed o Restrictive Layer (If observed): Type:	edox concentrations
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lit Hydric Soil Indicators: Indicators for Proble Histosol (A1) Sandy Redox (S5) Iron-Manganese M Black Histic (A3) Stripped Matrix (S6) Red Parent Materi Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Stratified Layers (A5) Loarny Mucky Mineral (F1) Other (Explain in F 2 cm Muck (A10) Loarny Mucky Mineral (F1) Other (Explain in F Depleted Below Dark Surface (A11) Depleted Matrix (F3) ³ Indicators of hydrophy S tratified Layers (A5) Loarny Mucky Mineral (F1) Other (Explain in F Depleted Below Dark Surface (A12) X Redox Dark Surface (F6) ³ Indicators of hydrophy S of Mucky Peat or Peat (S3) Redox Depressions (F8) unless disturbed o Restrictive Layer (If observed): Type: Type: Depleted Matrix (B1) Surface Bill X Dariage Patterns Water-Stained Leaves (B9) X Draface Soil Crack Surface Soil Crack High Water Table (A2) Aquatic Fauna (B13) X Draface Soil Crack YDROLOGY Water-Stained Leaves (B9) X Draface Soil Crack <td></td>	
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Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	
	()
Field Observations:	()
	()
Surface Water Present? Yes No X Depth (inches):	()
Water Table Present? Yes No X Depth (inches):	()
Saturation Present? Yes X No Depth (inches): 18 Wetland Hydrology Present?	()
(includes capillary fringe)	D5)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	D5)
Pomarka	D5)
Remarks:	D5)
	D5)

Project/Site: SR 3 & V	Vaits Road Interse	ection Improvemen	it (Des No. 1900138) C	City/County: Noble County	'		Sampling Date:	8/4/2021
Applicant/Owner:	INDOT				State:	IN	Sampling Point:	F2
Investigator(s): Austir	າ Clarridge & Cla	audia McAllister-P	veterson, CMT Inc. Se	ection, Township, Range:	S4 T34N	NR11E		
Landform (hillside, te	errace, etc.): <u>Hi</u>	illslope		Local relief (concave, co	onvex, no	ne):	None	
Slope (%): 15	Lat: 41.4233	01		Long: -85.267364			Datum: NAD 83	
Soil Map Unit Name:	MrB2 - Glynwo	ood silt loam, 2 to	o 6 percent slopes, e	roded	N	WI classi	ification: N/A	
Are climatic / hydrolo	gic conditions	on the site typica	al for this time of year	r? Yes <u>X</u> No		(If no, ex	plain in Remarks.)	
Are Vegetation	, Soil, c	or Hydrology	significantly disturb	bed? Are "Normal Circum	nstances"	present	? Yes <u>X</u> No	<u></u>
Are Vegetation	, Soil, c	or Hydrology	naturally problema	atic? (If needed, explain a	any answ	ers in Re	emarks.)	
SUMMARY OF F	FINDINGS -	Attach site	map showing sa	ampling point locatio	ons, tra	nsects	, important fea	tures, etc.
Hydrophytic Vegeta	ition Present?	Yes	No <u>X</u>	Is the Sampled Area				
Hydric Soil Present	?	Yes	No X	within a Wetland?	Y	es	No X	
Wetland Hydrology	Present?	Yes	No X					

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant Species
4				Across All Strata: 2 (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: 0.0% (A/B)
Sapling/Shrub Stratum (Plot size:	_)			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species0 x 1 =0
4.				FACW species 0 x 2 = 0
5.				FAC species 0 x 3 = 0
		=Total Cover		FACU species 90 x 4 = 360
Herb Stratum (Plot size:)				UPL species 10 x 5 = 50
1. Festuca arundinacea	40	Yes	FACU	Column Totals: 100 (A) 410 (B)
2. Festuca rubra	20	Yes	FACU	Prevalence Index = B/A = 4.10
3. Asclepias syriaca	15	No	FACU	
4. Daucus carota	10	No	UPL	Hydrophytic Vegetation Indicators:
5. Digitaria bicornis	10	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
6. Lolium perenne	5	No	FACU	2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes No X
Remarks: (Include photo numbers here or on a se	parate sheet.)			

Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-18	10YR 5/2	100					Loamy/Clay	ey		
		<u> </u>								
¹ Type: C=Co	oncentration, D=Dep	letion, RM	I=Reduced Matrix, I	MS=Mas	ked Sand	d Grains	. ² Lo	cation: PL=Pc	ore Lining, M=Mat	trix.
Hydric Soil	Indicators:						Ind	licators for Pr	oblematic Hydri	c Soils ³ :
Histosol	(A1)		Sandy Gle	eyed Mat	rix (S4)			Coast Prairie	Redox (A16)	
Histic Ep	ipedon (A2)		Sandy Re	• •				Iron-Mangane	ese Masses (F12)
Black His	()		Stripped N	•	6)			Red Parent M	· · ·	
Hydroge	n Sulfide (A4)		Dark Surfa	• • •					Dark Surface (F2	22)
	l Layers (A5)		Loamy Mu	•	• •			_Other (Explai	n in Remarks)	
2 cm Mu	. ,		Loamy Gle	•	• •					
	Below Dark Surfac	e (A11)	Depleted I				2			
	rk Surface (A12)		Redox Da		• •		'lno		rophytic vegetatio	
	Sandy Mucky Mineral (S1)				face (F7)			•	ology must be pre	
5 cm Mu	cky Peat or Peat (S	,	Redox De	pression	s (F8)			unless disturb	ped or problemati	С.
	Layer (if observed)									
Туре:		:								
		: 					Hydric Soil Pi	resent?	Yes	<u>No</u>
Type: _ Depth (ir Remarks:	nches):						Hydric Soil Pi	resent?	Yes	<u>No</u>
Type: _ Depth (ir Remarks:	nches):	: 					Hydric Soil Pi	resent?	Yes	<u>No</u>
Type: Depth (ir Remarks: HYDROLO	nches):						Hydric Soil Pi	resent?	Yes	<u>No</u>
Type: _ Depth (ir Remarks: 1YDROLO Wetland Hyd Primary Indic	nches): GY drology Indicators: cators (minimum of c							condary Indica	tors (minimum of	
Type: Depth (ir Remarks: TYDROLO Wetland Hyu Primary Indic Surface	nches): GY drology Indicators: cators (minimum of o Water (A1)		Water-Sta	ined Lea	、			condary Indica	tors (minimum of Cracks (B6)	
Type: Depth (ir Remarks: TYDROLO Wetland Hyo Primary Indic Surface V High Wa	hches): GY drology Indicators: cators (minimum of of Water (A1) ter Table (A2)		Water-Sta Aquatic Fa	ined Lea auna (B1	3)			<u>condary Indica</u> Surface Soil (Drainage Pat	<u>tors (minimum of</u> Cracks (B6) terns (B10)	
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3)		Water-Sta Aquatic Fa	ined Lea auna (B1 itic Plant	3) s (B14)			condary Indica Surface Soil (Drainage Pat Dry-Season V	<u>tors (minimum of</u> Cracks (B6) terns (B10) Vater Table (C2)	
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water Mi	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 itic Plant Sulfide (3) s (B14) Ddor (C1))	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary India Surface High Wa Saturatic Water M: Sedimen	Anches): Anches		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph	3) s (B14) Ddor (C1) eres on I) ₋iving R	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis	tors (minimum of Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Im	two require
Type: Depth (ir Remarks: TYDROLO Wetland Hyp Primary Indic Surface High Wa Saturatic Water Ma Sedimen Drift Dep	Anches): GGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1) eres on I ced Iron () ₋iving R C4)	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St	tors (minimum of Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D	two require
Type: Depth (ir Remarks: TYDROLO Wetland Hyd Primary India Surface V High Wa Saturatic Water M: Sedimen Drift Dep Algal Ma	Anches): IGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti) ₋iving R C4)	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water Ma Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) t or Crust (B4) osits (B5)	one is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc Surface	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti e (C7)) ₋iving R C4)	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water Ma Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) osits (B5) on Visible on Aerial	<u>one is requ</u> magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 Sulfide (Rhizosph of Reduc in Reduc Surface Well Dat	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9)) ₋iving R C4) Iled Soil	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyu Primary Indic Surface V High Wa Saturatic Water M Saturatic Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely	Arches): GGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) to Deposits (B2) posits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I v Vegetated Concave	<u>one is requ</u> magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 Sulfide (Rhizosph of Reduc in Reduc Surface Well Dat	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9)) ₋iving R C4) Iled Soil	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2)	two require
Type: Depth (ir Remarks: TYDROLO Wetland Hyd Primary India Surface V High Wa Saturatio Water Ma Saturatio Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely	Aches): AGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) osits (B5) on Visible on Aerial I v Vegetated Concave vations:	one is requ magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in F	3) s (B14) Ddor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks)) ₋iving R C4) Iled Soil	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatic Water M: Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Water	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) oosits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial I v Vegetated Concave vations: er Present?	magery (B e Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc c Surface Well Dat blain in F	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks) nches):) ₋iving R C4) Iled Soil	<u>Sec</u>	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I	tors (minimum of Cracks (B6) terns (B10) Nater Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatic Water Ma Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Water	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial I v Vegetated Concave vations: er Present? Ye	magery (B e Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck (7) Gauge or (B8) Other (Exp No X No X	ined Lea auna (B1 sulfide (Rhizosph of Reduc c Surface Well Dat blain in F Depth (i Depth (i	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks) ches): _ nches): _) ₋iving R C4) Iled Soil	Sec 	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I FAC-Neutral	tors (minimum of Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2) Test (D5)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wa Saturatic Water M: Sedimen Drift Dep Algal Ma Iron Dep Inundatic Sparsely Field Obser Surface Wate Water Table Saturation P	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial I v Vegetated Concave vations: er Present? Ye resent? Ye	magery (B e Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck (7) Gauge or (B8) Other (Exp No X No X	ined Lea auna (B1 sulfide (Rhizosph of Reduc c Surface Well Dat blain in F	3) s (B14) Odor (C1) eres on I ced Iron (tion in Ti (C7) a (D9) Remarks) ches): _ nches): _) ₋iving R C4) Iled Soil	Sec 	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I	tors (minimum of Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2) Test (D5)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wate Water Table Saturation Pi (includes cap	Aches): Ach	magery (B e Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 titc Plant Sulfide (Rhizosph of Reduc n Reduc s Surface Well Dat blain in F Depth (i Depth (i	3) s (B14) Ddor (C1) eres on I ced Iron (titon in Ti (C7) a (D9) Remarks) a (D9) Remarks):) _iving R C4) Iled Soil	oots (C3)	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I FAC-Neutral	tors (minimum of Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2) Test (D5)	two require
Type: Depth (ir Remarks: HYDROLO Wetland Hyd Primary India Surface V High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Inundatio Sparsely Field Obser Surface Wate Water Table Saturation Pi (includes cap	PGY drology Indicators: cators (minimum of of Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2) posits (B3) tt or Crust (B4) osits (B5) on Visible on Aerial I v Vegetated Concave vations: er Present? Ye resent? Ye	magery (B e Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or B8) Other (Exp No X No X No X	ined Lea auna (B1 titc Plant Sulfide (Rhizosph of Reduc n Reduc s Surface Well Dat blain in F Depth (i Depth (i	3) s (B14) Ddor (C1) eres on I ced Iron (titon in Ti (C7) a (D9) Remarks) a (D9) Remarks):) _iving R C4) Iled Soil	oots (C3)	condary Indica Surface Soil (Drainage Pat Dry-Season V Crayfish Burr Saturation Vis Stunted or St Geomorphic I FAC-Neutral	tors (minimum of Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Im ressed Plants (D ⁻ Position (D2) Test (D5)	two require

Project/Site: SR 3 & Waits Road Intersection Improvement (Des I	No. 1900138) City/Co	unty: Noble Count	ý	Sampling Da	ate: 8/4/2	021
Applicant/Owner: INDOT			State: IN	Sampling Po	oint:	G1
Investigator(s): Austin Clarridge & Claudia McAllister-Peterso	n, CMT Inc. Section,	Township, Range:	S4 T34N R11E			
Landform (hillside, terrace, etc.): Roadside Ditch	·	Local relief (conca				
Slope (%): 5 Lat: 41.423296	Long:	-85.266512		Datum: NAD 8	3	
Soil Map Unit Name: MrB2 - Glynwood silt loam, 2 to 6 pe	rcent slopes, eroded		NWI cla	ssification: N/A		
Are climatic / hydrologic conditions on the site typical for th	•	Yes X No) (If no,	explain in Remark	(s.)	
Are Vegetation, Soil, or Hydrologysign						
Are Vegetation, Soil, or Hydrology natu						-
					factures	
SUMMARY OF FINDINGS – Attach site map	snowing sampli	ng point locati	ons, transec	is, important	reatures	s, eιc.
Hydrophytic Vegetation Present? Yes X No	Is th	e Sampled Area				
Hydric Soil Present? Yes X No	with	in a Wetland?	Yes X	<u>No</u>		
Wetland Hydrology Present? Yes X No						
Remarks:						
VECETATION Lies scientific names of plants						
VEGETATION – Use scientific names of plants	.bsolute Dominant	Indicator				
	6 Cover Species?		minance Test v	worksheet:		
1		Nu	mber of Domina	nt Species That		
2		Are	e OBL, FACW, o	or FAC:	2	_(A)
3				ominant Species		
4			ross All Strata:	-	2	_ ^(B)
· · · · · · · · · · · · · · · · · · ·	=Total Cove		rcent of Domina e OBL, FACW, c	nt Species That or FAC [.]	100.0%	(A/B)
			, , , , , , , , , , , , , , , , , , ,	-	100.070	_(,,,,,)
1. · · · · · · · · · · · · · · · · · · ·		Pr	evalence Index	worksheet:		
2.			Total % Cove	r of: Mu	ltiply by:	_
3		OE	BL species	55 x 1 =	55	_
4			CW species	25 x 2 =	50	_
5			C species	$\frac{0}{100}$ x 3 =	0	-
Horb Stratum (Plot size:	=Total Cove		CU species	$\begin{array}{c} 20 \\ 0 \\ x 5 = \end{array}$	80 0	-
Herb Stratum (Plot size:) 1. Typha X glauca	45 Yes		L species	$\frac{0}{100}$ (A)	185	– (B)
2. Cyperus esculentus				(-)	1.85	_('')
3. Sorghastrum nutans	10 No	FACU		-		-

2. Cyperus esculentus	25	res	FACW	Prevalence index = $B/A = 1.85$
3. Sorghastrum nutans	10	No	FACU	
4. Carex torreyi	10	No	FACU	Hydrophytic Vegetation Indicators:
5. Scirpus atrovirens	10	No	OBL	1 - Rapid Test for Hydrophytic Vegetation
6.				X 2 - Dominance Test is >50%
7.				\overline{X} 3 - Prevalence Index is $\leq 3.0^1$
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes X No
Remarks: (Include photo numbers here or on a separa	ate sheet.)			

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Profile Description: (Desc							
Depth Ma			ox Featur	4	2		
(inches) Color (mois	st) <u>%</u>	Color (moist)	%	Туре	Loc ²	Texture	Remarks
0-18 10YR 3/2	2 90	10YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
· ·							
			·				
¹ Type: C=Concentration, D	=Depletion. RM=	Reduced Matrix.	MS=Mas	ked San	d Grains	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	<u></u>						rs for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Gle	eved Mat	rix (S4)			st Prairie Redox (A16)
Histic Epipedon (A2)		Sandy Re					Manganese Masses (F12)
Black Histic (A3)		Stripped M	. ,	;)			Parent Material (F21)
Hydrogen Sulfide (A4)		Dark Surfa	-	,)			Shallow Dark Surface (F22)
Stratified Layers (A5)		Loamy Mu	• • •	eral (F1)			er (Explain in Remarks)
2 cm Muck (A10)		Loamy Gle	-				
Depleted Below Dark St	urface (A11)	Depleted I	-				
Thick Dark Surface (A12		X Redox Da				³ Indicato	rs of hydrophytic vegetation and
Sandy Mucky Mineral (S	,	Depleted I		. ,	`		and hydrology must be present,
5 cm Mucky Peat or Pea		Redox De		•)		ss disturbed or problematic.
	()		pression	s (i 0)		unie	
Restrictive Layer (if obser	ved):						
Туре:							
Depth (inches):						Hydric Soil Presen	t? Yes X No
HYDROLOGY							
Wetland Hydrology Indica							
Wetland Hydrology Indica Primary Indicators (minimum							ry Indicators (minimum of two required)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1)		Water-Sta	ined Lea	• • •		X Surfa	ace Soil Cracks (B6)
Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Water-Sta Aquatic Fa	ined Lea auna (B1	3)		X Surfa X Drain	ace Soil Cracks (B6) nage Patterns (B10)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)		Water-Sta Aquatic Fa True Aqua	ined Lea auna (B1 atic Plants	3) s (B14)		X Surfa X Drain Dry-	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	<u>n of one is requi</u>	Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 atic Plants Sulfide C	3) s (B14))dor (C1)	X Surfa X Drain Dry- X Cray	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	<u>n of one is requi</u>	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plants Sulfide C Rhizosph	3) s (B14) Odor (C1 eres on) Living R	X Surfa X Drain Dry- X Cray Satu	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	<u>n of one is requi</u>	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc	3) s (B14) Ddor (C1 eres on ed Iron) Living R (C4)	oots (C3)	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	<u>n of one is requi</u>	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc	3) s (B14) Odor (C1 eres on ed Iron tion in T) Living R (C4)	X Surfa X Drain Dry-i Dry-i X Cray Satu Satu is (C6) X	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	<u>n of one is requi</u>	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface	3) s (B14) Odor (C1 eres on eed Iron tion in T (C7)) Living R (C4)	X Surfa X Drain Dry-i Dry-i X Cray Satu Satu is (C6) X	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae	<u>n of one is requii</u> erial Imagery (B7	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface Well Data	3) s (B14) Odor (C1 eres on eed Iron tion in T (C7) a (D9)) Living R (C4) illed Soil	X Surfa X Drain Dry-i Dry-i X Cray Satu Satu is (C6) X	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor	<u>n of one is requii</u> erial Imagery (B7	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface Well Data	3) s (B14) Odor (C1 eres on eed Iron tion in T (C7) a (D9)) Living R (C4) illed Soil	X Surfa X Drain Dry-i Dry-i X Cray Satu Satu is (C6) X	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations:	<u>n of one is requii</u> erial Imagery (B7	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or 38) Other (Exp	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface Well Data plain in R	3) s (B14) Ddor (C1 eres on red Iron tion in T (C7) a (D9) emarks)) Living R (C4) illed Soil	X Surfa X Drain Dry-i Dry-i X Cray Satu Satu is (C6) X	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations: Surface Water Present?	<u>n of one is requii</u> erial Imagery (B7	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or 38) Other (Exp	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface Well Data plain in R	3) s (B14) Ddor (C1 eres on red Iron (C7) a (D9) emarks) nches): _) Living R (C4) illed Soil	X Surfa X Drain Dry-i Dry-i X Cray Satu Satu is (C6) X	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present?	n of one is requi erial Imagery (B7 ncave Surface (E Yes Yes	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or 38) Other (Exp No X No X	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface Well Data plain in R Depth (ir Depth (ir	3) s (B14) Odor (C1 eres on red Iron tion in T (C7) a (D9) emarks) nches): _) Living R (C4) illed Soil	oots (C3) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C7) (ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Corr Field Observations: Surface Water Present? Water Table Present?	<u>n of one is requi</u> erial Imagery (B7 ncave Surface (E Yes	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck 7) Gauge or 38) Other (Exp No X No X	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Surface Well Data plain in R	3) s (B14) Odor (C1 eres on red Iron tion in T (C7) a (D9) emarks) nches): _) Living R (C4) illed Soil	oots (C3) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C6) (C7) (ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	n of one is requir erial Imagery (B7 ncave Surface (E Yes Yes Yes	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or 38) Other (Exp No X No X No X	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Con Reduc	3) s (B14) Odor (C1 eres on ed Iron tion in T (C7) a (D9) emarks) nches):) Living R (C4) illed Soil	X Surfa X Drain Dry Dry X Cray Satu Satu Is (C6) X X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Saturation Present?	n of one is requir erial Imagery (B7 ncave Surface (E Yes Yes Yes	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or 38) Other (Exp No X No X No X	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Con Reduc	3) s (B14) Odor (C1 eres on ed Iron tion in T (C7) a (D9) emarks) nches):) Living R (C4) illed Soil	X Surfa X Drain Dry Dry X Cray Satu Satu Is (C6) X X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	n of one is requir erial Imagery (B7 ncave Surface (E Yes Yes Yes	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or 38) Other (Exp No X No X No X	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Con Reduc	3) s (B14) Odor (C1 eres on ed Iron tion in T (C7) a (D9) emarks) nches):) Living R (C4) illed Soil	X Surfa X Drain Dry Dry X Cray Satu Satu Is (C6) X X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Sparsely Vegetated Cor Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	n of one is requir erial Imagery (B7 ncave Surface (E Yes Yes Yes	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Iro Thin Muck Gauge or 38) Other (Exp No X No X No X	ined Lea auna (B1 atic Plants Sulfide C Rhizosph of Reduc on Reduc Con Reduc	3) s (B14) Odor (C1 eres on ed Iron tion in T (C7) a (D9) emarks) nches):) Living R (C4) illed Soil	X Surfa X Drain Dry Dry X Cray Satu Satu Is (C6) X X Geo X FAC	ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

Project/Site: SR 3 & V	Vaits Road Inters	section Improveme	ent (Des No. 1900138) (City/County: Noble County	1	Sampling Date:	8/4/2021
Applicant/Owner:	INDOT				State: IN	Sampling Point:	G2
Investigator(s): Austir	n Clarridge & Cl	audia McAllister-	-Peterson, CMT Inc. S	Section, Township, Range:	S4 T34N R11E		
Landform (hillside, te	None						
Slope (%): 15	Lat: <u>41.4232</u>	279		Long: -85.266471		Datum: NAD 83	
Soil Map Unit Name:	MrB2 - Glynw	/ood silt loam, 2	to 6 percent slopes, e	eroded	NWI clas	sification: N/A	
Are climatic / hydrolo	ogic conditions	on the site typic	cal for this time of year	r? Yes <u>X</u> No) (lf no, e	explain in Remarks.)	
Are Vegetation	, Soil,	or Hydrology	significantly distur	bed? Are "Normal Circum	nstances" presen	nt? Yes <u>X</u> No	<u></u>
Are Vegetation	, Soil,	or Hydrology	naturally problema	atic? (If needed, explain	any answers in F	Remarks.)	
SUMMARY OF I	FINDINGS -	- Attach site	e map showing sa	ampling point location	ons, transect	ts, important fea	tures, etc.
Hydrophytic Vegeta	tion Present?	Yes	No <u>X</u>	Is the Sampled Area			
Hydric Soil Present	?	Yes	No X	within a Wetland?	Yes	<u>No X</u>	
Wetland Hydrology	Present?	Yes	No X				

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species
4				Across All Strata: <u>6</u> (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 10 x 1 = 10
4.				FACW species 10 x 2 = 20
5.				FAC species 0 x 3 = 0
		=Total Cover		FACU species 80 x 4 = 320
Herb Stratum (Plot size:)				UPL species 0 x 5 = 0
1. Festuca arundinacea	50	Yes	FACU	Column Totals: 100 (A) 350 (B)
2. Digitaria bicornis	10	Yes	FACU	Prevalence Index = B/A = 3.50
3. Cirsium arvense	10	Yes	FACU	
4. Echinochloa crus-galli	10	Yes	FACW	Hydrophytic Vegetation Indicators:
5. Glyceria striata	10	Yes	OBL	1 - Rapid Test for Hydrophytic Vegetation
6. Asclepias syriaca	10	Yes	FACU	2 - Dominance Test is >50%
7.				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes No X
Remarks: (Include photo numbers here or on a se	eparate sheet.)			

Profile Descr	ription: (Describ	e to the dept	th needed to doc	ument ti	he indica	tor or o	confirm the abse	ence of indicators	s.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture		Remarks	
0-18	10YR 5/4	100					Loamy/Claye	еу		
¹ Type: C=Cor	ncentration, D=De	epletion, RM=	Reduced Matrix, N	//S=Mas	ked Sand	dGrains	s. ² Loo	cation: PL=Pore L	ining, M=Matrix	(.
Hydric Soil Ir	ndicators:						Indi	icators for Proble	matic Hydric \$	Soils ³ :
Histosol (/	A1)		Sandy Gle	yed Mat	rix (S4)			Coast Prairie Red	ox (A16)	
Histic Epi	pedon (A2)		Sandy Red	dox (S5)				Iron-Manganese N	Masses (F12)	
Black Hist	tic (A3)		Stripped N	latrix (Se	6)			Red Parent Mater	ial (F21)	
Hydrogen	Sulfide (A4)		Dark Surfa	ice (S7)				Very Shallow Darl	k Surface (F22))
Stratified	Layers (A5)		Loamy Mu	cky Min	eral (F1)			Other (Explain in l	Remarks)	
2 cm Muc	k (A10)		Loamy Gle	eyed Ma	trix (F2)			-		
Depleted	Below Dark Surfa	ce (A11)	Depleted M	Aatrix (F	3)					
Thick Dar	k Surface (A12)		Redox Dai	rk Surfac	ce (F6)		³ Ind	licators of hydroph	ytic vegetation	and
Sandy Mu	ucky Mineral (S1)		Depleted [Dark Sur	face (F7)			wetland hydrology	/ must be prese	ent,
5 cm Muc	ky Peat or Peat (S3)	Redox De	pression	s (F8)			unless disturbed of	or problematic.	
Restrictive L	ayer (if observed	i):								
Туре:										
Depth (inc	ches):						Hydric Soil Pr	resent?	Yes	No X
Remarks:										
	2V									
-	rology Indicator						0		, . .	
		one is requir	ed; check all that a					condary Indicators		<u>o requirea)</u>
Surface W	()		Water-Stai		• • •			Surface Soil Crac Drainage Patterns	()	
Saturation	er Table (A2)		Aquatic Fa		-			Dry-Season Wate	. ,	
Water Ma			Hydrogen			`		Crayfish Burrows	. ,	
	Deposits (B2)		Oxidized F				oots (C3)	Saturation Visible	. ,	erv (C9)
Drift Depo	,		Presence			-		Stunted or Stress	-	00)
· ·	or Crust (B4)		Recent Iro		`	,	s (C6)	Geomorphic Posit	()	
Iron Depo			Thin Muck					FAC-Neutral Test	. ,	
	n Visible on Aeria	l Imagery (B7			. ,			•		
Sparsely V	Vegetated Conca	ve Surface (B	·							
Field Observ	ations:									
Surface Wate		res	No X	Depth (i	nches):					
Water Table F	Present?	/es		Depth (i	· -					
Saturation Pre	esent?	/es		Depth (i			Wetland Hyd	drology Present?	Yes	No X
(includes capi					· -					
Describe Rec	orded Data (strea	m gauge, mo	nitoring well, aeria	l photos	, previou	s inspec	tions), if available	e:		
Remarks:										

	Sampling Date:	8/4/2021
e: IN	Sampling Point:	H1
34N R11E		
nvex, none):	Concave	
	Datum: NAD 83	
NWI classif	fication: N/A	
(If no, exp	olain in Remarks.)	
ces" present?	Yes X No)
nswers in Rei	marks.)	
transects	, important feat	tures, etc.
Yes_X_	No	
r	34N R11E hvex, none): NWI classif (If no, exp es" present? hswers in Rei transects	IN Sampling Point: 34N R11E nvex, none): Concave Datum: NAD 83 NWI classification: N/A (If no, explain in Remarks.) es" present? Yes X No nswers in Remarks.) transects, important fea

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant Species
4				Across All Strata: <u>3</u> (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)
Sapling/Shrub Stratum (Plot size:)			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 50 x 1 = 50
4.				FACW species 30 x 2 = 60
5.				FAC species 0 x 3 = 0
		=Total Cover		FACU species 20 x 4 = 80
Herb Stratum (Plot size:)		•		UPL species 0 x 5 = 0
1. Lycopus americanus	30	Yes	OBL	Column Totals: 100 (A) 190 (B)
2. Juncus torreyi	30	Yes	FACW	Prevalence Index = B/A = 1.90
3. Festuca arundinacea	20	Yes	FACU	
4. Glyceria striata	15	No	OBL	Hydrophytic Vegetation Indicators:
5. Typha X glauca	5	No	OBL	1 - Rapid Test for Hydrophytic Vegetation
6.				X 2 - Dominance Test is >50%
7.				\overline{X} 3 - Prevalence Index is $\leq 3.0^{1}$
8				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)	•		be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Profile Desc Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 3/1	100					Loamy/Clayey	
4-18	10YR 6/2	80	10YR 5/6	20	С	М	Sandy	Prominent redox concentrations
¹ Type: C=Co	ncentration, D=Dep	letion, RM	=Reduced Matrix, I	MS=Mas	ked San	d Grains	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicato	rs for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Gle	eyed Mat	rix (S4)		Coa	st Prairie Redox (A16)
Histic Epi	pedon (A2)		X Sandy Re	dox (S5)			Iron-	Manganese Masses (F12)
Black His	tic (A3)		Stripped N	latrix (Se	3)		Red	Parent Material (F21)
Hydroger	n Sulfide (A4)		Dark Surfa	ace (S7)			Very	Shallow Dark Surface (F22)
Stratified	Layers (A5)		Loamy Mu	icky Mine	eral (F1)		Othe	r (Explain in Remarks)
2 cm Muc			Loamy Gle	-				
	Below Dark Surface	e (A11)	Depleted I	-				
Thick Dar	rk Surface (A12)		Redox Da	rk Surfac	e (F6)		³ Indicato	rs of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Depleted I	Dark Sur	face (F7))	wetl	and hydrology must be present,
5 cm Muc	ky Peat or Peat (S3	5)	Redox De	pression	s (F8)		unle	ss disturbed or problematic.
Postrictivo I	ayer (if observed):							
Resulctive L	ayer (il observeu).							
Type:	ayer (il observed).							
							Hydric Soil Presen	t? Yes <u>X</u> No
Type: _ Depth (in Remarks:	ches):						Hydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (in Remarks: 1YDROLO	ches):						Hydric Soil Presen	t? Yes <u>X</u> No
Type: Depth (in/ Remarks: HYDROLO	ches): GY Irology Indicators:							
Type: Depth (in/ Remarks: HYDROLO Wetland Hyd Primary Indic	ches): GY Irology Indicators: ators (minimum of o						Seconda	ry Indicators (minimum of two require
Type: Depth (in/ Remarks: HYDROLO Wetland Hyd Primary Indic: Surface V	Ches): GY Irology Indicators: ators (minimum of o Vater (A1)		Water-Sta	ined Lea	• • •		<u>Seconda</u>	ry Indicators (minimum of two require ace Soil Cracks (B6)
Type: Depth (in/ Remarks: IYDROLO Wetland Hyd Primary Indic Surface V High Wat	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2)		Water-Sta Aquatic Fa	ined Lea auna (B1	3)		<u>Seconda</u> Surf Trai	r <u>y Indicators (minimum of two require</u> ace Soil Cracks (B6) nage Patterns (B10)
Type: Depth (in/ Remarks: iYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturatio	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3)		Water-Sta Aquatic Fa	ined Lea auna (B1 itic Plant	3) s (B14)		Seconda Suf X Drai Dry-	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2)
Type: Depth (in/ Remarks: HYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1)		Water-Sta Aquatic Fa True Aqua Hydrogen	ined Lea auna (B1 itic Plant Sulfide (3) s (B14) Ddor (C1	,	<u>Seconda</u> Surf Drai Dry- Cray	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8)
Type: Depth (in/ Remarks: IYDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	ined Lea auna (B1 itic Plant Sulfide (Rhizosph	3) s (B14) Ddor (C1 eres on l	_ iving Ro	Seconda Surf Drai Dry- Cray pots (C3)Satu	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9)
Type: Depth (in/ Remarks: TYDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo	ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	ined Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on l ced Iron (Living Ro (C4)	<u>Seconda</u> Surf X Drai Dry- Cray Sots (C3) Satu	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
Type: Depth (in/ Remarks: IYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat	GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4)		Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc	3) s (B14) Odor (C1 eres on l ced Iron (tion in Ti	Living Ro (C4)	<u>Seconda</u> Surf X Drai Dry- Cray pots (C3) Satu s (C6) X Geo	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (in/ Remarks: IYDROLO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5)	ne is requ	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface	3) s (B14) Odor (C1 eres on l ced Iron (ction in Ti e (C7)	Living Ro (C4)	<u>Seconda</u> Surf X Drai Dry- Cray pots (C3) Satu s (C6) X Geo	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)
Type: Depth (in/ Remarks: IYDROLO Wetland Hyd Primary Indic: Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio	GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial In	ne is requ magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or	ined Lea auna (B1 Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9)	Living Ro (C4) Iled Soils	<u>Seconda</u> Surf X Drai Dry- Cray pots (C3) Satu s (C6) X Geo	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (in/ Remarks: IYDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Saturation Unift Depo Algal Mat Iron Depo Inundatio Sparsely	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial In Vegetated Concave	ne is requ magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or	ined Lea auna (B1 Sulfide C Rhizosph of Reduc on Reduc Surface Well Dat	3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9)	Living Ro (C4) Iled Soils	<u>Seconda</u> Surf X Drai Dry- Cray pots (C3) Satu s (C6) X Geo	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (in/ Remarks: TYDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ	GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial In Vegetated Concave vations:	ne is requ magery (B	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks)	Living Ro (C4) Iled Soils	<u>Seconda</u> Surf X Drai Dry- Cray pots (C3) Satu s (C6) X Geo	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (in/ Remarks: HYDROLO(Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water	GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial II Vegetated Concave vations: er Present? Ye	ne is requ magery (B s Surface (Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Odor (C1 eres on l ced Iron (tition in Ti (C7) a (D9) Remarks) nches): _	Living Ro (C4) Iled Soils	<u>Seconda</u> Surf X Drai Dry- Cray pots (C3) Satu s (C6) X Geo	ry Indicators (minimum of two required ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (in/ Remarks: TYDROLOO Wetland Hyd Primary Indic: Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water	GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4) osits (B5) n Visible on Aerial II Vegetated Concave vations: er Present? Ye Present? Ye	magery (B Surface (ss	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No X No X	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc s Surface Well Dat blain in R Depth (ii Depth (ii	3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks) nches): _ nches): _	Living Ro (C4) Iled Soils	Dots (C3) s (C6) Seconda Surf X Drai Dry- Cray Satu Stur FAC	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Type: Depth (in/ Remarks: TYDROLOO Wetland Hyd Primary Indic: Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Wate Water Table I Saturation Pri	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4) osits (B5) n Visible on Aerial II Vegetated Concave rations: er Present? Ye esent? Ye	magery (B Surface (ss	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No X No X	ined Lea auna (B1 sulfide (Rhizosph of Reduc n Reduc Surface Well Dat blain in R	3) s (B14) Ddor (C1 eres on l ced Iron (tion in Ti (C7) a (D9) Remarks) nches): _ nches): _	Living Ro (C4) Iled Soils	Dots (C3) s (C6) Seconda Surf X Drai Dry- Cray Satu Stur FAC	ry Indicators (minimum of two require ace Soil Cracks (B6) hage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2)
Type: Depth (in/ Remarks: TYDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Saturation Prr (includes cap	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) posits (B3) : or Crust (B4) posits (B5) n Visible on Aerial In Vegetated Concave vations: er Present? Ye esent? Ye esent? Ye esent? Ye esent? Ye	magery (B Surface (Ss	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No X No X No X No X	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in R Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on l ced Iron (tition in Ti (C7) a (D9) a (D9) Remarks) nches): 	Living Ro (C4) Iled Soils	Seconda	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)
Type: Depth (in/ Remarks: TYDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Inundatio Sparsely Field Observ Surface Water Saturation Prr (includes cap	Ches): GY Irology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2) osits (B3) : or Crust (B4) osits (B5) n Visible on Aerial II Vegetated Concave rations: er Present? Ye esent? Ye	magery (B Surface (Ss	Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence Recent Irc Thin Muck 7) Gauge or B8) Other (Exp No X No X No X No X	ined Lea auna (B1 ttic Plant Sulfide (Rhizosph of Reduc n Reduc Surface Well Dat Dlain in R Depth (ii Depth (ii	3) s (B14) Odor (C1 eres on l ced Iron (tition in Ti (C7) a (D9) a (D9) Remarks) nches): 	Living Ro (C4) Iled Soils	Seconda	ry Indicators (minimum of two require ace Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1) morphic Position (D2) -Neutral Test (D5)

Project/Site: SR 3 & V	Vaits Road Interse	ection Improvemer	nt (Des No. 1900138)	City/Co	unty: Noble C	County			Sampling Date:	8/4/2021
Applicant/Owner:	INDOT					;	State:	IN	Sampling Point:	H2
Investigator(s): Austin Clarridge & Claudia McAllister-Peterson, CMT Inc. Section, Township, Range:								N R11E		
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): None									None	
								Datum: NAD 83		
Soil Map Unit Name:	MrB2 - Glynwo	ood silt loam, 2 t	to 6 percent slopes, e	eroded			N	WI class	ification: N/A	
Are climatic / hydrolo	Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)									
Are Vegetation	, Soil, o	r Hydrology	significantly distur	bed?	Are "Normal C	- Circums	stances"	present	? Yes <u>X</u> No	>
Are Vegetation	, Soil, o	r Hydrology	naturally problema	atic?	(If needed, exp	cplain a	ny answ	ers in Re	emarks.)	
SUMMARY OF F	-INDINGS -	Attach site	map showing sa	ampli	ng point lo	catio	ns, tra	insects	s, important fea	tures, etc.
Hydrophytic Vegeta	tion Present?	Yes	No_X_	Is th	e Sampled Ar	rea				
Hydric Soil Present?	?	Yes	No X	with	in a Wetland?	?	Y	es	No X	
Wetland Hydrology	Present?	Yes	No <u>X</u>							
Remarks:										

VEGETATION – Use scientific names of plants.

			Absolute	Dominant	Indicator		
Tree Stratum	(Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:	
1						Number of Dominant Species That	
2						Are OBL, FACW, or FAC: 0	(A)
3.						Total Number of Dominant Species	
4						Across All Strata: 1	(B)
5						Percent of Dominant Species That	
				=Total Cover		Are OBL, FACW, or FAC: 0.0%	(A/B)
Sapling/Shrub S	tratum (Plot size:)					
1						Prevalence Index worksheet:	
2						Total % Cover of: Multiply by:	_
3.						OBL species 0 x 1 = 0	_
1						FACW species 0 x 2 = 0	
5						FAC species 0 x 3 = 0	
				=Total Cover		FACU species 85 x 4 = 340	
Herb Stratum	(Plot size:)				UPL species 15 x 5 = 75	
1. Festuca arur			60	Yes	FACU	Column Totals: 100 (A) 415	(B)
2. Lolium perer	nne		15	No	FACU	Prevalence Index = B/A = 4.15	
3. Daucus caro	ta		15	No	UPL		•
4. Asclepias sy	riaca		10	No	FACU	Hydrophytic Vegetation Indicators:	
5.						1 - Rapid Test for Hydrophytic Vegetation	
0						2 - Dominance Test is >50%	
7						3 - Prevalence Index is ≤3.0 ¹	
0						4 - Morphological Adaptations ¹ (Provide sup	porting
0						data in Remarks or on a separate sheet)	
10.						Problematic Hydrophytic Vegetation ¹ (Expla	in)
			100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology	must
Woody Vine Stra	atum (Plot size:)				be present, unless disturbed or problematic.	naot
1.						Hydrophytic	
0						Vegetation	
				=Total Cover		Present? Yes No X	
Remarks: (Inclu	ide photo numbers here o	r on a separ	ate sheet.)				

Profile Des	cription: (Describe	e to the dept				ator or o	confirm the absence o	of indicators.)	
Depth	Matrix		Redo	x Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-7	10YR 4/2	100					Loamy/Clayey	with grave	9
———									
	oncentration, D=De	pletion, RM=I	Reduced Matrix, N	/IS=Mas	ked San	d Grains		: PL=Pore Lining, M=Ma	
Hydric Soil								s for Problematic Hydr	ic Soils ³ :
Histosol	()		Sandy Gle	•	• •			t Prairie Redox (A16)	
	pipedon (A2)		Sandy Rec					Manganese Masses (F12	?)
I —	stic (A3)		Stripped N		5)			Parent Material (F21)	
	n Sulfide (A4)		Dark Surfa	• • •				Shallow Dark Surface (F	22)
	d Layers (A5)		Loamy Mu	-			Other	r (Explain in Remarks)	
	ick (A10)	- () ()	Loamy Gle	-					
	d Below Dark Surfac	æ (A11)	Depleted M	-			³ Indiantor	a of hydrophytic ycantoti	an and
	ark Surface (A12) lucky Mineral (S1)		Redox Dar Depleted [• •			s of hydrophytic vegetati nd hydrology must be pr	
	icky Peat or Peat (S	3)	Redox Depleted L		• • •			s disturbed or problemat	
				516331011	3 (1 0)		unes		ic.
	Layer (if observed)								
Type: Depth (i	Rock/gra	7	_				Hydric Soil Present	? Yes	No X
· 、	icites).	1	_				Tryunc Son Fresent		
Remarks:	lover of grovel was	anaguntarad	at 7 inchas Multi	olo otton	anto wor	mada	at multiple leastions on	d restrictive gravel was	populatorod at
or above 7 in		encountereu	at 7 mones. Multip	Jie allen	ipts were	maue		nd restrictive gravel was e	encountered at
HYDROLO)GY								
Wetland Hy	drology Indicators	:							
-	cators (minimum of		ed; check all that a	apply)			Secondar	y Indicators (minimum o	f two required)
Surface	Water (A1)		Water-Stai	ned Lea	ives (B9)		Surfa	ice Soil Cracks (B6)	
High Wa	ater Table (A2)		Aquatic Fa	iuna (B1	3)		Drain	age Patterns (B10)	
Saturatio	on (A3)		True Aqua	tic Plant	s (B14)		Dry-S	Season Water Table (C2)	1
Water M	larks (B1)		Hydrogen	Sulfide (Odor (C1)	Crayf	fish Burrows (C8)	
Sedimer	nt Deposits (B2)		Oxidized F	Rhizosph	eres on l	_iving R	oots (C3) Satur	ration Visible on Aerial In	nagery (C9)
· · · · · ·	oosits (B3)		Presence			. ,		ed or Stressed Plants (D	1)
	at or Crust (B4)		Recent Iro			lled Soi		norphic Position (D2)	
	oosits (B5)		Thin Muck		• •		FAC-	Neutral Test (D5)	
	on Visible on Aerial								
Sparsely	/ Vegetated Concav	e Surface (B	B)Other (Exp	lain in F	(Remarks		-		
Field Obser	vations:								
Surface Wat		es		Depth (i	· -				
Water Table		es			nches):				
Saturation F		es	No <u>X</u>	Depth (i	nches):		Wetland Hydrolog	gy Present? Yes	NoX
	pillary fringe)			1			the second states and the second states and the second states are stated as a second state state state state states are states at the second states at the s		
Describe Re	corded Data (strear	n gauge, mor	ntoring well, aeria	l photos	, previou	s inspec	ctions), if available:		
Remarks:									

Project/Site: SR 3 & Waits Road Intersection Improvement (I	Des No. 1900138)_ City/Coι	Inty: Noble C	ounty	Sampling Date	: 8/4/2021
Applicant/Owner: INDOT		_		State: IN	Sampling Point	:: I1
Investigator(s): Austin Clarridge & Claudia McAllister-Pete	erson, CMT Inc.	Section,	Township, Rai	nge: S4 T34N R11E		
Landform (hillside, terrace, etc.): Roadside Ditch		-	Local relief (c	oncave, convex, none):	Concave	
Slope (%): 5 Lat: 41.425028		Lona:	-85.267489	· · · ,	Datum: NAD 83	
Soil Map Unit Name: Pe - Pewamo silty clay loam, 0 to	o 1 percent slor			NWI classi	fication: Riverine	(R4SBC)
Are climatic / hydrologic conditions on the site typical fi			Yes X	No (If no, ex	-	
Are Vegetation , Soil , or Hydrology	,			ircumstances" present		
Are Vegetation, Soil, or Hydrology				plain any answers in Re		
				-		
SUMMARY OF FINDINGS – Attach site m	ap snowing	j sampili	ng point lo	cations, transects	, important fe	atures, etc
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	o		e Sampled Ar n a Wetland?		No	
Remarks:						
VEGETATION – Use scientific names of pla						
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test wo	rksheet.	
1. Acer negundo	5	Yes	FAC	Number of Dominant		
2. Rhus glabra	5	Yes	UPL	Are OBL, FACW, or F	•	3 (A)
3				Total Number of Dom	inant Species	
4				Across All Strata:		4 (B)
5				Percent of Dominant	•	
Conling/Chrub Stratum (Diataiza)	<u>10</u> =T	Total Cover		Are OBL, FACW, or F	-AC:	75.0% (A/B)
Sapling/Shrub Stratum (Plot size:1.)			Prevalence Index w	orkshoot:	
2.				Total % Cover o		bly by:
3.					$\frac{1}{100} \frac{1}{100} \frac{1}$	30
4.				· ·	$\frac{1}{5}$ x 2 =	110
5.					x 3 =	60
		Total Cover		FACU species) x 4 =	0
Herb Stratum (Plot size:)				UPL species	5 x 5 =	25
1. Phalaris arundinacea	45	Yes	FACW		10 (A)	225 (B)
2. Typha X glauca	30	Yes	OBL	Prevalence Index		05
3. Calystegia sepium	10	No	FAC			
4. Impatiens capensis	10	No	FACW	Hydrophytic Vegeta	tion Indicators:	
5. Apocynum cannabinum	5	No	FAC		r Hydrophytic Veg	etation
6.				X 2 - Dominance T		
7.				X 3 - Prevalence In		
8.				4 - Morphologica	I Adaptations ¹ (Pro	ovide supportir
9.				data in Remar	ks or on a separat	e sheet)
10.				Problematic Hyd	rophytic Vegetatio	n ¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

No

Hydrophytic Vegetation Present? Yes X

Remarks: (Include photo numbers here or on a separate sheet.)

(Plot size:

)

Woody Vine Stratum

1.

2.

100 =Total Cover

=Total Cover

Depth	Matr			x Featur			confirm the absence	
(inches)	Color (moist		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10YR 3/2	<u>, 15</u> 85	7.5YR 4/6	15	<u>с</u>	M	Loamy/Clayey	Prominent redox concentrations
0.10	1011(0/2		1.011(4/0				Louiny/oldycy	
¹ Type: C=C	oncentration D=	Depletion RM:	=Reduced Matrix, N	//S=Mas	ked San	d Grains	² l ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil			,					rs for Problematic Hydric Soils ³ :
Histosol			Sandy Gle	ved Mat	rix (S4)			st Prairie Redox (A16)
	ipedon (A2)		Sandy Red					Manganese Masses (F12)
Black His			Stripped M					Parent Material (F21)
	n Sulfide (A4)		Dark Surfa	•	,			Shallow Dark Surface (F22)
	Layers (A5)		Loamy Mu	cky Min	eral (F1)		Othe	er (Explain in Remarks)
2 cm Mu	ck (A10)		Loamy Gle	eyed Ma	trix (F2)			
Depleted	Below Dark Su	face (A11)	Depleted I	Matrix (F	3)			
Thick Da	rk Surface (A12))	X Redox Da	rk Surfac	ce (F6)		³ Indicato	rs of hydrophytic vegetation and
Sandy M	ucky Mineral (S ²	1)	Depleted [Dark Sur	face (F7))	wetla	and hydrology must be present,
5 cm Mu	cky Peat or Peat	t (S3)	Redox De	oression	s (F8)		unles	ss disturbed or problematic.
Restrictive I	Layer (if observ	ed):						
Type:								
Depth (ir	nches):						Hydric Soil Presen	t? Yes_X_ No
HYDROLO	GY							
Wetland Hy	drology Indicate	ors:						
Primary Indic	<u>cators (minimum</u>	of one is requi	red; check all that a	apply)			Seconda	ry Indicators (minimum of two required)
X Surface	Water (A1)		Water-Sta	ined Lea	ives (B9))	Surfa	ace Soil Cracks (B6)
	ter Table (A2)		Aquatic Fa	•	,			nage Patterns (B10)
X Saturatio	()		True Aqua		• •			Season Water Table (C2)
	arks (B1)		Hydrogen		•	<i>,</i>		fish Burrows (C8)
	t Deposits (B2)		Oxidized F	•		-	· · · —	ration Visible on Aerial Imagery (C9)
	osits (B3)		Presence			` '		ted or Stressed Plants (D1)
	t or Crust (B4) osits (B5)		Recent Iro Thin Muck			llied Soli		morphic Position (D2)
	on Visible on Aer	ial Imageny (B			· · /			-Neutral Test (D5)
	Vegetated Cond		· · · · · · · · · · · · · · · · · · ·					
Field Obser					(omanto)		T	
Surface Wat		Vec X	No	Denth (i	nches):	3		
Water Table		Yes X Yes			nches):			
Saturation P		Yes X			nches):		Wetland Hydrolo	gy Present? Yes X No
(includes cap				2 op (.	-			3 , 1
		eam gauge, mo	onitoring well, aeria	l photos	, previou	s inspec	tions), if available:	
Remarks:		Dital						
ADUTTING UN	T 2 to Bixler Lake	e Diich.						

Project/Site: SR 3 & V	Vaits Road Inters	section Improvemer	nt (Des No. 1900138)	City/Co	ounty: No	ble County	/		Sampling Date:	8/4/2021
Applicant/Owner:	INDOT						State:	IN	Sampling Point:	12
Investigator(s): Austir	n Clarridge & C	laudia McAllister-F	Peterson, CMT Inc.	Section,	, Townshi	ip, Range:	S4 T341	N R11E		
Landform (hillside, te	errace, etc.): <u></u>	lillslope		Loc	cal relief (concave, c	onvex, no	one):	None	
Slope (%): 15	Lat: 41.4250	080		Long:	-85.2674	497			Datum: NAD 83	
Soil Map Unit Name:	Pe - Pewamo	o silty clay loam, () to 1 percent slope	s			N	WI class	ification: N/A	
Are climatic / hydrolo	gic conditions	on the site typica	al for this time of yea	ar?	Yes	X No		(If no, ex	plain in Remarks.)	
Are Vegetation	, Soil,	or Hydrology	significantly distu	irbed?	Are "Nor	rmal Circun	nstances"	present	? Yes <u>X</u> No	
Are Vegetation	, Soil,	or Hydrology	naturally problem	natic?	(If neede	ed, explain	any answ	ers in Re	emarks.)	
SUMMARY OF I		- Attach site	map showing s	sampli	ing poi	nt locati	ons, tra	insects	s, important feat	tures, etc.
Hydrophytic Vegeta Hydric Soil Present Wetland Hydrology	?	Yes Yes Yes	No X No X No X		ne Sampl nin a Wet		Y	es	<u>No X</u>	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species That
2				Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species
4				Across All Strata: <u>2</u> (B)
5				Percent of Dominant Species That
		=Total Cover		Are OBL, FACW, or FAC: 50.0% (A/B)
Sapling/Shrub Stratum (Plot size:)			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 0 x 1 = 0
4.				FACW species 60 x 2 = 120
5.				FAC species 0 x 3 = 0
		=Total Cover		FACU species 40 x 4 = 160
Herb Stratum (Plot size:)				UPL species $0 \times 5 = 0$
1. Phalaris arundinacea	60	Yes	FACW	Column Totals: 100 (A) 280 (B)
2. Solidago canadensis	30	Yes	FACU	Prevalence Index = B/A = 2.80
3. Cirsium arvense	5	No	FACU	
4. Cichorium intybus	5	No	FACU	Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50%
7				3 - Prevalence Index is ≤3.0 ¹
8.				4 - Morphological Adaptations ¹ (Provide supporting
9.				data in Remarks or on a separate sheet)
10.				Problematic Hydrophytic Vegetation ¹ (Explain)
	100	=Total Cover		¹ Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:)			be present, unless disturbed or problematic.
1				Hydrophytic
2.				Vegetation
		=Total Cover		Present? Yes No X
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Profile Desc	ription: (Describe	e to the dept	h needed to docu	ument t	he indica	ator or o	confirm the absence	e of indicators.)		
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture		Remarks		
0-6	10YR 4/4	100					Loamy/Clayey		with gravel		
·											
	oncentration, D=De	nletion RM=	Reduced Matrix	AS=Mas	ked San	d Grains		n: PL=Pore Lir	ning M=Matri		
Hydric Soil I		pieden, ran						ors for Probler	-		
Histosol			Sandy Gle	ved Mat	rix (S4)			ast Prairie Redo	-		
	ipedon (A2)		Sandy Red	-				n-Manganese M			
Black His			Stripped N					d Parent Materia	. ,		
	n Sulfide (A4)		Dark Surfa	•	.,			y Shallow Dark	. ,)	
	Layers (A5)		Loamy Mu	• • •	eral (F1)			er (Explain in R	•	/	
2 cm Mu			Loamy Gle						ionianto)		
	Below Dark Surfac	ce (A11)	Depleted N	-							
	rk Surface (A12)		Redox Dar	`	,		³ Indicate	ors of hydrophy	tic vegetation	and	
	ucky Mineral (S1)		Depleted [. ,			land hydrology	-		
	cky Peat or Peat (S	(3)	Redox Dep		• • •			ess disturbed or		,	
	_ayer (if observed	,							proproduction		
Type:	Grave										
Depth (in		6	_				Hydric Soil Prese	nt?	Yes	No	х
		•							100 <u> </u>		<u> </u>
Remarks:			at C in also a Multi								
or above 6 in		encounterea	at 6 inches. Multi	pie atten	npis were	e made a	at multiple locations a	and restrictive g	ravel was end	countered	a at
HYDROLO	GY										
·	drology Indicators										
-	ators (minimum of		ed: check all that a	annly)			Second	ary Indicators (i	minimum of ty		(ho
-	Nater (A1)		Water-Stai		Wes (RQ)			face Soil Crack		<u>ro require</u>	<u>eu)</u>
	ter Table (A2)		Aquatic Fa		()			inage Patterns	()		
Saturatio			True Aqua					-Season Water			
Water Ma	()		Hydrogen		. ,)		vfish Burrows (. ,		
	t Deposits (B2)		Oxidized F					uration Visible of	,	nerv (C9))
	osits (B3)		Presence	•		-		nted or Stresse	-		,
· · · ·	t or Crust (B4)		Recent Iro			· ·		omorphic Positi			
	osits (B5)		Thin Muck				· · ·	C-Neutral Test (
	n Visible on Aerial	Imagery (B7)							/		
	Vegetated Concav		· ·		• •						
Field Observ		(-	-)		,						
Surface Wate		es	No X	Denth (i	nches):						
Water Table		es			nches):						
Saturation Pr		es		Depth (i			Wetland Hydrol	ogy Present?	Yes	No	x
(includes cap				Deptil (i			Wettand Hydron	ogy i resent!	163 <u> </u>	NO	<u>~</u>
		n daude mo	nitoring well aeria	l photos	previou	s inspec	tions), if available:				
		3		F	,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Remarks:											
1											

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL

DETERMINATION (JD): January 10, 2022

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Claudia McAllister-Peterson Crawford, Murphy & Tilly, Inc. 8790 Purdue Rd Indianapolis, IN 46268

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAP-OP-R-____

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

Proposed improvements for the project (DES No: 1900138) include converting the project intersection of State Road 3 (SR 3) and Waits Road to a Closed Median Reduced Conflict Intersection (RCI). The approaches on Waits Road will be updated to right turn only movement. Vehicles wishing to travel through or turn left from Waits Road will be required to turn right onto SR 3 and then complete a U-turn movement. Vehicles wishing to turn left onto Waits Road from SR 3 will be required to complete a U-turn movement at the Median U-Turn (MUT) location. The spacing of the MUT along SR 3 will be 1,500 feet north of the existing intersection due to the existing curve on SR 3. The MUT will be unsignalized. Lighting at the MUT may need to be provided for adequate visibility at the intersection. There will not be a south MUT, instead vehicles will need to travel to the intersection of SR 3 and Main Street, which is located approximately 0.33 mile south of the SR 3 and Waits Road intersection.

Per the USGS Kendallville, Indiana Quadrangle, the project is situated within Sections 4, 5 and 9, Township 34 North, and Range 11 East.

Land use in the vicinity of the project is primarily residential and agricultural with small patches of forest.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State:INCounty: NobleCity: KendallvilleCenter coordinates of site (lat/long in degree decimal format):Lat.41.425108 °N,Long. -85.268119 °WUniversal Transverse Mercator:16T 644716.78 m Easting (x) 4587397.19 mNorthing (y)Name of nearest waterbody:Bixler Lake Ditch

Identify (estimate) amount of	waters in the re-	view area: See table be	low
Non-wetland waters:	_linear feet:	width (ft) and/or	acres.
Cowardin Class:			
Stream Flow:	_		
Wetlands:acres.			
Cowardin Class:			

Name of any water bodies on the site that have been identified as Section 10 waters: Tidal: <u>N/A</u> Non-Tidal: <u>N/A</u>

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

Office (Desk) Determination.	Date:	
Field Determination.	Date(s):	

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

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 approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that 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) that 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) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (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 preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes 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 approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, 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, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked
items should be included in case file and, where checked and requested, appropriately
reference sources below):
Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: <u>General location map, aerial photograph, USGS topographic map, picture key map, NRCS</u>
soils map, NWI map, NHD map, 12 Digit HUC map, FEMA map
Data sheets prepared/submitted by or on behalf of the applicant/consultant.
Office concurs with data sheets/delineation report.
Office does not concur with data sheets/delineation report.
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: <u>1:24,000 Kendallville Quadrangle,</u>
USDA Natural Resources Conservation Service Soil Survey. Citation:
http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
National wetlands inventory map(s). Cite name:
http://www.fws.gov/wetlands/Data/Mapper.html
State/Local wetland inventory map(s):
FEMA/FIRM maps: <u>18113C0217D, eff. 3/15/2015</u> .
100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
Photographs: Aerial (Name & Date): <u>State of Indiana Orthophotography, 2017</u> .
Other (Name & Date): <u>Site Photographs</u> , 6/23/21, 8/4/21.
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.

Clay Millet Pet

1/10/2022

Signature and date of Regulatory Project Manager (REQUIRED) Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude	Longitude	Cowardin class	Estimated amount of aquatic resource inreview area	Class of aquatic resource
UNT 1 to Bixler Lake Ditch	41.425146	-85.268653	R4SBC	28 linear feet (2 feet wide)	Non-section 10 water; subject to 404 jurisdiction – non-wetland waters; ephemeral flow
UNT 2 to Bixler Lake Ditch	41.424641	-85.268365	R4SBC*	436 linear feet (3.5 feet wide)	Non-section 10 water; subject to 404 jurisdiction – non-wetland waters; intermittent flow
UNT 3 to Bixler Lake Ditch	41.425146	-85.268653	R4SBC	331 linear feet (1.75 feet wide)	Non-section 10 water; subject to 404 jurisdiction – non-wetland waters; intermittent flow
Wetland A	41.425391	-85.267768	PEM1	0.530 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland B	41.428177	-85.271537	PEM1	0.017 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland C	41.428459	-85.272069	PEM1	0.002 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland D	41.428065	-85.272393	PEM1	0.343 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland E	41.424749	-85.268425	PEM1	0.003 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland F	41.423319	-85.267414	PEM1	0.071 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland G	41.423296	-85.266512	PEM1	0.044 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland H	41.424216	-85.267047	PEM1	0.002 acre	Non-section 10 water; subject to 404 jurisdiction – wetland
Wetland I	41.425028	85.267489	PEM1	0.078 acre	Non-section 10 water; subject to 404 jurisdiction – wetland

* Cowardin Class determined from USFWS NWI online mapper.

Marion Wells

Subject:FW: Waters Report Approved: Des No. 1900138 Waters Report - SR 3 at Waits Road Noble CoAttachments:1900138 Waters Report Approved 1.21.2022.pdf

From: Koehlinger, Aaron <<u>AKoehlinger@indot.IN.gov</u>>
Sent: Friday, January 21, 2022 11:18 AM
To: Nick Batta <<u>nbatta@cmtengr.com</u>>
Cc: Bass, Jenny R <<u>JBass@indot.IN.gov</u>>; Curry, Jennifer <<u>JCurry1@indot.IN.gov</u>>; Tucker, Miguel
<<u>MTucker2@indot.IN.gov</u>>
Subject: Waters Report Approved: Des No. 1900138 Waters Report - SR 3 at Waits Road Noble Co

External Message: This email was sent from someone outside of CMT. Please use caution with links and attachments from unknown senders or receiving unexpected emails.

Good morning Nick,

Thank you for submitting the waters report for **Des No. 1900138 Waters Report - SR 3 at Waits Road Noble Co** (5/30/2023). The approved report can be found on Projectwise through this link: <u>1900138 Waters Report Approved</u> <u>1.21.2022.pdf</u>. It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.

The information in this report should be used by the Project Designer to determine if waters of the U.S. will be impacted by the project. Avoidance and minimization of impacts must occur *before* mitigation will be considered. If mitigation is required, the Project Manager or Project Designer must coordinate with the Ecology and Waterway Permitting Office to discuss how adequate compensatory mitigation will be provided.

The Project Manager should notify the Ecology and Waterway Permitting Office if there is any change to the project footprint presented in this report. Such changes may require additional fieldwork and submittal of an updated waters report covering areas not previously investigated. *This report is only valid for a period of five years from the date of earliest fieldwork*. If the report expires prior to waterway permit application submittal, additional fieldwork and a revised waters report will be required.

It will not be sent to the United States Army Corps of Engineers (USACE) or the Indiana Department of Environmental Management (IDEM) until the waterways permit applications are submitted to these agencies.

Please fill out the listed questions below. I will get back to you with a permit determination as soon as possible.

Permit Determination Questions

Will work go off pavement? What kind of structure work is associated with this project (replacement, painting, scour protection, etc.)? If a pipe liner project, please specify the type and include an INDOT hydraulics memo if available.

What is the estimated total soil disturbance associated with this project in acres? Disturbance includes (among other items) Full depth reclamation and patching should not be counted.

- Shoulder work;
- Construction entrances;
- Riprap drainage turnouts riprap around bridge cones;

- Area under the bridge where equipment will be driving and working;
- o Cofferdams or dewatering systems scour work
- Excavation around piers
- Tree clearing
- o Full Depth

Will any permanent or temporary work take place below the Q100? If so, is the project considered Rural or Urban? What is the upstream drainage area (in square miles)?

What are the anticipated permanent impacts to any jurisdictional streams (in **linear feet** below ordinary high water mark and in **acres** below ordinary high water mark) and wetlands (acres)?

• <u>Streams</u>

Linear feet: Acres:

• <u>Wetlands:</u>

Acres:

What are the anticipated temporary impacts to any jurisdictional streams (in **linear feet** below ordinary high water mark and in **acres** below ordinary high water mark) and wetlands (acres)?

• <u>Streams</u>

Linear feet: Acres:

Wetlands

Acres:

If riprap is being placed for scour protection, is it just being placed on any existing riprap footprint?

Will there be any tree clearing?

Is this project impacting a county regulated drain?

Is this project impacting a section 10 stream/ river?

Are there any known wildlife concerns (nesting swallows, bats, other ETR species located within 0.5 miles of the project)?

For stream channel bottom stabilization does is it exceed one bank full width or 10 linear feet(whichever is greater)?. Rip rap will count as stream bottom stabilization. Please also provide the dimensions of the rip rap below OHWM upstream and downstream of the structure.

Please forward a copy of the project plans for my review.

Aaron Koehlinger

Permitting Specialist, Ecology and Waterway Permitting INDOT Environmental Services 100 N Senate Ave, Room N758-ES Indianapolis, IN 46204 Hours: M-F 9 am – 5:00 pm Office: (317)296-0308 Email: Akoehlinger@indot.IN.gov



From: Nick Batta <<u>nbatta@cmtengr.com</u>> Sent: Monday, January 10, 2022 3:32 PM

Floodplain Analysis & Indiana Department **Regulatory Assessment (FARA)** Natural Resources Point of Interest **Base Flood Elevation Point** Flood Elevation Points JURISDICTIONAL UNSTUDIED STREAM **Rivers and Streams at** least 1 square mile Drainage Area (sq. miles) - 1 - 10 FEMA Zone AE **Project Area** Point of Interest Coordinates (WGS84) Long: -85.2681788995 1:12,000 Lat: 41.4251270151

The information provided below is based on the point of interest shown in the map above.County: NobleApproximate Ground Elevation: 992.7 feet (NAVD88)Stream Name:Base Flood Elevation: Not AvailableUnnamed TributaryDrainage Area: Not availableBest Available Flood Hazard Zone: Not Mapped

National Flood Hazard Zone: Not Mapped

Is a Flood Control Act permit from the DNR needed for this location? **See following pages** Is a local floodplain permit needed for this location? **Contact your local Floodplain Administrator**-Floodplain Administrator: **Norman Lortie, Building Commissioner**

Community Jurisdiction: **Noble County, County proper** Phone: **(260) 636-2215** Email: **nlortie@nobleco.us**

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

F-101

Indiana Department of Transportation SR 3 Intersection Improvement at Waits Road INDOT Des No. 1900138



Date: February 11, 2022

Location: Kendallville City Hall

Subject: Local Agency Coordination

Meeting notes added in red

1. Introductions

a. Attendees from INDOT were Miguel Tucker, Jordan Eldridge and Dana Plattner. Attendees from the City of Kendallville were Scott Derby (Engineering), Lance Waters (Police), and Jeremy McKinley (Fire). Also attended were Logan Ison (Parkview, EMS), Nick Batta (CMT), and Zack Smith (Noble County).

2. **Project History and Needs**

- a. 13 crashes in 2017-2019 (4 injury or fatal); 46% of the crashes either right angle to turning
- b. ICF is 1.99 and ICC is 1.36
- c. Levels of Service adequate
- d. Does not meet signal warrants
- e. Another fatal crash occurred in the spring of 2021
- f. INDOT completed a Road Safety Audit a few years ago
- **g**. Most of the severe crashes are "far-side" incidents, where traffic crossing SR 3 can across the initial lanes of SR 3 but are they struck once past the median.

3. Design Status

- a. Topographic Survey
- b. Stage 1 Plans
- c. Waters Report
- d. Early Utility Coordination

4. Review of Proposed Improvement

- a. Benefits of Reduced Conflict Intersections (RCI)
- b. How They Work
- c. Review Current Proposal
- d. INDOT studied 7 of their installed RCIs and found that fatal crashes were reduced by 81% and overall crashes by over 50%.
- e. Special attention will be given to the newly closed median. This may include using delineator posts. (INDOT District Traffic Engineer)
- f. The "pork chop" islands on the Waits Road approaches should be painted (as opposed to raised) (INDOT District Traffic Engineer)



g. Consider extending the left turn lanes of the median so Waits Road traffic can turn directly into them. (INDOT District Traffic Engineer)

5. Schedule

- a. Stage 2 Plans
- b. NEPA Approval
- c. Stage 3 Plans
- d. Final Tracings
- e. Letting
- f. Construction bid in August of 2023 with likely construction in the spring of 2024

6. Next Steps

- a. Preliminary Field Check meeting likely to be held in March or early April
- b. Public Meeting likely to be held in the early summer

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Page 539 of 843 Report Created:3/22/2022 12:26:15PM

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

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Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated July 2020)

			allville Fair Grounds					Jark										ation Area	Wildlife Area	te		y Park	y Park
Property	Chain O'Lakes State Park	Chain O' Lakes	Noble Co. Fairgrounds, Kendallville Fair Grounds	Chain O' Lakes State Park	G. Martin Kenney Memorial Park	Chain O' Lakes State Park	Kelly St. Park	Avilla Park	Chain O' Lakes State Park	Gaff Park (Mainland Park)	Chain O' Lakes State Park	Cromwell Community Park	Big Lake Public Access Site	Crane Lake Public Access Site	Eagle Lake Wetland Conservation Area	Rome City Wetlands Fish and Wildlife Area	Smalley Lake Public Access Site	Chain O' Lakes State Park	Hidden Diamonds Community Park	Hidden Diamonds Community Park			
County	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble
ProjectNumber SubProjectCode	1800002 1800002	1800118 1800118A	1800135 1800135	1800161 1800161G	1800171 1800171B	1800305 1800305H	1800312 1800312B	1800319 1800319	1800327 1800327C	1800353 1800353	1800358 1800358	1800363 1800363D	1800369 1800369E	1800378 1800378A	1800391 1800391	1800405 1800405B	1800405 1800405AA	1800405 1800405J	1800405 1800405T	1800405 1800405U	1800413 1800413	1800492 1800492	1800513 1800513

*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.

SR 3 Intersection Improvement at Waits Road Engineer's Assessment Des Number: 1900138

NOBLE COUNTY December 4, 2020



8790 Purdue Road, Indianapolis, IN 46268

the north and 800' to the south. The Closed Median RCI will have a MUT spacing of 1500' to the north and 650' to the south. Another potential issue that was discussed during the field check was the addition of a right turn lane along southbound SR 3. This lane would necessitate grading of the adjacent ditch that could require right-of-way takings. This right turn lane is not warranted by volumes but has been a standard treatment for RCI upgrades. Discussions with INDOT determined the right turn lane is not necessary to reduce cost and right-of-way takings for this project.

Two additional alternatives were presented and discussed for improvements to the intersection. The first additional alternative was to remove both MUTs to the south and north and cul-de-sac westbound Waits Road. This option would re-route Waits Road eastbound and westbound traffic to the SR 3 and Main Street intersection to make a typical left turn or through movement. A left turn movement would be allowed on northbound SR 3. Southbound SR 3 traffic would also be re-routed to the Main Street signal to make a left onto Waits Road. The second additional alternative is similar to the first but kept both eastbound and westbound Waits Road as right-in and right-out approaches and maintained the left turn movement for both southbound and northbound SR 3. Waits Road left turn and through movement traffic will still be re-routed to the intersection of SR 3 and Main Street. INDOT requested added travel time analysis of the RCI alternatives along with the additional alternatives discussed at the meeting. This analysis would determine which alternatives were to be proposed in the Engineer's Assessment.

3.0 TRAFFIC DATA AND CAPACITY ANALYSIS

This project analyzed traffic movements and crash history in the area surrounding the proposed project area. The extent of the analysis encompassed the existing conditions and geometric design of the study intersection.

To effectively measure the proposed improvements, the identified alternatives were evaluated for operational and safety impacts to the roadway. The analysis includes the existing conditions based upon count conducted in 2020. Future analyses include the design year (2044).

Six alternatives were developed for analysis, including a No Build alternative. Descriptions of the alternatives will be provided in *Section 5.0.*

3.1 TRAFFIC DATA

Traffic Data and turning movement counts used for the study was compiled from 24-hour counts provided by the Indiana Department of Transportation in August 2020 at the intersections of SR 3 and Waits Road and SR 3 and Main St. INDOT previously provided turning movement traffic counts at the SR 3 / Waits Road intersection from 2018. When comparing the two counts at Waits Road, the volumes had decreased by 29% in the AM and 23% in the PM. This is likely due to the COVID-19 related effects. In order to

normalize this data, the traffic counts at both intersections were increased by 1.3 for the year of 2020 to adjust for the immediate drop in traffic; by 0.5 growth rate between years 2020 to 2025; and finally by 1% growth rate between years 2025 and 2044. The full turning movement forecasting is included in *Appendix C – Traffic Analysis*.

3.2 CAPACITY ANALYSIS

The operational analysis associated with this report includes an analysis of the existing conditions and design year traffic volumes. Synchro traffic modeling software (Version 10.3.55.0) and Highway Capacity Software 7 (Version 7.6) were used to analyze each alternative. Highway Capacity Manual (HCM) 2010 default values were used for modeling traffic behavior. While crash history was the main reason for studying this intersection, the existing conditions were analyzed for congestion or capacity issues that had not been previously identified. The results of the existing conditions analysis are presented in *Table 3.*

		AM	PM			
Criteria	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)		
Northbound SR 3	А	0.0	А	0.1		
Southbound SR 3	А	0.3	А	0.3		
Eastbound Waits Road	С	21.5	С	22.7		
Westbound Waits Road	В	12.9	С	18.0		

TABLE 3 – 2020 EXISTING CONDITIONS	TABLE	3 – 2020	EXISTING	CONDITIONS	
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The results in *Table 3* show that the intersection currently operates at an acceptable level of service (LOS). According to the Indiana Design Manual, the minimum acceptable level of service on a rural arterial is LOS D. The delay for northbound and southbound SR 3 is calculated only for traffic making a left turn.

Intersection performance was analyzed as a mobility measure of effectiveness. The performance criteria set forth in the HCM 2010 for signalized intersections and unsignalized intersections were used to analyze intersections delay and provide a level of service (LOS) for the results of the Synchro and HCS7 analyses. The design year intersection approach's LOS and delay for the No Build and the proposed improvement alternatives are shown in *Table 4*.

Indiana Department of Transportation SR 3 Intersection Improvement at Waits Road

Alternative		Eastbound		Westbound		Northbound Left		Southbound Left		North Median U-Turn		South Median U-Turn	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	
2044 No Duild	AM	D	32.4	С	15.3	A	0.0	A	0.3	N/A	N/A	N/A	N/A
2044 No Build	PM	E	36.2	С	24.5	Α	0.0	Α	0.3	N/A	N/A	N/A	N/A
2044 Alt 1 Standard RCI	AM	В	10.7	В	11.1	Α	0.0	Α	0.3	Α	8.7	А	9.8
	PM	В	11.9	В	11.1	Α	0.0	Α	0.3	В	10.3	А	9.4
2044 Alt 2	AM	В	10.8	В	11.1	N/A	N/A	N/A	N/A	Α	8.7	Α	9.8
Closed Median RCI	PM	В	12.0	В	11.1	N/A	N/A	N/A	N/A	В	10.3	A	9.6
2044 Alt 3	AM	В	10.7	В	11.1	Α	0.0	Α	0.3	*В	*13.1	*A	*7.9
Standard RCI No MUT	РМ	В	11.9	В	11.1	А	0.0	А	0.3	*C	*29.9	*В	*10.1
2044 Alt 4	AM	В	10.8	В	11.1	N/A	N/A	N/A	N/A	Α	8.7	*A	*8.4
Closed Median RCI No South MUT	РМ	В	12.0	В	11.1	N/A	N/A	N/A	N/A	В	10.3	*В	*10.7
2044 Alt 5	AM	В	10.8	В	11.1	N/A	N/A	N/A	N/A	N/A	N/A	*A	*8.4
Closed Median RCI No MUT	РМ	В	12.0 at the inters	В	11.1	N/A	N/A	N/A	N/A	N/A	N/A	*В	*10.7

TABLE 4 – LEVEL OF SERVICE SUMMARY

Turn Delays at the intersection of SR 3 and Waits Road

The intersection performance results in *Table 4* shows that for the No Build scenerio, if no alignment, capacity, or intersection control changes are implemented, vehicle delays are expected to increase as traffic volumes grow in the future, and the delay experienced falls below the acceptable range for the type of facility.

All alternatives approaches meet the minimum acceptable level of service per the IDM. With the removal of both median U-turns on the alternatives Standard RCI No MUT and Closed Median RCI No MUT additional traffic will be re-routed to the intersection of SR 3 and Main Street. Re-routing traffic to this intersection will create longer delays to make typical median u-turn movements. These delays are still within the minimum acceptable level of service. The alternative Closed Median RCI No South MUT will also route additional traffic to the SR 3 and Main Street intersection. However, westbound Waits Road traffic will use the north MUT to make their movements decreasing the amount of delay at the Main Street signalized intersection. The full synchro results can be found in *Appendix C – Traffic Analysis*.

Indiana Department of Transportation SR 3 Intersection Improvement at Waits Road

SimTraffic was used to calculate the travel times for the all five proposed alternatives. The entire corridor of SR 3 including Waits Road and Main Street were input into Synchro 10 using the AM and PM 2044 design hourly volumes. For each alternative ten simulations of a 60-minute interval were ran to calculate the total travel time of the corridor. The average total travel time of these ten simulations was calculated to capture the total travel time of each alternative. In order to accurately compare the alternatives, adjustments were made to the outputs of the SimTraffic total time travel analysis. The travel time on Waits Road between SR 3 and Main Street and the travel time on Main Street from Waits Road to SR 3 were manually factored in. This was done to account for the Alternative 3 traffic that would have normally traveled on Waits Road to SR 3 but would now reroute to travel down Main Street to SR 3. This reroute was not being captured by SimTraffic. The travel time was calculated based on segment length and posted speed limit for the segment of Waits Road from Main Street to SR 3 and the segment of Main Street from Waits Road to SR 3. The Waits Road segment equated to 0.1 hours travel time and Main Street segment equated to 0.13 hours travel time. For Alternatives 1, 2, 4, and 5, where vehicles travel on the Waits Street segment, we subtracted the 0.1 hours travel time to match what would happen in Alternative 3. The 0.13 hours of travel time was added to Alternative 3 where vehicles travel down Main Street to SR 3. Assumptions were made for Alternative 5 travel time to account for the additional travel time needed for SR 3 northbound left turn vehicles and westbound Waits Road through and left turn vehicles to reroute to the nearest intersection to the north, Ohio Street, to complete the U-turn movement. The adjustment was calculated based on segment length and posted speed as well as an assumed average delay per vehicles for the U-turn at Ohio Street. An average total travel time of the corridor with the adjustment discussed are shown for the AM and PM peak hour volumes of each Alternative in Table 5.

	AM	РМ		
Alternative	Travel Time (hrs)	Travel Time (hrs)		
Alternative 1 Standard RCI	30.1	42.3		
Alternative 2 Closed Median RCI	30.1	42.2		
Alternative 3 Standard RCI No MUT	31.0	43.0		
Alternative 4 Closed Median RCI No South MUT	31.4	42.6		
Alternative 5 Closed Median RCI No MUT	31.5	42.8		

TABLE 5 – SIMTRAFFIC SUMMARY

Alternatives 1 and 2 have the lowest total AM and PM combined travel time and Alternatives 3, 4, and 5 have the highest total AM and PM combined travel time, but only account for an average 2.5% increase compared to the lowest total. The exclusion of the south median U-turn in Alternatives 3, 4, and 5 will add travel time in the peak hours as traffic will have to travel to Main Street intersection. Alternate 5 accounts for the additional travel time needed for SR 3 northbound left turn and westbound Waits Road through and left turn vehicles reroute that extends well outside the study limits. This reroute would impact 16 vehicles in the AM Peak and 20 vehicles in the PM Peak causing a disruption to the mobility of the corridor. Alternatives 1 and 2 show the best mobility for all users of the corridor, however have the greatest pavement footprint. Alternatives 3 and 4 reduce the pavement footprint and still provide adequate capacity through the corridor.

4.0 CRASH DATA AND ANALYSIS

4.1 CRASH DATA

A safety analysis was performed to evaluate historic crash data as well as to compare build and No Build alternatives. The analysis was done only for the study intersection. Historic crash data were reviewed at the intersection of SR 3 and Waits Road. The crash data were provided by INDOT. Within a 3-year period between April 2017 and November 2019, 13 crashes were reported within the study intersection. There were no fatalities reported during the study period. Of the four crashes that resulted in injuries, two were reported as incapacitating injuries. The severe crashes were right angle crashes in 2017 and 2018, and all of the injury crashes within the study period were right angle or turning crashes. These crashes were due to vehicles trying to make a two-stage left turn from eastbound Waits Road onto Northbound SR 3. A breakdown of the crashes by type and location is provided in *Table 6.*

	Right Angle / Turning		Ran off Road		Animal in Roadway			Sideswipe			Other			Total		
	PDO	NIC	F/IC	PDO	NIC	F/IC	PDO	NIC	F/IC	PDO	NIC	F/IC	PDO	NIC	F/IC	
2017	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	5
2018	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	4
2019	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	4
Total	2	2	2	1	0	0	4	0	0	1	0	0	1	0	0	13
Percentage		46%			8%			30%			8%			8%		

TABLE 6 - HISTORICAL CRASH SEVERITY DATA (2017-2019)

PDO = Property Damage Only

NIC = Not Incapacitating Injury

F/IC = Fatality/Incapacitating

The data shows that approximately 46% of the crashes at the intersection are right angle or turning movement crashes. One of the common factors cited in right angle crashes was vehicles within the median failing to yield to the right-of-way. Improvement options such as restricted conflict intersections would mitigate frequency and severity of right-angle crashes, which tend to result in more severe crashes. The narratives from the historic crash data of the right turn crashes were reviewed. All right-angle crashes that occurred at the intersection could have been avoided by installing a Standard RCI or a Closed Median RCI due to the restricted left turn on the minor road approaches.

4.2 SAFETY ANALYSIS

The crash history for the study intersection was input into INDOT's RoadHAT 3.0 project to compare intersections to similar locations statewide. Indices of crash frequency (ICF) and crash cost (ICC) are calculated to determine how many standard deviations away from average an intersection's crash history and severity are compared to other similar intersections across Indiana. When the RoadHAT results should a positive ICF and ICC, this means the intersection is experiencing a higher frequency of crashes and a more expensive crash cost than similar intersection statewide. Typically, a high positive ICF and ICC would raise a red flag that the intersection should be evaluated for potential safety enhancements. The RoadHAT results provided by INDOT for the current year (2020) traffic volumes and crash history from (2017-2019) can be found in *Table 7.*

Interportion	2015-2018					
Intersection	lcf	lcc				
SR 3 and Waits Road	1.99	1.36				

The RoadHAT results flag this intersection as a safety concern. The index of crash frequency is two standard deviations higher than similar intersections in the state and the index of crash cost is more than one standard deviation higher than similar intersections in the state. The higher index of crash cost is due to the number and severity of injury crashes at the intersection.

To improve safety at the intersection of SR 3 and Waits Road, crash modification factors (CMFs) were reviewed for possible intersection improvements. CMFs were found from INDOT's CRFs and CMFs Most Suitable for Indiana table. The CMF for converting a two-way stop controlled intersection to a J-turn intersection has a value of 0.65 which indicates a reduction in crashes. This CMF will be applied to the Closed Median RCI. The clearing house website and INDOT CMF Table did not provide a well-substantiated CMF to use for a Standard RCI. In order to differentiate the safety benefits of a Standard RCI and a Closed Median RCI, the number of conflict points present in each configuration was used as a calibration method. There are 16 possible conflict points in a Closed Median RCI and 24 conflict points in Standard RCI intersection. Using

base/existing condition as a CMF of 1 with 42 conflict points and straight-line interpolation between base/existing and the Closed Median RCI CMFs, it results in a CMF value of 0.76. These CMFs can be found in *Appendix C – Traffic Analysis*. The table below summarizes how the crash modification factor could reduce the average yearly predicted crashes at the intersection.

	CMF Value	PDO Crashes	F/I Crashes	% Crash Reduction
Existing Conditions		3.7	0.7	
Installing Standard RCI	0.76	2.8	0.5	24%
Installing Median Closed RCI	0.65	2.4	0.5	35%

Table 8 – CRASH REDUCTION SUMMARY TABLE

INDOT'S CRFs and CMFs table also documented that installing a RCI has an additional benefit of potentially decreasing higher severity crashes at the intersection. The CMF value for KABC crash type is 0.46, which would decrease the potential for severe crashes at this intersection by 54%. The RCI configurations limit the opportunities for right angle crashes, which addresses the historically higher severity crashes at this intersection. According to the FHWA Highway Safety Improvement Program Manual table 4.2, Crash Costs by Injury Severity Level, the comprehensive cost for property damage only crash is \$7,400 whereas the comprehensive cost for a fatal/injury crash is \$158,200, so the reduction in severe crashes from installing a Standard of Closed Median RCI results in considerable crash cost benefits.

5.0 ALTERNATIVES ANALYSIS

5.1 INTRODUCTION

Six alternatives were analyzed: five build alternatives and the No Build alternative. The summary of each alternative is shown in the section below and each alternative's traffic performance has been previously discussed in this report. Conceptual exhibits can be found in *Appendix A – Project Graphics*.

Additional alternatives were also considered but discarded early in the assessment.

- A signal warrant analysis was completed and determined that a signal was not warranted for the intersection of SR 3 and Waits Road.
- An alternative which included a cul-de-sac on westbound Waits Road was eliminated as an option. This alternative created the largest increase in composite travel time and impacted most of the existing movements by the rerouting of traffic to SR 3 and Main Street intersection.



Appendix C

Traffic Analysis

- Intersection Design Guide
- Road HAT Analysis
- Crash Modification Factors
- Highway Capacity Software 7 Results
- Synchro Results
- SimTraffic Results

2024	Stage 2 SR3 @ Waits Rd A. KOBRYN
QI	AM: $3.3 \times 3000 / 250 = 40.41$ PM: $3.0 \times 3000 / 289 = 44.84$
QZ	$\begin{array}{llllllllllllllllllllllllllllllllllll$
	361/3 = 120.33 Crashes/yr CRF 0.463 - Install J turn intorsection
10.00	120.33 (vashes/ 42 . (0.403) = 55.71 crashive reduced
QZ	$H = P\left[\frac{i(1+i)^{n}}{(1+i)^{n}-1}\right] = 1,200,000 \left[\frac{0.05(1+0.05)^{20}}{(1+0.05)^{20}-1}\right] = 1940,291$ H = 9(0.291/3.3) = 333 H = 9(0.291/3.4) = 333
	\$ 96.291/3.6) \$ 96.291/55.71 = \$1728.43) 3b
QI	$\frac{CONVENTIONAl - NO build}{AM: 1.4 \times 3600/243 = 23.70}$ PM: 1.9 $\times 3600/278 = 24.60$
Q 2	CRF
	$118.47 \text{ crashes/NR} \cdot (0) = 0$
2	

Index of Crash Free	quency and Co	st - Form F1	Page 1/2			
Location	Interse	ction of SR 3 and Waits F	Road			
GIS						
Post						
Analyst	NLP					
Date		6/10/2020				
INPUT						
Road Facility Type		Unsignalized Rural Sta	te-Local Intersection			
Major Road AADT (veh/day)			10144			
T-intersection Indicator (1 if present, 0 otherwise)			0			
First Year with Crash Data (yyyy)			2017			
Last Year with Crash Data (уууу)			2019			
Number of Crashes (crash/period)						
Fatal and Incapacitating Injury Crashes			2			
Non-Incapacitating and Possible Injury Crashe	s		2			
Property Damage Only Crashes			9			
Route or Road Type		Unsignalized Rural State-Local Intersection				
Average Crash Costs (\$)						
Fatal and Incapacitating Injury Crashes			459600			
Non-Incapacitating and Possible Injury Crashe	S		32700			
Property Damage Only Crashes			5000			
Crash Cost Year (yyyy)			2013			
ОИТРИТ						
Expected Crash Frequency (crash/year)						
Fatal and Incapacitating Injury Crashes			0.050			
Non-Incapacitating and Possible Injury Crashe	S		0.27			
Property Damage Only Crashes			0.85			
All Crashes			1.17			
Index of Crash Frequency			1.99			
Index of Crash Cost			1.36			

Index of Crash Frequency and Cost - Form F1											
Location	Location Intersection of SR 3 and Waits Road										
GIS											
Post											
Analyst	NLP										
Date 6/10/2020											
Comments:											

Description

severities are presented. Finally, the state(s) where each study was conducted and the corresponding reference are provided in the the criteria presented in the Joint Transportation Research Program technical report, "Updating the Crash Modification Factors and Calibrating the IHSDM for Indiana". The table contains 82 safety countermeasures spanning 16 different categories. For each countermeasure, the applicable areas type (urban and/or rural), facility type, and CRF/CMF values for various crash types and This table presents the CRFs/CMFs for safety countermeasures that were identified as being the most suitable for Indiana based on table.