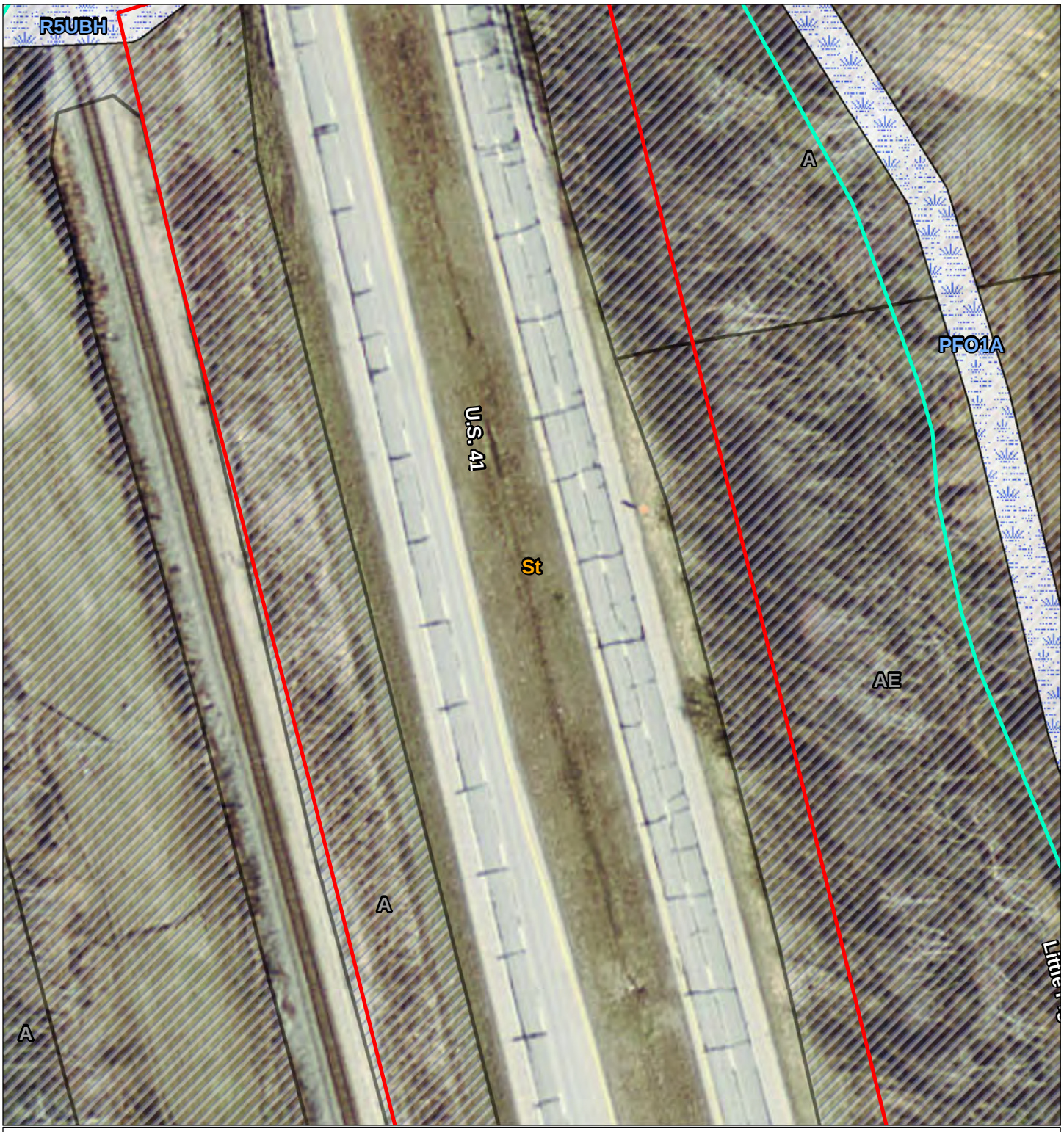


Project Study Limits (PSL)
NWI Wetland
Floodplain - Zone A/AE - 1% Annual Chance
NHD Flowline
DNR Approved Floodway
NRCS Soil Survey

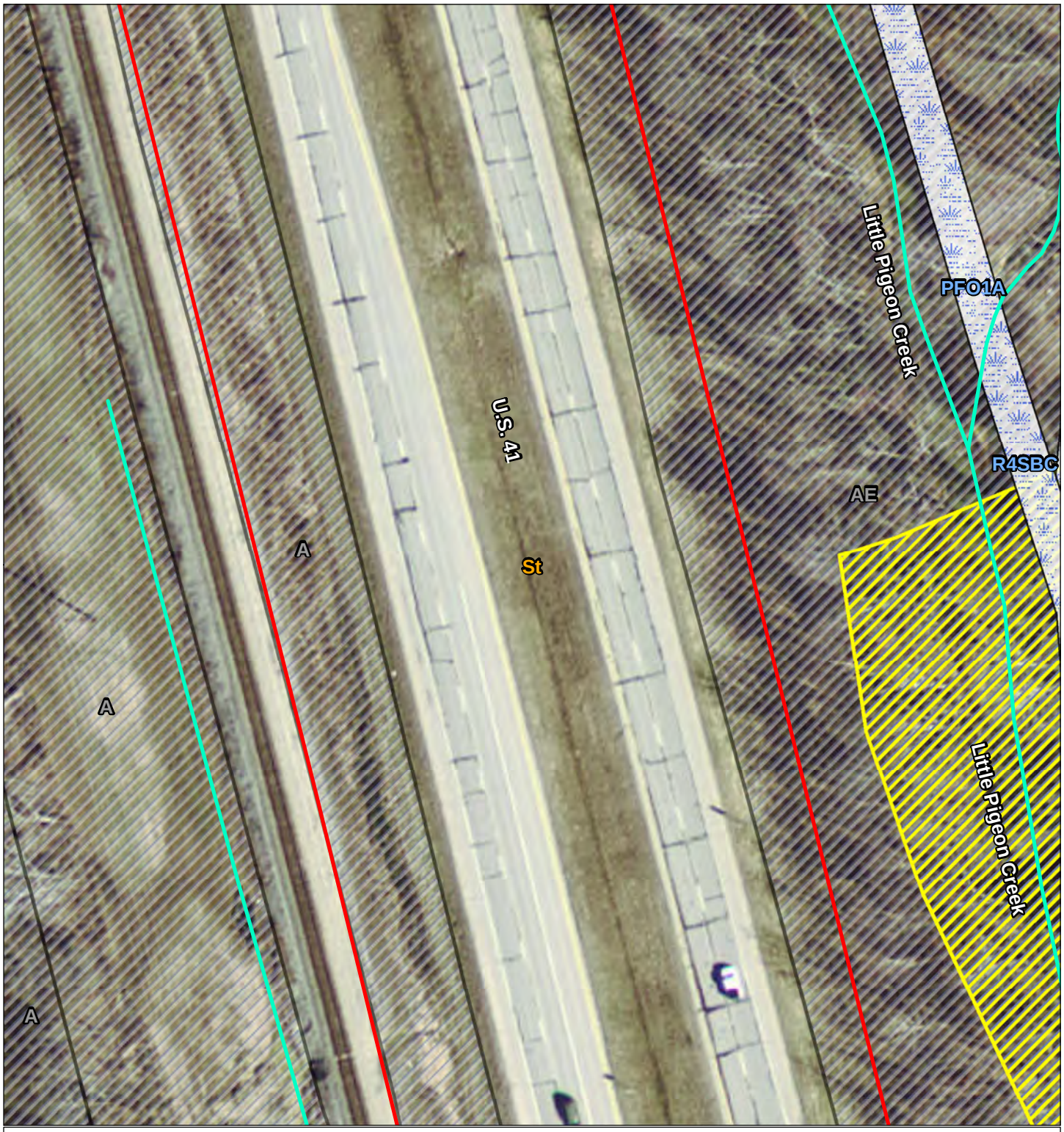
Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Project Study Limits (PSL)
NHD Flowline
NWI Wetland
DNR Approved Floodway
Floodplain - Zone A/AE - 1% Annual Chance
NRCS Soil Survey

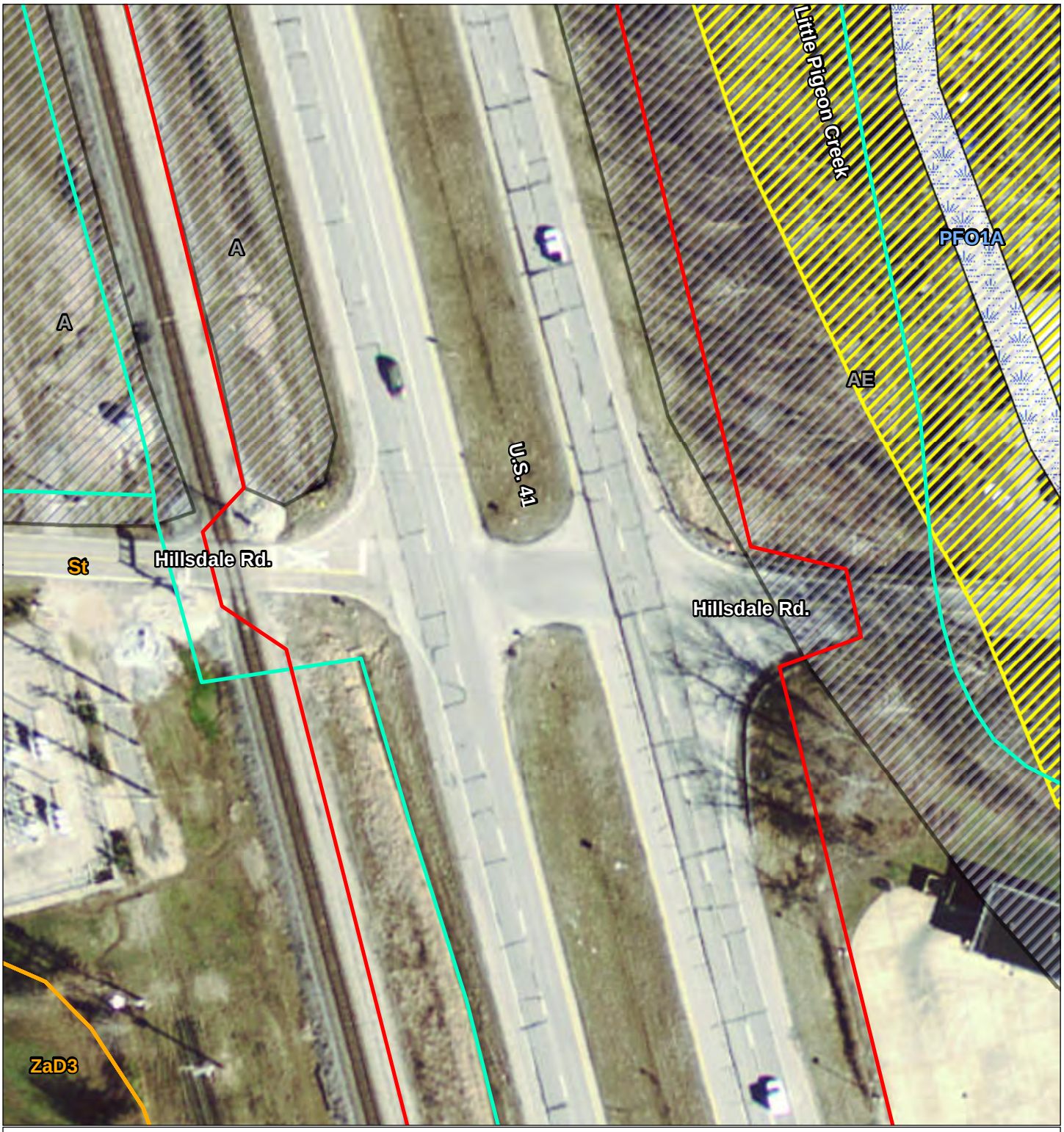
Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Project Study Limits (PSL)
NHD Flowline
NWI Wetland
DNR Approved Floodway
Floodplain - Zone A/AE - 1% Annual Chance
NRCS Soil Survey

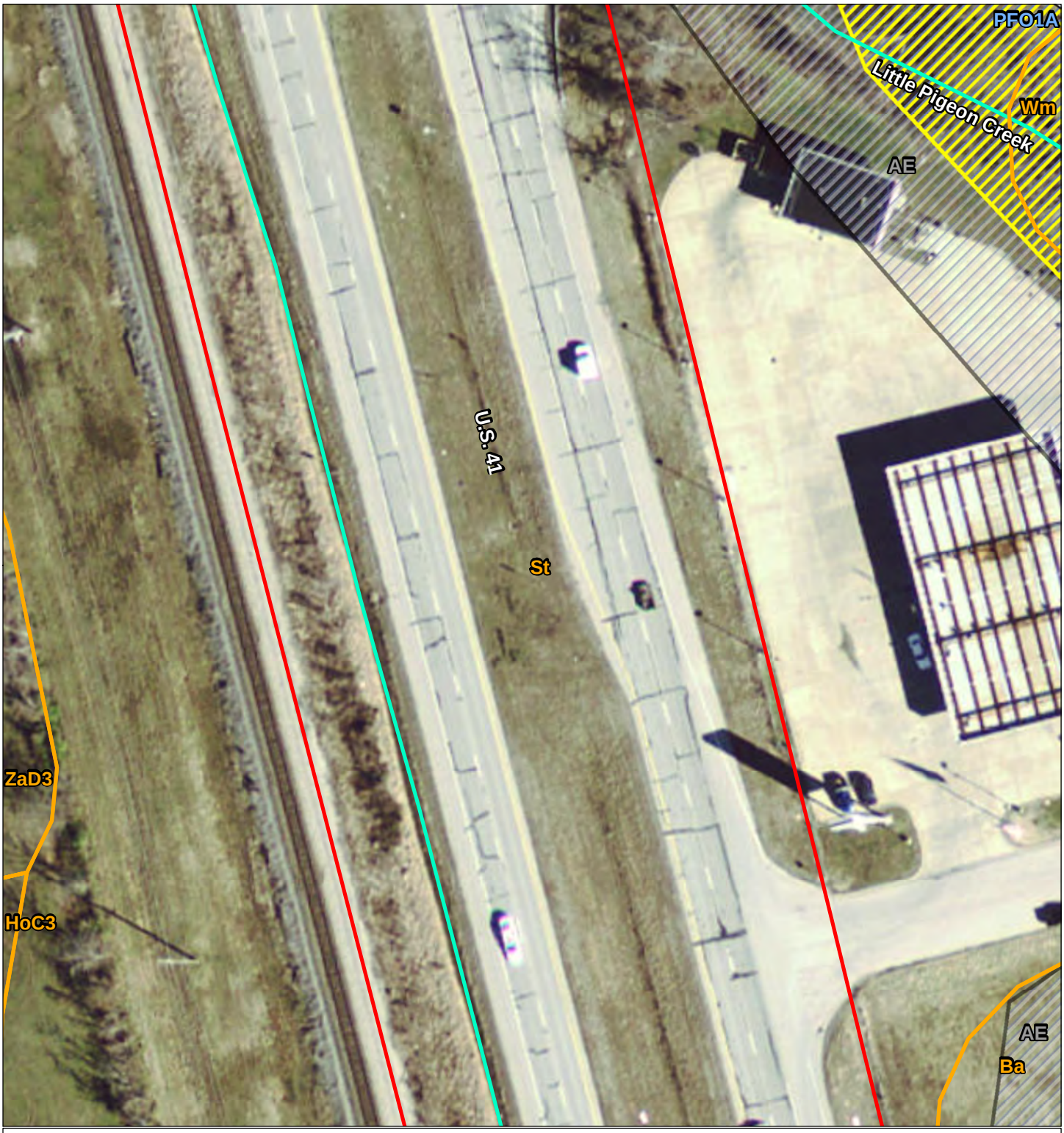
Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Project Study Limits (PSL)
NHD Flowline
NWI Wetland
DNR Approved Floodway
Floodplain - Zone A/AE - 1% Annual Chance
NRCS Soil Survey

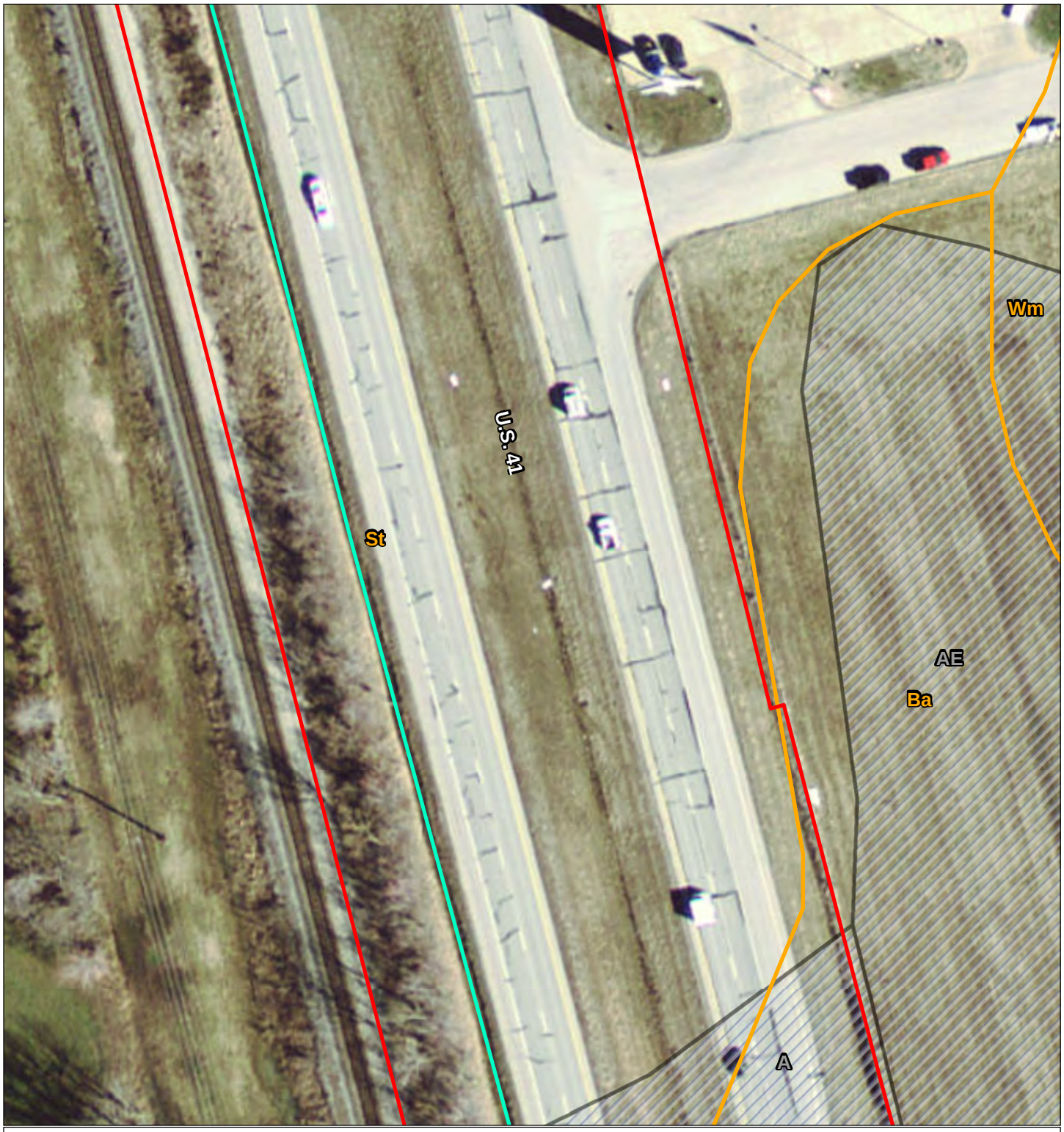
Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Project Study Limits (PSL)
NHD Flowline
NWI Wetland
DNR Approved Floodway
Floodplain - Zone A/AE - 1% Annual Chance
NRCS Soil Survey

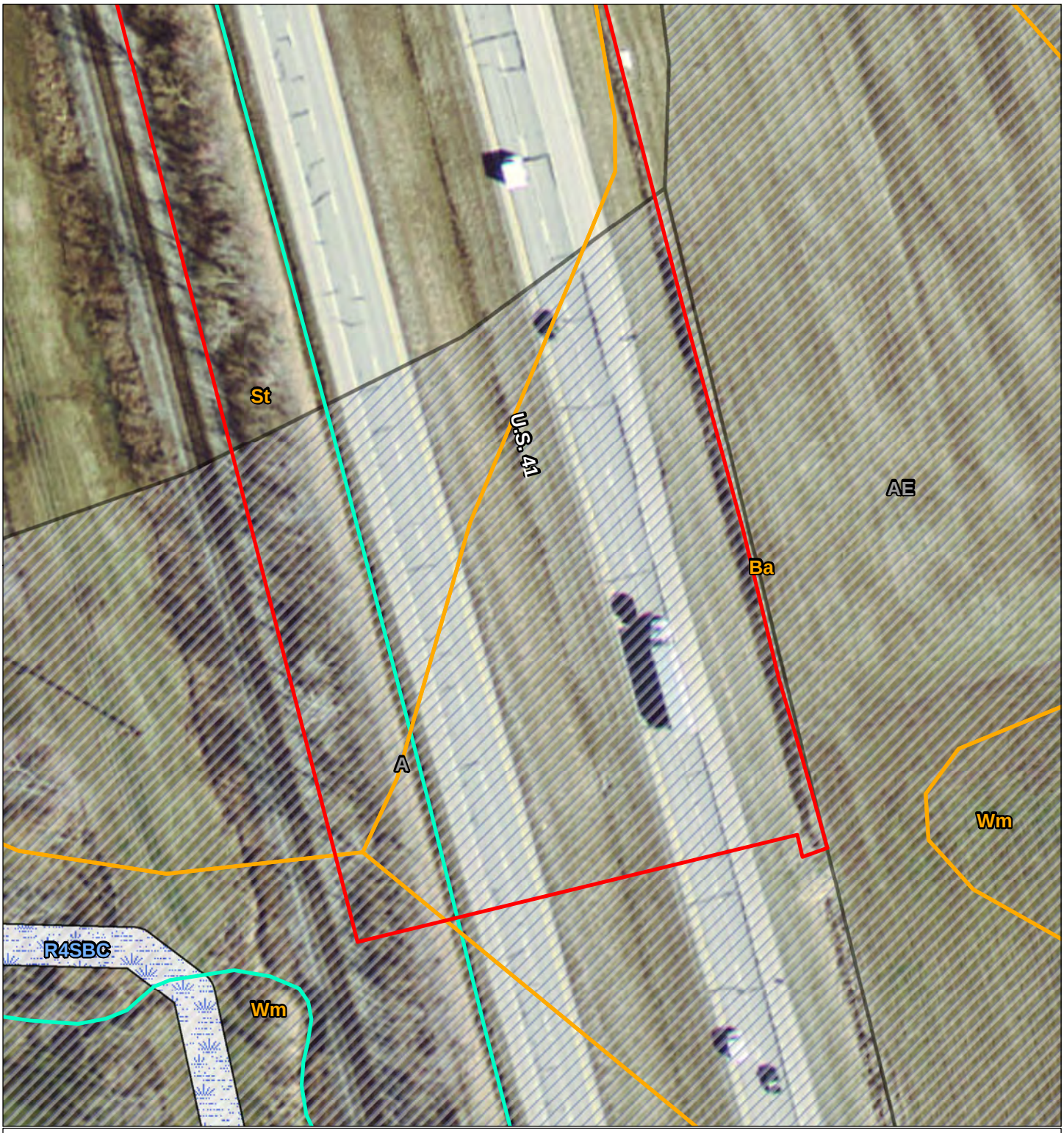
Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Project Study Limits (PSL)
NWI Wetland
Floodplain - Zone A/AE - 1% Annual Chance
NHD Flowline
DNR Approved Floodway
NRCS Soil Survey

Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL

Map Unit Symbol	Map Unit Name	Hydric Rating (%)
Ba	Bartle silt loam	Hydric (3)
St	Stendal silt loam	Hydric (3)
Wm	Wilbur silt loam	Not Hydric (0)

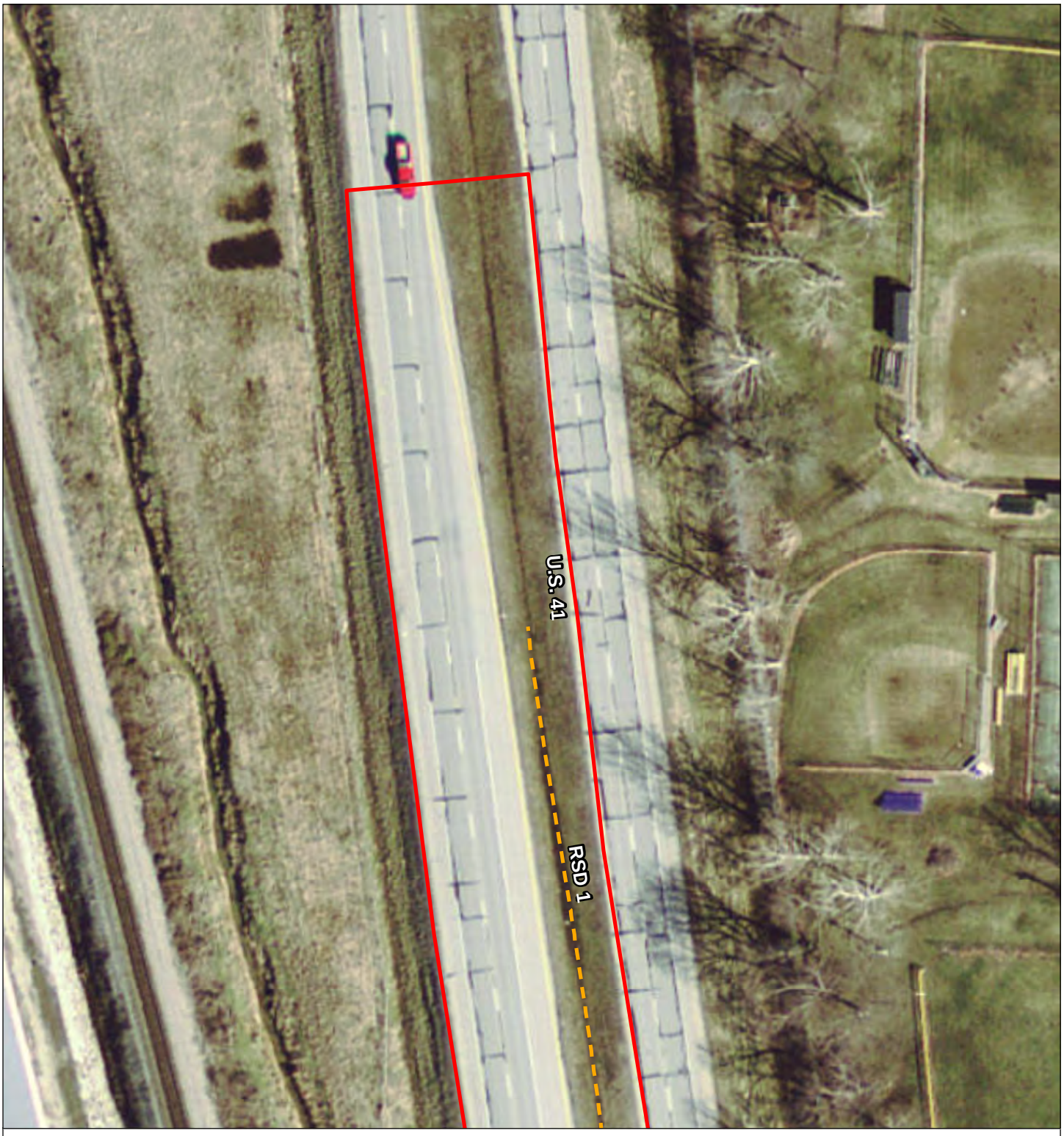
Exhibit 4 - NWI Wetland, NHD Flowline, NRCS Soil Survey, DNR Approved Floodway, and FEMA Flood Insurance Rate Map (FIRM)
Hillsdale Road at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 12.5 25 50
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

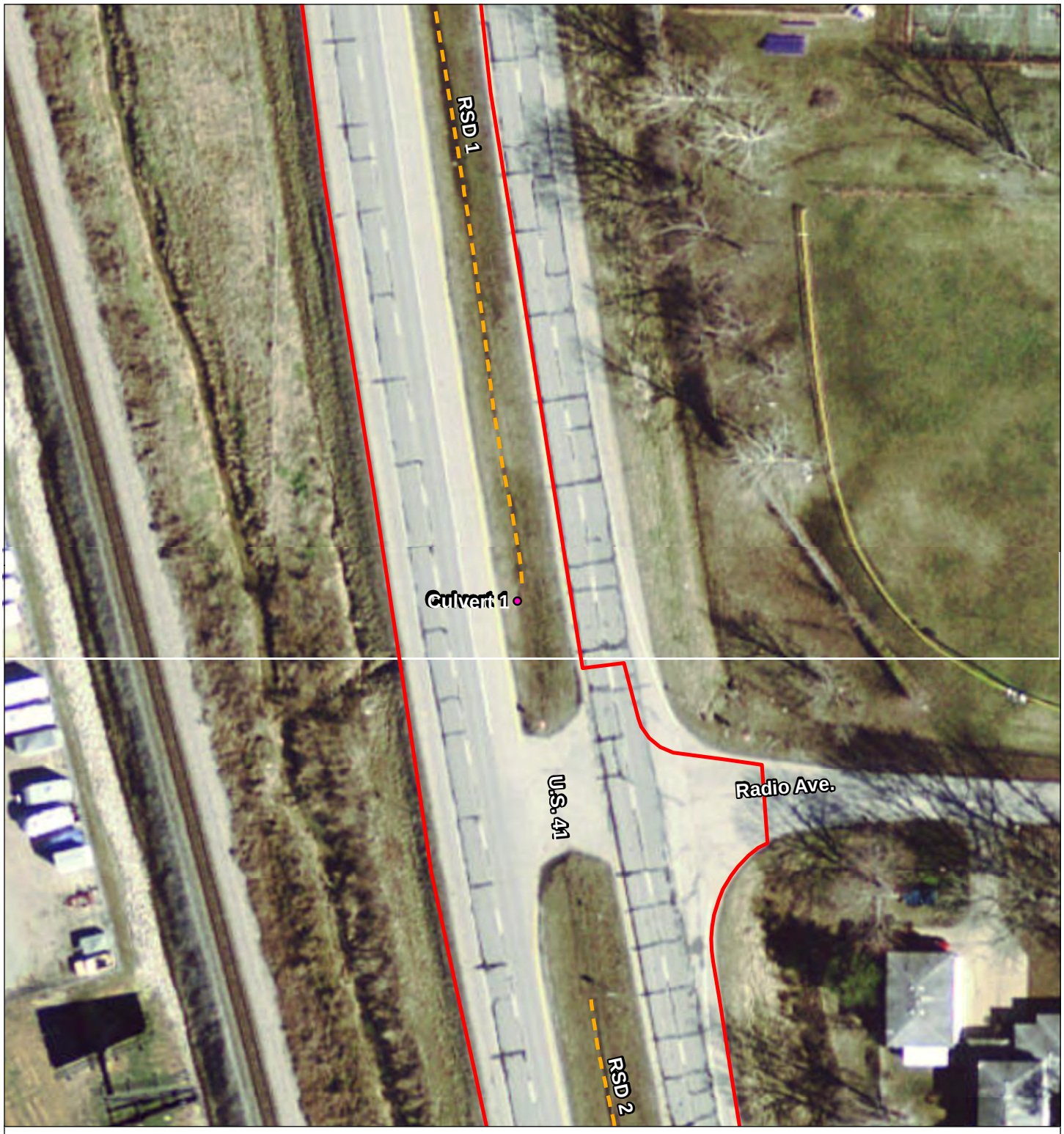
Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

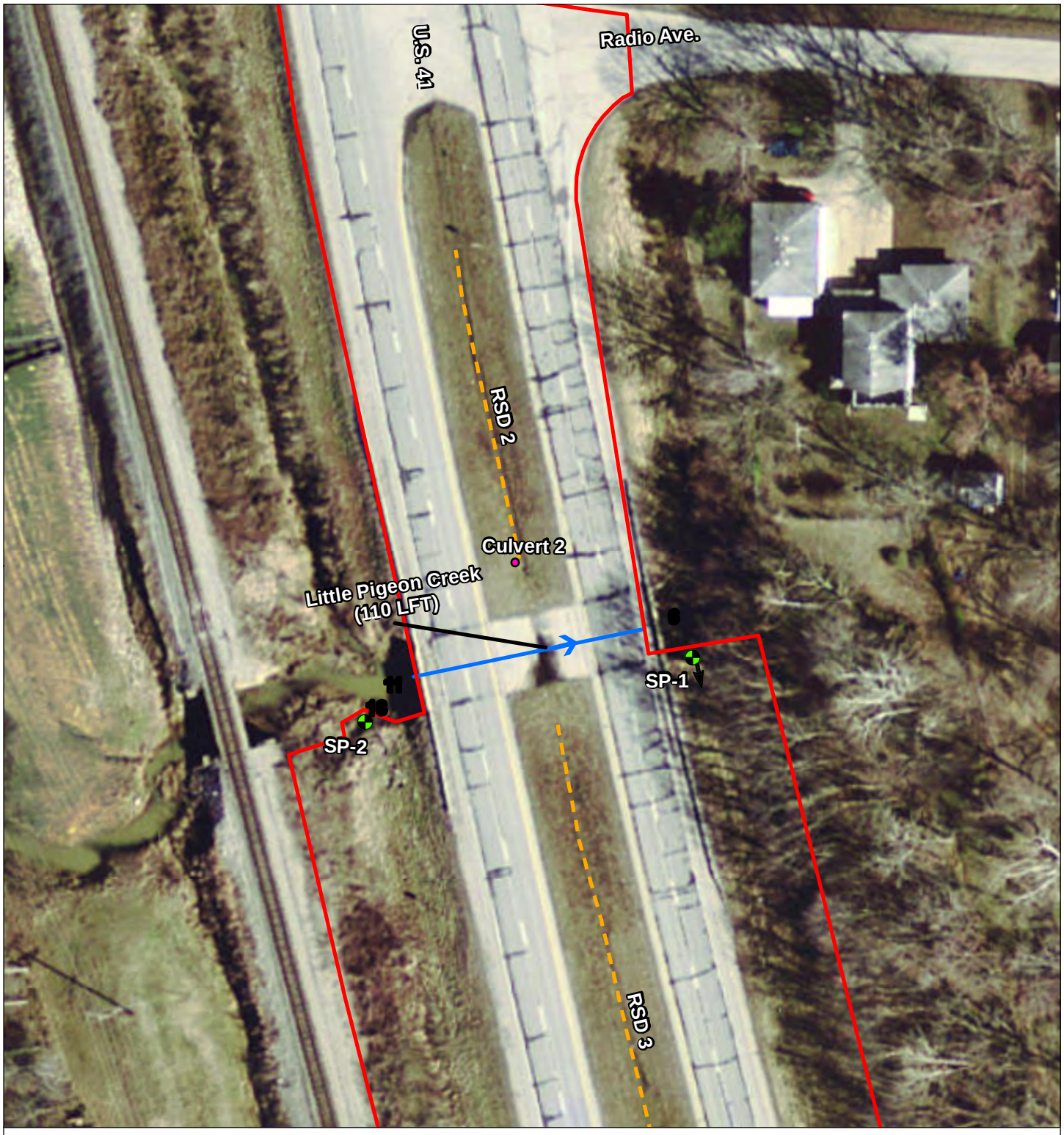
Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

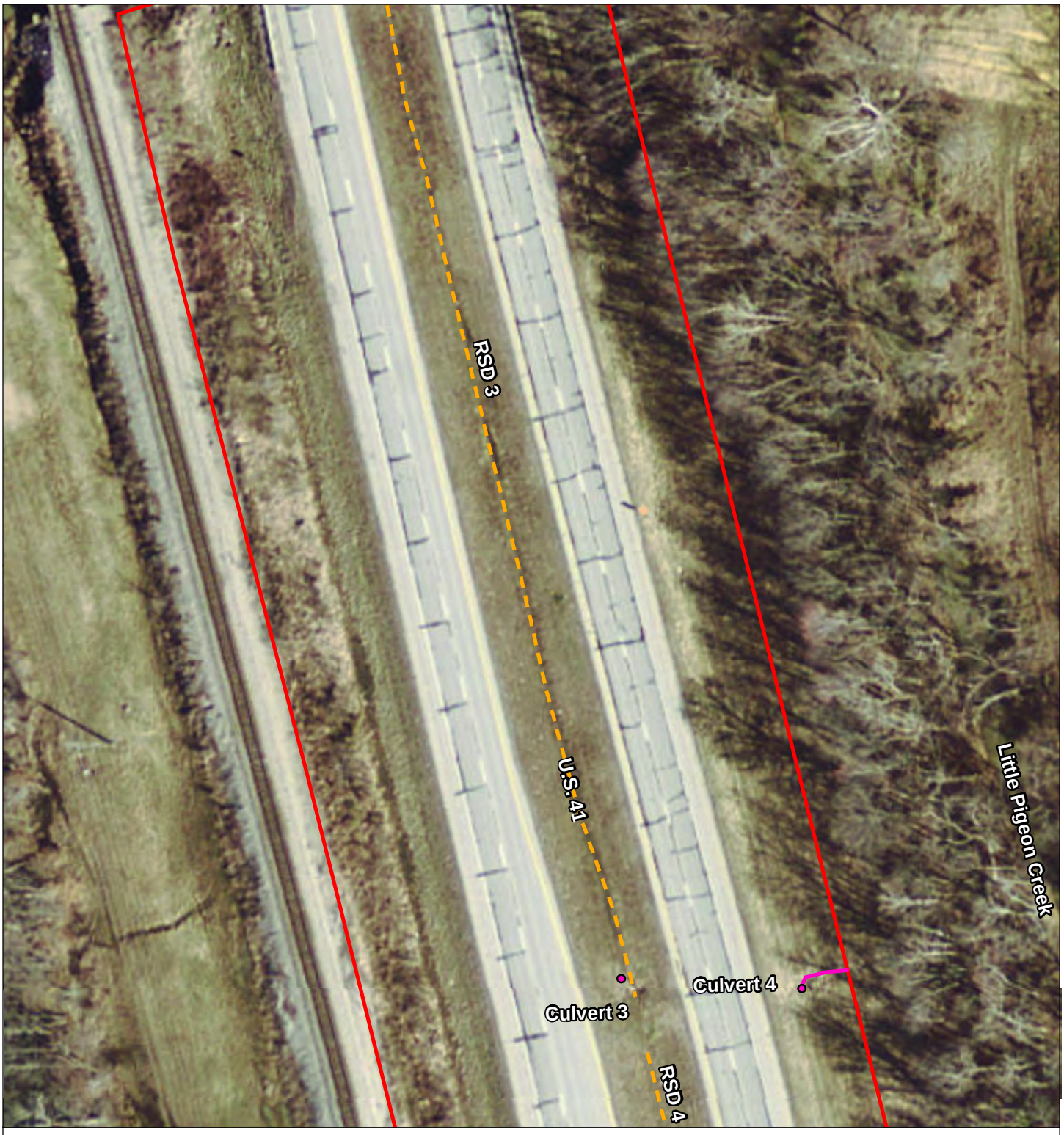
Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

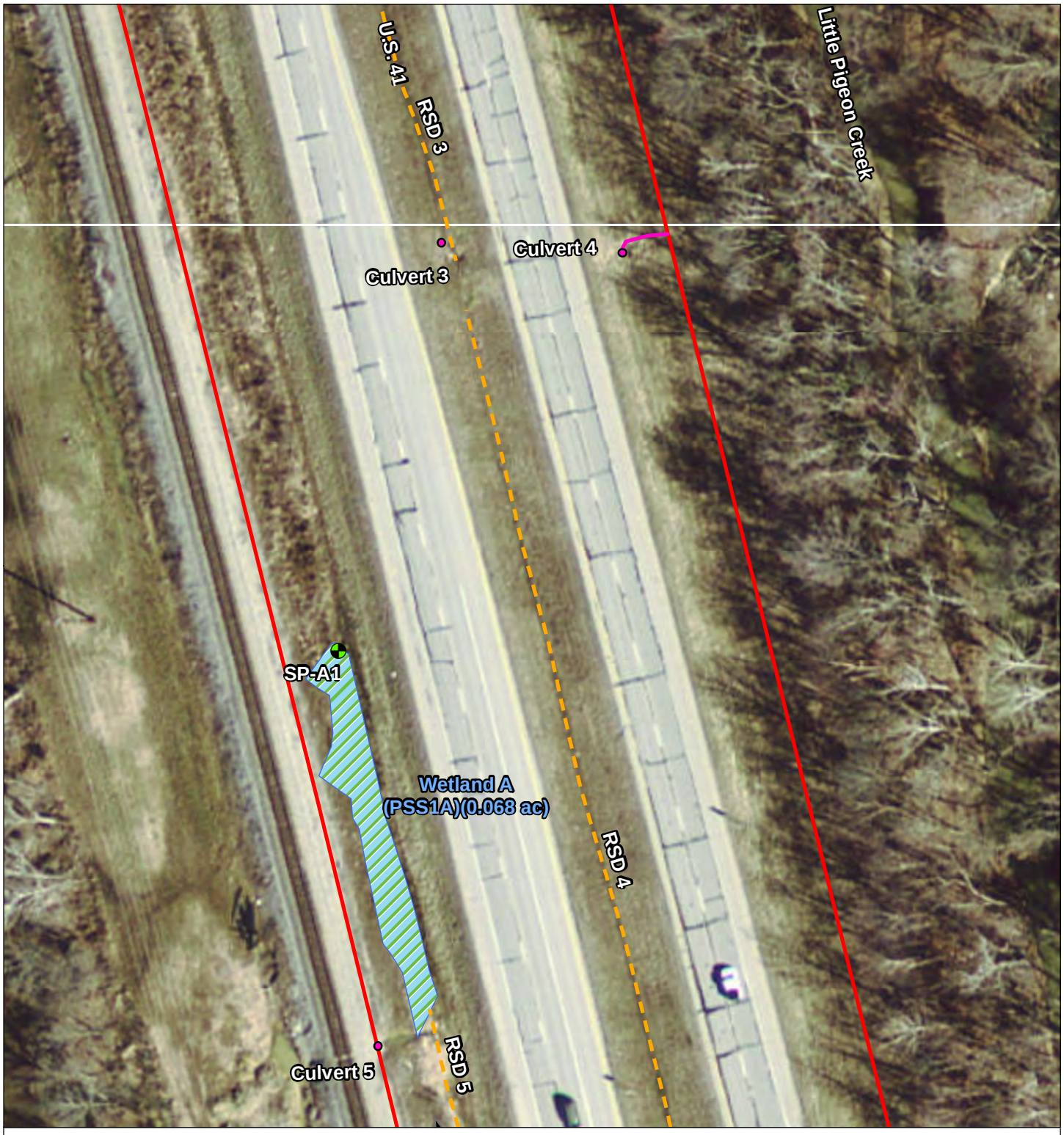
Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

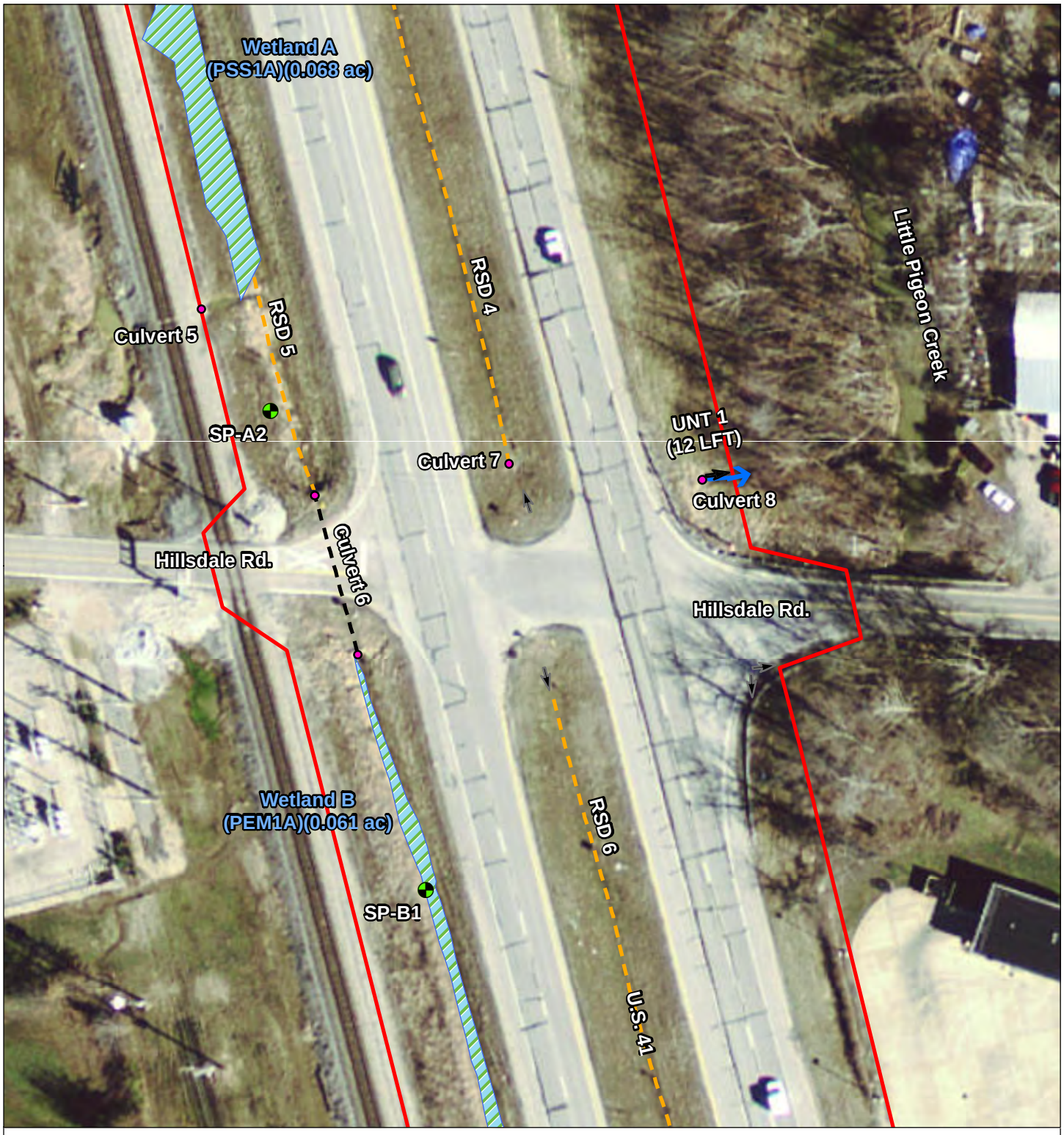
Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

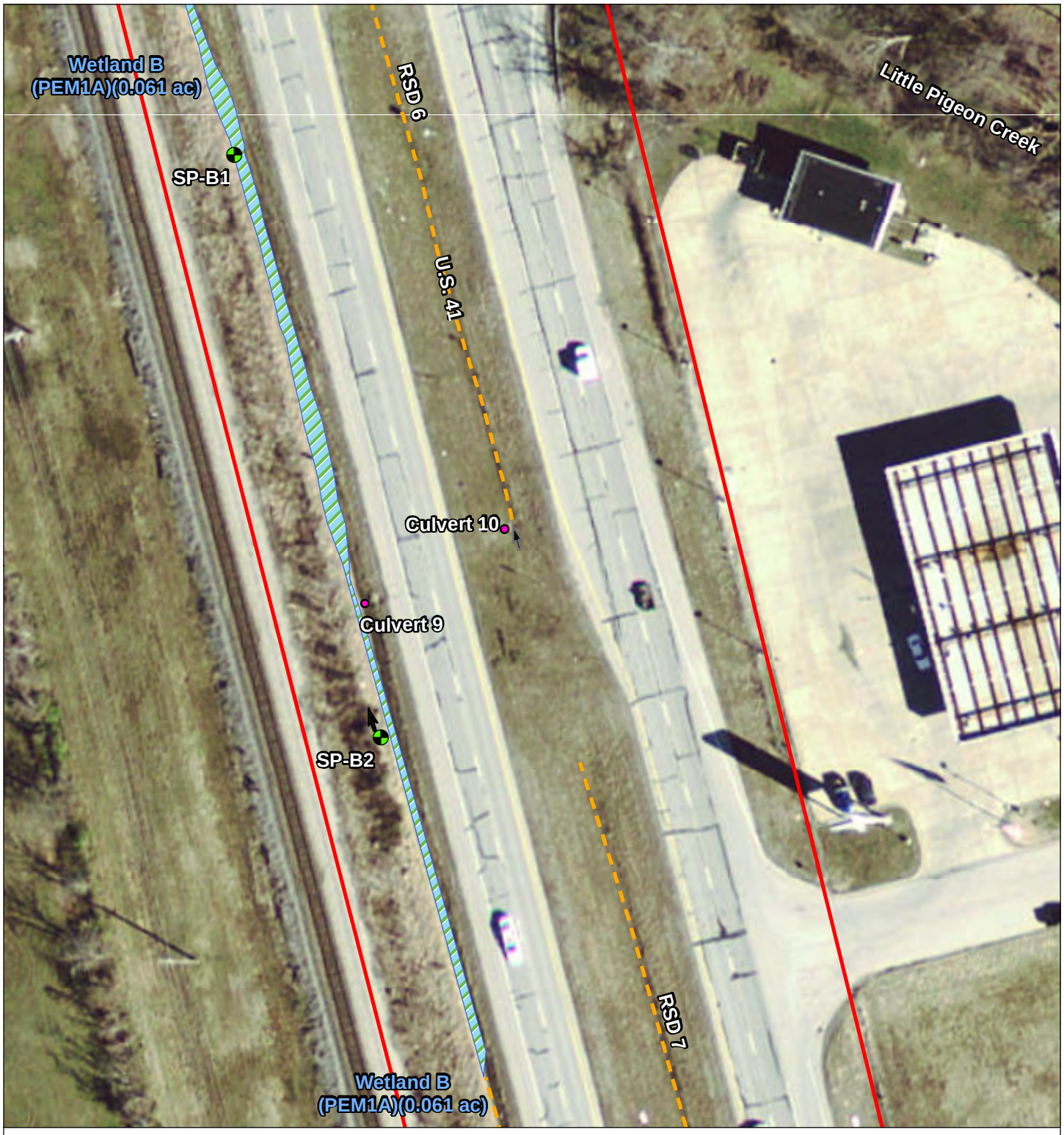
Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL



Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL

Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL

Sampling Point (SP) | Project Study Limits (PSL) | Roadside Ditch (RSD) | Culvert
Wetland | Stream | Culvert Opening | Drainage Feature (DF)

Exhibit 5 - Waters Delineation Map
Hillsdale Rd. at U.S. 41 Intersection Improvements
Scott & Center Townships, Vanderburgh County, Indiana
Des. No. 1400005
Metric Project No. 19-0123
Map Date: 11/12/2019
Map Author: Cory Shumate

All locations approximate
Source: Indiana Spatial Data Portal (2013)

N

0 20 40 80
Feet

METRIC ENVIRONMENTAL

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Evansville / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-A1

Investigator(s): Cory Shumate Section, Township, Range: Section 17; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0% Lat: 38.08036 Long: -87.55554 Datum: NAD83

Soil Map Unit Name: Stendal silt loam (St) - Hydric (3%) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes x No ____

Remarks:
Wetland A (PSS1A) Sampling Point

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Salix nigra*	15%	Yes	OBL
2. *Fraxinus pennsylvanica*	15%	Yes	FACW
3. *Platanus occidentalis*	5%	No	FACW
4. *Acer saccharum*	5%	No	FACU
5.			
	40% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Juncus effusus*	60%	Yes	OBL
2. *Poa pratensis*	20%	Yes	FAC
3. *Phragmites australis*	10%	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	90% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	0% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75%	x1 =	0.75
FACW species	30%	x2 =	0.6
FAC species	20%	x3 =	0.6
FACU species	5%	x4 =	0.2
UPL species		x5 =	
Column Totals:	1.30 (A)		2.15 (B)

Prevalence Index = B/A = 1.65

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

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

SOIL

Sampling Point: SP-A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR4/2	45	5YR 4/6	10	C	M	SiL	Mixed Matrix
	10YR 6/2	45						
5-10	10YR 5/2	40	5YR 4/6	20	C	M	SiL	Prominent redox concentrations; Mixed Matrix
	10YR 7/1	40						
10-20	10YR 5/2	75	7.5YR 5/8	25	C	M	SiL	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** x **No** _____

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

Remarks:

Sampling point was located in a depression with concave local relief. Therefore, it meets the criteria for geomorphic position (D2).

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Evansville / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-A2

Investigator(s): Cory Shumate Section, Township, Range: Section 17; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave

Slope (%): 1% Lat: 38.07971 Long: -87.55535 Datum: NAD83

Soil Map Unit Name: Stendal silt loam (St) - Hydric (3%) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No x

Remarks:
Wetland A Upland Sampling Point

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Schedonorus arundinaceus*	80%	Yes	FACU
2. *Poa pratensis*	15%	No	FAC
3. *Setaria pumila*	10%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	105% = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	0% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species	25%	x3 =	0.75
FACU species	80%	x4 =	3.2
UPL species		x5 =	
Column Totals:	1.05 (A)		3.95 (B)

Prevalence Index = B/A = 3.76

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: SP-A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	98	10YR 6/4	2	C	M	SiL	Distinct redox concentrations
5-12	10YR 4/2	80	10YR 2/1	10	C	M	SiL	Faint redox concentrations
			10YR 6/4	10	C	M		Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 12

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

Area surrounding sampling point had concave local relief. Therefore, it meets the criteria for geomorphic position (D2).

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Evansville / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-B1

Investigator(s): Cory Shumate Section, Township, Range: Section 20; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0% Lat: 38.07909 Long: -87.55508 Datum: NAD83

Soil Map Unit Name: Stendal Silt Loam (St) - Hydric (3%) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes x No ____

Remarks:
Wetland B (PEM1A) Wetland Sampling Point

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Poa Pratensis*	20%	Yes	FAC
2. *Juncus effusus*	20%	Yes	OBL
3. *Cyperus strigosus*	20%	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	60% = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	0% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20%	x1 =	0.2
FACW species	20%	x2 =	0.4
FAC species	20%	x3 =	0.6
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	0.60 (A)		1.2 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

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

SOIL

Sampling Point: SP-B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 4/3	100					SiL	
1-20	N 5/	70	2.5YR 2.5/4	15	C	PL	SiCL	Prominent redox concetnrations
			5YR 3/4	15	C	PL		Prominent redox concetnrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks:

Sampling point was located within a depression with concave local relief. Therefore it meets the criteria for geomorphic position (D2).

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Evansville / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-B2

Investigator(s): Cory Shumate Section, Township, Range: Section 20; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex

Slope (%): 3% Lat: 38.07834 Long: -87.55482 Datum: NAD83

Soil Map Unit Name: Stendal Silt Loam (St) - Hydric (3%) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No x

Remarks:
Wetland B Upland Sampling Point

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer saccharum*	5%	Yes	FACU
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Schedonorus arundinaceus*	40%	Yes	FACU
2. *Setaria pumila*	40%	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	80% = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *Rosa multiflora*	25%	Yes	FACU
2. *Lonicera japonica*	10%	Yes	FACU
	35% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species	40%	x3 =	1.2
FACU species	80%	x4 =	3.2
UPL species		x5 =	
Column Totals:	1.20 (A)		4.4 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: SP-B2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	47.5	7.5YR 5/8	5	C	M	SiCL	Prominent Redox concentrations; Mixed Matrix
	10YR 7/2	47.5						
12-20	10YR 7/2	60	7.5YR 5/8	5	C	M	SiCL	Prominent redox concentrations
			10YR 4/2	35	C	M		Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Darmstadt / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-1

Investigator(s): Cory Shumate Section, Township, Range: Section 17; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex

Slope (%): 1% Lat: 38.08226 Long: -87.5556 Datum: NAD83

Soil Map Unit Name: Stendal silt loam (St) - Hydric (3%) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No x

Remarks:
Upland Sampling Point 1

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	25%	Yes	FAC
2. *Robinia pseudoacacia*	25%	Yes	FACU
3.			
4.			
5.			
	50% = Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Elymus virginicus*	40%	Yes	FACW
2. *Persicaria maculosa*	40%	Yes	FACW
3. *Commelina communis*	15%	No	FACU
4. *Perilla frutescens*	5%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100% = Total Cover		

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	0% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species	80%	x2 =	1.6
FAC species	30%	x3 =	0.9
FACU species	40%	x4 =	1.6
UPL species		x5 =	
Column Totals:	1.50 (A)		4.1 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** X **No** ____

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

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3	100					SiL	
5-9	10YR 4/3	50					SiL	Mixed Matrix
	10YR 5/4	50						
9-17	10YR 5/4	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 17

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Darmstadt / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-2

Investigator(s): Cory Shumate Section, Township, Range: Section 17; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex

Slope (%): 1% Lat: 38.08217 Long: -87.55612 Datum: NAD83

Soil Map Unit Name: Stendal silt loam (St) - Hydric (3%) NWI classification: R5UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No x

Remarks:
Upland Sampling Point 2

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Juglans nigra*	5%	Yes	FACU
2. *Rhus aromatica*	5%	Yes	UPL
3. *Cornus racemosa*	5%	Yes	UPL
4.			
5.			
	15% = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	70%	Yes	FACW
2. *Persicaria maculosa*	15%	No	FACW
3. *Persicaria hydropiperoides*	10%	No	OBL
4. *Setaria pumila*	5%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *Rosa multiflora*	5%	Yes	FACU
2.			
	5% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10%	x1 =	0.1
FACW species	85%	x2 =	1.7
FAC species	5%	x3 =	0.15
FACU species	10%	x4 =	0.4
UPL species	10%	x5 =	0.5
Column Totals:	1.20 (A)		2.85 (B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

X 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
While the prevalence index is less than 3.0, the hydric soil and wetland hydrology criteria are not met. Thus, the prevalence index cannot be used to meet the criteria of hydrophytic vegetation.

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	75	10YR 5/3	25	C	M	SiL	Faint redox concentrations
10-20	10YR 4/2	50					SiL	Mixed Matrix
	10YR 4/6	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Des. No. 1400005 - Hillsdale Rd. at U.S. 41 Intersection Improvements City/County: Evansville / Vanderburgh County Sampling Date: 10/15/2019

Applicant/Owner: INDOT State: IN Sampling Point: SP-3

Investigator(s): Cory Shumate Section, Township, Range: Section 20; Township 5 S; Range 10 W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0% Lat: 38.07675 Long: -87.55433 Datum: NAD83

Soil Map Unit Name: Stendal Loam (St) - Hydric (3%) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X

Hydric Soil Present? Yes ____ No X

Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? Yes ____ No x

Remarks:
Upland Sampling Point 3

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharum*	25%	Yes	FACU
2. *Ulmus americana*	15%	Yes	FACW
3.			
4.			
5.			
	40%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Acer saccharum*	10%	Yes	FACU
2. *Cornus racemosa*	5%	Yes	FAC
3. *Platanus occidentalis*	2%	No	FACW
4.			
5.			
	17%	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Solidago canadensis*	35%	Yes	FACU
2. *Commelina communis*	20%	Yes	FACU
3. *Helianthus tuberosus*	15%	No	FACU
4. *Elymus canadensis*	15%	No	FACU
5. *Verbesina alternifolia*	15%	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis labrusca*	5%	Yes	FACU
2.			
	5%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species	32%	x2 =	0.64
FAC species	5%	x3 =	0.15
FACU species	125%	x4 =	5
UPL species		x5 =	
Column Totals:	1.62 (A)		5.79 (B)

Prevalence Index = B/A = 3.57

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	45	7.5YR 6/8	5	C	M	SiL	Prominent redox concentrations; Mixed Matrix
	10YR 6/2	45	5YR 3/4	5	C	M		Prominent redox concentrations
12-20	10YR 5/2	40	10YR 7/3	5	C	M	SiL	Faint redox concentrations; Mixed Matrix
	10YR 6/2	40	5YR 3/4	5	C	M		Prominent redox concentrations.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No x	Depth (inches):	
Water Table Present?	Yes ___ No x	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No x	Depth (inches):	

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

Sampling point was located within a depression with concave local relief. Therefore, it meets the criteria for geomorphic position (D2).

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: January 21, 2020

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Cory Shumate
Metric Environmental, LLC
6971 Hillsdale Court
Indianapolis, IN 46250
317-350-4896
corys@metricenv.com

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The proposed project (Des. 1400005) includes the intersection improvement project on US 41 between Hillsdale Rd. and Radio Ave. situated at the southeast corner of the Town of Darmstadt, Indiana. The two-way stop-controlled intersection of U.S. 41 at Hillsdale Rd. will be converted to a J-turn intersection. The median access for Radio Ave. will be closed, making Radio Ave. a right-in/right-out roadway approach. In addition, street lighting will be installed. No impacts to Little Pigeon Creek are anticipated as a result of this project. This project is located in Sections 17 and 20, Township 5 South, Range 10 West on the Evansville North, Indiana 7.5-minute United States Geological Survey topographic quadrangle.

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

State: IN County/parish/borough: Vanderburgh County City: Evansville & Darmstadt
Center coordinates of site (lat/long in degree decimal format):
Lat.: 38.07948°
Long.: -87.55493°
Universal Transverse Mercator: 16 S 451331.08 E 4214778.91 N
Name of nearest waterbody: Little Pigeon Creek

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

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

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

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland A	38.08013	-87.55548	0.068 acre (190 LFT)	Wetland	Section 404
Wetland B	38.07872	-87.55493	0.061 acre (570 LFT)	Wetland	Section 404
Little Pigeon Creek	38.08227	-87.55583	48.3 LFT (0.007 acre)	Non-wetland waters	Section 404
UNT 1	38. 07964	-87. 55461	12.4 LFT (0.0003 acre)	Non-wetland waters	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

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

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

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

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
- [x] Map: Dated 11/12/2019

Data sheets prepared/submitted by or on behalf of the PJD requestor.

- [ ] Office concurs with data sheets/delineation report.
- [ ] Office does not concur with data sheets/delineation report. Rationale: _____.

- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [ ] U.S. Geological Survey Hydrologic Atlas: _____.
  - [x] USGS NHD data.
  - [x] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: Evansville North, IN 7.5 min, 1996

- [x] Natural Resources Conservation Service Soil Survey. Citation: SSURGO Vanderburgh County

- [x] National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/ .
- [ ] State/local wetland inventory map(s): _____.
- [x] FEMA/FIRM maps: ; Effective _____

- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): Indiana Aerial Photograph, 2013 .

  or [x] Other (Name & Date): Site Photographs, 10/15/19.
- [ ] 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.

	CShumate 1/21/2020
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

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

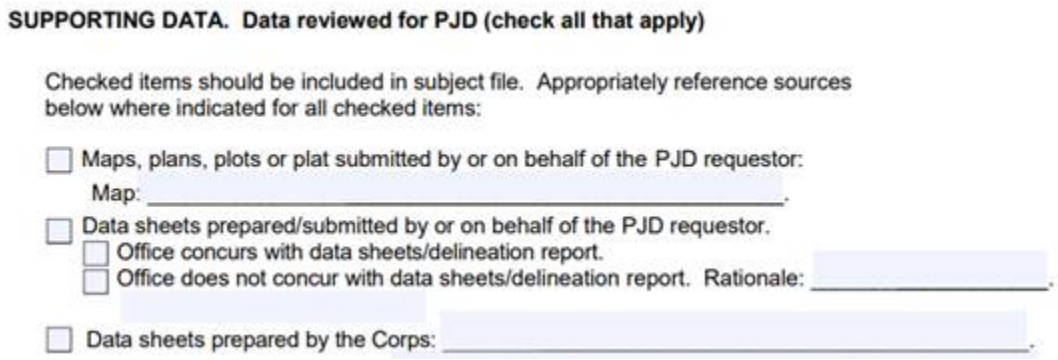
Susan Castle

Subject: FW: Des. No. 1400005 Hillsdale Rd. and Radio Ave. at U.S. 41 Scott and Center Townships, Vanderburgh County, Indiana Waters Determination Report
Attachments: 1400005 Waters Report Approved 1.22.20.pdf

From: Cooper, Nicholas <NCooper5@indot.IN.gov>
Sent: Wednesday, January 22, 2020 8:38 AM
To: Cory Shumate <corys@metricenv.com>
Cc: Amy Smith <amys@metricenv.com>; Alex Gray <alexg@metricenv.com>; Bullock, Matthew K <MBullock1@indot.IN.gov>
Subject: RE: Des. No. 1400005 Hillsdale Rd. and Radio Ave. at U.S. 41 Scott and Center Townships, Vanderburgh County, Indiana Waters Determination Report

Cory,

Thanks for making those changes. It seems that your Pre-JD form is still a little off from what I was looking for in my comment #9. The second check box that is next to "data sheets" has been moved up next to the second map line. I put an image below from the original so that you can revise yours for future reports.



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

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

☐ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: _____.
☐ Data sheets prepared/submitted by or on behalf of the PJD requestor.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report. Rationale: _____.

☐ Data sheets prepared by the Corps: _____.

Thank you for submitting the waters report for **US 41/Hillsdale Road Intersection Project, Des. No. 1400005**. Your most recent submission has been reviewed and approved. For the INDOT PM, the approved report can be found on Projectwise through this link: **Des. No. 1400005 Waters Report - Final**. It is the responsibility of the Project Manager to forward a copy of this report to the Project Designer.

Beginning November 2019, we are signing and dating the front page of Waters Reports to assist in the NEPA review. I have attached this signature page which should be incorporated into the Waters Report going forward. 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.

Nick Cooper
Ecology and Waterway Permitting Specialist
Indiana Department of Transportation
Ph. (317) 233-3698

APPENDIX G:
Public Involvement

APPENDIX H:
Air Quality

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
Comments:Modify 2018-2021 STIP Reducing FY19 CN MPO PYB to $3,449,999.90, FY19 CN MPO to $2,635,696.00 and FY19 CN Local $1,521,423.80 per EMPO TIP Mod Letter dated 5/25/2018.																	
Vanderburgh County	37200 / 1400549	Init.	IR 1041	Added Travel Lanes	Green River Rd from Kansas Rd to Boonville-New Harmony Rd	Vincennes	0	STP		Evansville MPO	CN	$1,577,240.00	$0.00		$1,577,240.00		
										Local Funds	CN	$0.00	$1,625,060.00		$1,625,060.00		
										Evansville MPO - PYB	CN	$4,923,000.00	$0.00		$4,923,000.00		
Vanderburgh County	37200 / 1702432	A 10	IR 1041	Environmental Mitigation	5.6 mi SW Dwntwn Eville, E of Seminary, .35 mi. N of Seminary/Eisterhold Rd.	Vincennes	0	STP	$100,000.00	Local Funds	PE	$0.00	$84,525.00		$84,525.00		
Comments:Amend 2018-2021 STIP FY19 $84,525.00. EMPO TIP																	
Indiana Department of Transportation	37845 / 1400005	Init.	US 41	Intersect. Improv. W/ New Signals	At Hillsdale Road, 2.04 miles N of SR 57	Vincennes	.105	NHPP		Safety Construction	CN	$1,770,400.00	$442,600.00	$120,000.00	$2,093,000.00		
										Safety Construction	PE	$8,000.00	$2,000.00	$10,000.00			
										Safety Consulting	PE	$190,800.00	$47,700.00	$238,500.00			
Indiana Department of Transportation	38329 / 1400191	Init.	US 41	Truss Reconstruction Or Repair	Over Pigeon Creek, 0.37 miles N of SR 66	Vincennes	0	NHPP		Bridge Construction	CN	$1,290,400.00	$322,600.00	$1,613,000.00			
										Bridge Consulting	PE	$146,200.00	$36,550.00	$182,750.00			
Indiana Department of Transportation	38580 / 1500710	Init.	SR 62	Small Structure Pipe Lining	5.99 miles W of US-41	Vincennes	0	NHPP		Bridge Construction	CN	$136,000.00	$34,000.00	$170,000.00			
Indiana Department of Transportation	38710 / 1500041	Init.	SR 62	Bridge Replacement, Concrete	Over CSX RR, 4.19 mile W of US 41	Vincennes	0	NHPP		Bridge Construction	CN	$2,491,200.00	$622,800.00			$3,114,000.00	
										Bridge Construction	PE	$204,000.00	$51,000.00			$255,000.00	
Indiana Department of Transportation	38710 / 1600060	Init.	SR 62	Bridge Replacement, Concrete	Over Tekopple Avenue, 4.09 miles W US-41	Vincennes	0	NHPP		Bridge Construction	CN	$65,600.00	$16,400.00	$82,000.00			
Indiana Department of Transportation	38710 / 1600060	A 02	SR 62	Bridge Replacement, Concrete	Over Tekopple Avenue, 4.09 miles W US-41	Vincennes	0	NHPP	$5,913,000.00	Bridge Construction	CN	$4,664,800.00	$1,166,200.00	($82,000.00)		$5,913,000.00	
Comments:Amend FY 2018-2021 STIP to reflect moving FY 2018 CN funding to FY 2020 and increasing to $5,913,000. Per Evansville MPO TIP Administrative Modification approval on 07/13/2017.																	
Indiana Department of Transportation	38710 / 1602258	Init.	SR 62	Replace Superstructure	Over Carpenter Creek, 4.43 miles W US-41	Vincennes	0	NHPP		Bridge Consulting	PE	$120,800.00	$30,200.00	$151,000.00			
										Bridge Construction	CN	$1,299,200.00	$324,800.00			$1,624,000.00	
Vanderburgh County	38919 / 1592156	Init.	MS BRDG	Bridge Rehabilitation Or Repair	Bridge 310 on Columbia/Delaware St over Pigeon Creek,9th Av and CSX	Vincennes	0	STP		Local Funds	CN	$0.00	$675,000.00		$675,000.00		

*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.

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Comments:Adding FY20 PE $224,000.00 per EMPO TIP Letter dated 12/16/2019. AQC 11/29/2019.																		
Evansville	35103 / 1006080	Init.	ST 1028	Added Travel Lanes	Lincoln Avenue; Green River Road to Newburgh Road	Vincennes	0	STPBG		Evansville MPO	CN	$2,520,000.00	$0.00			$2,520,000.00		
										Local Funds	CN	$0.00	$630,000.00			$630,000.00		
Evansville	35103 / 1006080	A 03	ST 1028	Added Travel Lanes	Lincoln Avenue; Green River Road to Newburgh Road	Vincennes	0	STPBG	$3,150,000.00	Local Funds	CN	$0.00	-$630,000.00			($630,000.00)		
										Evansville MPO	CN	-$2,520,000.00	$0.00			($2,520,000.00)		
Comments:Amend 2020-2024 STIP. Removing CN Phase from FY22 because project is not in the EMPO TIP. CN has moved to FY25.																		
Evansville	36943 / 1383066	Init.	IR 1040	Intersection Improvement	Washington Ave at 2nd Street and 2nd Street at Parrott St/Jefferson St	Vincennes	.1	STPBG		Evansville MPO - PYB	CN	$1,097,106.00	$0.00	$1,097,106.00				
										Local Funds	CN	$0.00	$454,026.50	$454,026.50				
Evansville	36943 / 1383066	M 02	IR 1040	Intersection Improvement	Washington Ave at 2nd Street and 2nd Street at Parrott St/Jefferson St	Vincennes	.1	STBG	$1,701,132.50	Local Funds	CN	$0.00	$150,000.00	$150,000.00				
Comments:Modify 2020-2024 STIP. Increasing FY20 CN Local $150,000.00 to total $604,026.50 per EMPO 2020-2024 TIP.																		
Evansville	36945 / 1383064	Init.	ST 1038	Other Type Project (Miscellaneous)	Covert Avenue, From US 41 to I-69	Vincennes	5	STPBG		Evansville MPO - PYB	CN	$886,774.00	$0.00	$886,774.00				
										Evansville MPO	CN	$2,368,674.00	$0.00	$2,368,674.00				
										Local Funds	CN	$0.00	$1,308,862.00	$1,308,862.00				
Indiana Department of Transportation	37845 / 1400005	Init.	US 41	Intersect. Improv. W/ New Signals	At Hillsdale Road, 2.04 miles N of SR 57	Vincennes	.105	NHPP		Safety Construction	CN	$1,764,545.60	$441,136.40	$2,205,682.00				
Indiana Department of Transportation	38710 / 1500041	Init.	SR 62	Bridge Replacement, Concrete	Over CSX RR, 4.19 mile W of US 41	Vincennes	0	NHPP		Bridge Construction	CN	$8,832,164.00	$2,208,041.00	$11,040,205.00				
Indiana Department of Transportation	39705 / 1601700	Init.	PR 69	New Road Construction	Ohio River Crossing from I-69 Evansville to southside I-69 Henderson KY	Vincennes	1	NHPP		Major New - Consulting	CN	$45,000.00	$5,000.00	$50,000.00				
										Major New - ROW	RW	$3,600,000.00	$400,000.00	$800,000.00	$2,800,000.00	$400,000.00		
Indiana Department of Transportation	39922 / 1601009	Init.	SR 66	Interchange Modification	At the intersection of Green River Road (2.2 miles W of I-69), WB off ramp	Vincennes	.03	NHPP		Safety Construction	CN	$158,296.00	$39,574.00	$13,000.00	$184,870.00			
Indiana Department of Transportation	39923 / 1601011	Init.	US 41	Added Travel Lanes, Construct Turn Lanes	At Lynch Road, 1.0 mi N of SR-66	Vincennes	.01	NHPP		Safety Construction	CN	$1,081,273.60	$270,318.40	$15,000.00	$1,336,592.00			
Indiana Department of Transportation	39923 / 1601011	A 11	US 41	Added Travel Lanes, Construct Turn Lanes	At Lynch Road, 1.0 mi N of SR-66	Vincennes	.01	NHPP	$1,356,592.00	Safety ROW	RW	$16,000.00	$4,000.00	$20,000.00				
Comments:Adding FY20 RW $20,000.00 per EMPO TIP Letter dated 11/15/2019.																		

*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.

Table 5.4:
TIP Projects Listing Cont.

Sponsor: Indiana Department of Transportation												
Route Des# Length: Description:	Project Limits Planning Reference Federal Funding Source	Map ID Amendment/ Modification Date	Phase	All amounts in thousands 2020	2021	2022	2023	2024	Planning/ Cost to Complete	Federal Share	State Share
Vanderburgh County											
US 41	Intersection with Hillsdale Rd., 2.04 mi. N of SR 57		PE							$ -	$ -
1400005			RW							$ -	$ -
0.105 mi.	NHPP		CN	$2,206						$ 1,765	$ 441
Contract 37845;	Intersection improvement project										
SR 62	Over CSX RR, 4.19 mi. W of US 41		PE							$ -	$ -
1500041			RW							$ -	$ -
n/a	NHPP		CN	$11,040						$ 8,832	$ 2,208
Contract 38710;	Bridge replacement. Includes SR 62 over Carpenter Creek, 4.43 mi. W of US 41; SR 62 over Over Tekoppel Ave., 4.09 mi. W of US 41										
SR 66	Intersection with Green River Rd., 2.2 mi. W of I-69		PE							$ -	$ -
1601009			RW							$ -	$ -
n/a	NHPP		CN	$13	$185					$ 158	$ 40
Contract 39922;	Interchange modification, WB off ramp.										
US 41	Intersection with Lynch Rd., 1.0 mi. N of SR 66		PE							$ -	$ -
1601011			RW	$20						$ 16	$ 4
n/a	NHPP	11/14/2019	CN	$15	$1,336					$ 1,081	$ 270
Contract 39923;	Intersection improvement with turn lanes										
SR 62	University Pkwy. bridge over SR 62, 7.5 mi. W of US 41		PE							$ -	$ -
1602248			RW							$ -	$ -
n/a	NHPP		CN	$957						$ 766	$ 191
Contract 40075;	Bridge thin deck overlay.										
SR 62	Pedestrian Walk at SR 62 EB/WB		PE	$112						$ 90	$ 22
1702066			RW	$64						$ 51	$ 13
n/a	NHPP	11/14/2019	CN			$2,640				$ 2,112	$ 528
Contract 40560;	Bridge replacement										
US 41	Vietnam Gold Star Bridge over Ohio River		PE		$300					$ 240	$ 60
1702658			RW							$ -	$ -
n/a	NHPP		CN							$ -	$ -
Contract 40789;	Inspection of northbound and southbound Ohio River bridges										
SR 66	Over Little Creek, 1.68 miles W of SR 65		PE							$ -	$ -
1592949			RW							$ -	$ -
n/a	STBG		CN		$785					$ 628	$ 157
Contract 41137;	Bridge deck overlays										
SR 62	Over First Ave, RR, Parking, 1.72 mi W of US 41, WBL		PE							$ -	$ -
1801127			RW							$ -	$ -
n/a	NHPP		CN	$3,071						$ 2,457	$ 614
Contract 41167;	Bridge thin deck overlay										
US 41	From N of SR 66/SR 62 (Lloyd Expwy) to 0.74 mi N of SR 66 (Diamond		PE							$ -	$ -
1601066			RW			$760				$ 608	$ 152
8.0 mi.	NHPP		CN				$21,360			$ 17,088	$ 4,272
Contract 41410;	Pavement Replacement										
SR 65	Over I-64 EB/WB lanes, 2.61 mi S of SR 68		PE							$ -	$ -
1800142			RW							$ -	$ -
n/a	STBG		CN				$4,271			$ 3,417	$ 854
Contract 41457;	Bridge Replacement, Concrete										
US 41	Vietnam Gold Star Bridge over Ohio River		PE							$ -	$ -
1601737			RW							$ -	$ -
0.945 mi.	NHPP		CN	$70						$ 56	$ 14
No Contract Number;	State police additional patrols for "Fix For 41" project										
I-64	From 0.6 mi. W of SR 165 to 3.32 mi. E fo SR 65.		PE							$ -	$ -
1601990			RW							$ -	$ -
9.652 mi.	NHPP		CN	$7,596						$ 6,836	$ 760
Contract 40042;	Pavement, hot mix asphalt overlay, preventive maintenance.										
SR 62	From 4.59 mi W (Rosenberger) to 2.72 mi W of S Jct US-41 (Wabash)		PE	$7,019						$ 5,615	$ 1,404
1900308			RW				$300			$ 240	$ 60
1.85 mi.	NHPP	7/11/2019	CN					$55,360		$ 44,288	$ 11,072
Contract 42287;	Road Reconstruction and Intersection Improvements.										
I-64	Over Abandoned N & S Railroad, 0.82 mi E SR-65		PE	$313			$20			$ 300	$ 33
1900099			RW							$ -	$ -
n/a	NHPP	7/11/2019	CN					$2,555		$ 2,300	$ 256
Contract 42187;	Bridge Deck Replacement										
US 41	1.80 mi N Jct SR-57		PE	$368			$60			$ 342	$ 86
1900273			RW							$ -	$ -
n/a	NHPP	7/11/2019	CN					$2,536		$ 2,029	$ 507
Contract 42185;	Small Structure Replacement										

APPENDIX I:
Additional Studies

Vanderburgh County Land and Water Conservation Fund

objectid	State	County	Grant ID Element	Type	Grant Element Title	Grant Sponsor	Fiscal Year	Amount
47343	Indiana	Vanderburgh	94	A	STREAM VALLEY PARK	EVANSVILLE-VANDERBURGH COUNTY LEVEE AUTHORITY	1972	191500.92
47485	Indiana	VANDERBURGH	390	D	WILLIAM J. MOUTOUX PARK	EVANSVILLE PARK BOARD	1981	45100
47687	Indiana	VANDERBURGH	496	C	D/PIGEON CREEK GREENWAY PASSAGE	EVANSVILLE PARK BOARD	1993	75000
51294	Indiana	VANDERBURGH	13	D	LORRAINE & GARVIN SWIMMING POOLS	EVANSVILLE PARK BOARD	1967	160104.79
51311	Indiana	VANDERBURGH	93	D	RIVERFRONT PARK	EVANSVILLE PARK BOARD	1972	72000
51316	Indiana	VANDERBURGH	109	D	GOLFMOOR PARK	EVANSVILLE PARK BOARD	1972	88587
51366	Indiana	VANDERBURGH	333	D	KLEYMEYER PARK DEVELOPMENT	EVANSVILLE PARK BOARD	1979	511995.67
51369	Indiana	VANDERBURGH	334	D	STOCKWELL PARK	EVANSVILLE PARK BOARD	1979	22594.54
60677	Indiana	VANDERBURGH	86	D	WESSELMAN PARK NATURE CENTER	EVANSVILLE PARK BOARD	1971	80000
60682	Indiana	VANDERBURGH	100	D	ANTHONY C. OATES MEMORIAL PARK	EVANSVILLE PARK BOARD	1972	265000
78912	Indiana	Vanderburgh	224	A	STREAM VALLEY PARK PHASE II	EVANSVILLE-VANDERBURGH COUNTY	1973	75000
78930	Indiana	VANDERBURGH	288	D	BURDETTE PARK	VANDERBURGH COUNTY PARK BOARD	1977	51773.55

B03002

HISPANIC OR LATINO ORIGIN BY RACE

Universe: Total population

2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Vanderburgh County, Indiana		Census Tract 102.01, Vanderburgh County, Indiana		Census Tract 107, Vanderburgh County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	181,831	*****	11,623	+/-474	8,834	+/-22
Not Hispanic or Latino:	177,210	*****	11,278	+/-504	8,768	+/-98
White alone	152,954	+/-101	9,841	+/-599	8,010	+/-278
Black or African American alone	16,539	+/-503	263	+/-147	312	+/-223
American Indian and Alaska Native alone	374	+/-162	0	+/-18	8	+/-14
Asian alone	2,233	+/-179	740	+/-296	205	+/-152
Native Hawaiian and Other Pacific Islander alone	244	+/-45	0	+/-18	0	+/-16
Some other race alone	313	+/-197	58	+/-63	13	+/-21
Two or more races:	4,553	+/-511	376	+/-163	220	+/-115
Two races including Some other race	53	+/-86	0	+/-18	0	+/-16
Two races excluding Some other race, and three or more races	4,500	+/-505	376	+/-163	220	+/-115
Hispanic or Latino:	4,621	*****	345	+/-205	66	+/-94
White alone	2,807	+/-469	282	+/-198	50	+/-81
Black or African American alone	93	+/-81	0	+/-18	0	+/-16
American Indian and Alaska Native alone	0	+/-27	0	+/-18	0	+/-16
Asian alone	13	+/-20	0	+/-18	0	+/-16
Native Hawaiian and Other Pacific Islander alone	17	+/-25	0	+/-18	0	+/-16
Some other race alone	1,453	+/-453	31	+/-54	16	+/-28
Two or more races:	238	+/-130	32	+/-52	0	+/-16

	Vanderburgh County, Indiana		Census Tract 102.01, Vanderburgh County, Indiana		Census Tract 107, Vanderburgh County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Two races including Some other race	206	+/-133	32	+/-52	0	+/-16
Two races excluding Some other race, and three or more races	32	+/-30	0	+/-18	0	+/-16

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '******' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

B17001

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Universe: Population for whom poverty status is determined
2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Vanderburgh County, Indiana		Census Tract 102.01, Vanderburgh County, Indiana		Census Tract 107, Vanderburgh County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	175,128	+/-518	11,567	+/-479	8,834	+/-22
Income in the past 12 months below poverty level:	31,506	+/-1,880	231	+/-164	362	+/-215
Male:	13,572	+/-1,059	87	+/-93	197	+/-117
Under 5 years	1,754	+/-288	0	+/-18	31	+/-34
5 years	327	+/-116	0	+/-18	0	+/-16
6 to 11 years	1,615	+/-251	0	+/-18	13	+/-22
12 to 14 years	801	+/-208	0	+/-18	22	+/-27
15 years	133	+/-73	28	+/-34	0	+/-16
16 and 17 years	545	+/-184	0	+/-18	16	+/-18
18 to 24 years	1,784	+/-317	38	+/-60	12	+/-19
25 to 34 years	1,559	+/-263	0	+/-18	29	+/-38
35 to 44 years	1,473	+/-284	0	+/-18	15	+/-23
45 to 54 years	1,577	+/-279	18	+/-33	24	+/-27
55 to 64 years	1,265	+/-207	0	+/-18	25	+/-23
65 to 74 years	543	+/-161	3	+/-5	9	+/-12
75 years and over	196	+/-77	0	+/-18	1	+/-3
Female:	17,934	+/-1,162	144	+/-100	165	+/-109
Under 5 years	1,899	+/-332	0	+/-18	11	+/-17
5 years	276	+/-123	0	+/-18	0	+/-16

	Vanderburgh County, Indiana		Census Tract 102.01, Vanderburgh County, Indiana		Census Tract 107, Vanderburgh County, Indiana	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
6 to 11 years	1,619	+/-263	34	+/-39	17	+/-23
12 to 14 years	798	+/-206	0	+/-18	8	+/-12
15 years	336	+/-137	0	+/-18	10	+/-15
16 and 17 years	480	+/-154	22	+/-34	13	+/-21
18 to 24 years	2,968	+/-372	14	+/-21	24	+/-23
25 to 34 years	2,530	+/-355	0	+/-18	10	+/-16
35 to 44 years	2,019	+/-271	36	+/-41	34	+/-33
45 to 54 years	2,008	+/-275	0	+/-18	29	+/-31
55 to 64 years	1,248	+/-212	4	+/-6	3	+/-5
65 to 74 years	688	+/-122	0	+/-18	3	+/-5
75 years and over	1,065	+/-217	34	+/-38	3	+/-5
Income in the past 12 months at or above poverty level:	143,622	+/-2,029	11,336	+/-527	8,472	+/-216
Male:	71,172	+/-1,083	5,824	+/-390	4,166	+/-182
Under 5 years	3,900	+/-286	442	+/-143	296	+/-106
5 years	919	+/-197	60	+/-43	110	+/-64
6 to 11 years	4,937	+/-392	575	+/-182	326	+/-93
12 to 14 years	2,298	+/-298	176	+/-87	227	+/-88
15 years	1,027	+/-202	92	+/-83	92	+/-71
16 and 17 years	1,522	+/-212	180	+/-122	115	+/-63
18 to 24 years	5,475	+/-357	364	+/-148	247	+/-121
25 to 34 years	11,150	+/-305	503	+/-173	552	+/-124
35 to 44 years	8,857	+/-318	971	+/-213	526	+/-97
45 to 54 years	9,574	+/-330	667	+/-189	537	+/-129
55 to 64 years	10,717	+/-225	877	+/-156	630	+/-126
65 to 74 years	6,397	+/-172	642	+/-125	359	+/-75
75 years and over	4,399	+/-135	275	+/-128	149	+/-69
Female:	72,450	+/-1,232	5,512	+/-318	4,306	+/-192
Under 5 years	3,596	+/-336	352	+/-139	224	+/-106
5 years	822	+/-207	159	+/-99	71	+/-55
6 to 11 years	4,869	+/-409	510	+/-209	442	+/-129
12 to 14 years	2,191	+/-291	68	+/-49	233	+/-92
15 years	764	+/-147	132	+/-73	28	+/-27
16 and 17 years	1,466	+/-198	130	+/-66	134	+/-58
18 to 24 years	4,926	+/-362	222	+/-84	199	+/-87
25 to 34 years	10,497	+/-381	680	+/-165	532	+/-101
35 to 44 years	8,435	+/-267	751	+/-178	579	+/-121
45 to 54 years	9,631	+/-302	744	+/-147	579	+/-118
55 to 64 years	11,377	+/-249	988	+/-164	604	+/-145
65 to 74 years	7,552	+/-162	426	+/-119	417	+/-95
75 years and over	6,324	+/-247	350	+/-128	264	+/-70

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling

variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

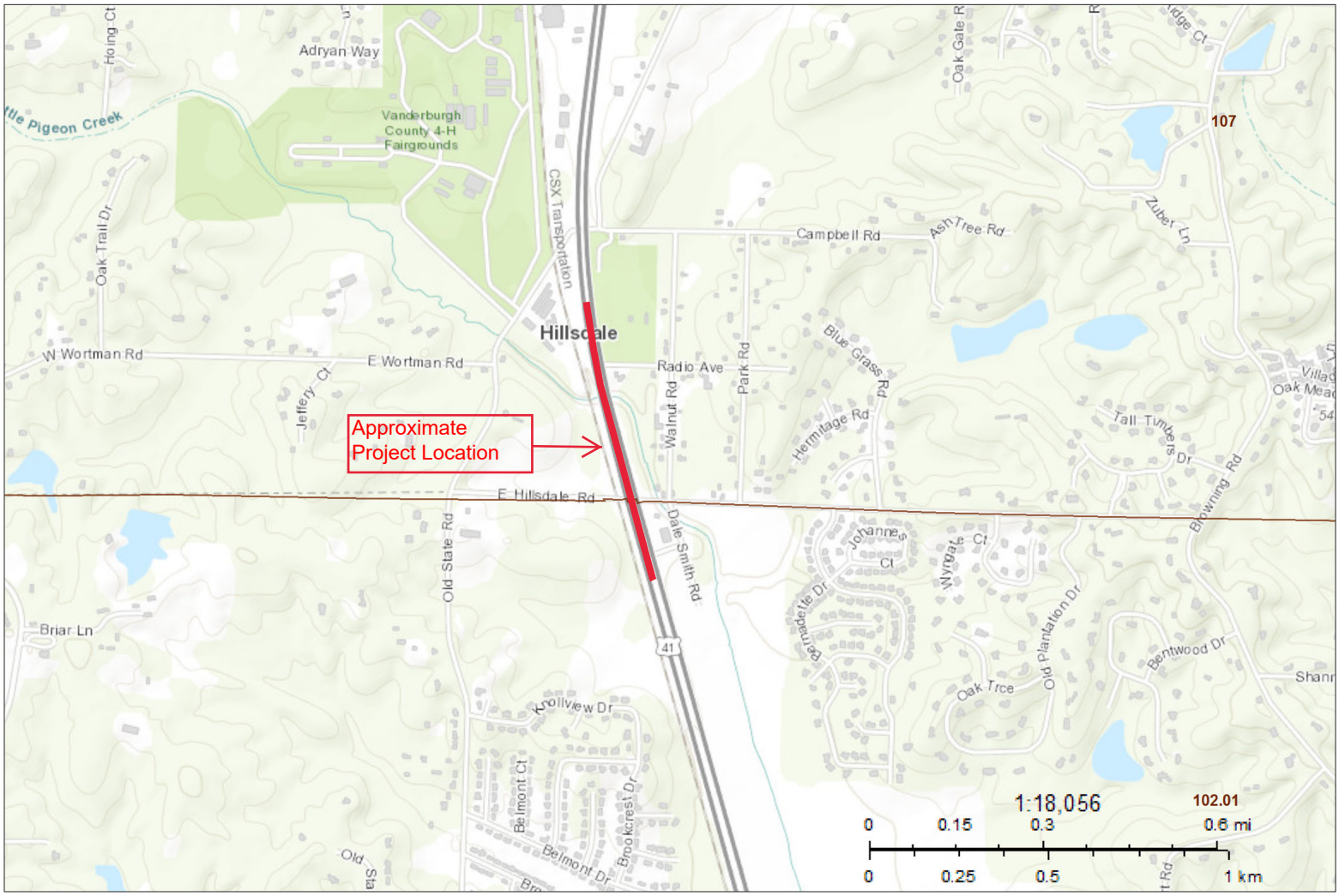
While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.



Legend

Your Selections
No Legend

Selection Results
No Legend

2018 Boundaries
- ☐ County Vanderburgh
- ☐ Census Tract AC-1 = 102.01, AC-2 = 107

Environmental Justice Analysis, 2013-2017 American Community Survey 5-Year Estimates				
Des. No. 1400005, US 41, Hillsdale Road, and Radio Avenue, Intersection Improvements, Scott and Center Townships, Vanderburgh County, Indiana		**COC**	**AC-1**	**AC-2**
		Vanderburgh County Indiana	Census Tract 102.01 Center Township Vanderburgh County Indiana	Census Tract 107 Scott Township Vanderburgh County Indiana
	LOW-INCOME			
B17001001	Population for whom poverty status is determined: Total	175,128	11,567	8,834
B17001002	Population for whom poverty status is determined: Income in 2017 below poverty level	31,506	231	362
	Percent Low-Income (Income in 2017 below poverty level/Total population)	17.99%	2.00%	4.10%
	125 Percent of COC (125 x COC Percent Low-Income)	22.49%	**AC <125% COC**	**AC <125% COC**
	Potential Low-Income EJ Impact?		**No**	**No**
	MINORITY			
B03002001	Total Population: Total	181,831	11,623	8,834
B03002002	Total Population: Not Hispanic or Latino	177,210	11,278	8,768
B03002003	Total Population: Not Hispanic or Latino; White alone	152,954	9,841	8,010
B03002004	Total Population: Not Hispanic or Latino; Black or African American alone	16,539	263	312
B03002005	Total Population: Not Hispanic or Latino; American Indian and Alaska Native alone	374	0	8
B03002006	Total Population: Not Hispanic or Latino; Asian alone	2,233	740	205
B03002007	Total Population: Not Hispanic or Latino; Native Hawaiin and Other Pacific Islander alone	244	0	0
B03002008	Total Population: Not Hispanic or Latino; Some other race alone	313	58	13
B03002009	Total Population: Not Hispanic or Latino; Two or more races	4,553	376	220
B03002010	Total Population: Hispanic or Latino	4,621	345	66
B03002011	Total Population: Hispanic or Latino; White alone	2,807	282	50
B03002012	Total Population: Hispanic or Latino; Black or African American alone	93	0	0
B03002013	Total Population: Hispanic or Latino; American Indian and Alaska Native alone	0	0	0
B03002014	Total Population: Hispanic or Latino; Asian alone	13	0	0
B03002015	Total Population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	17	0	0
B03002016	Total Population: Hispanic or Latino; Some other race alone	1,453	31	16
B03002017	Total Population: Hispanic or Latino; Two or more races	238	32	0
	Number Non-white/minority (B03002001 - B03002003)	28,877	1,782	824
	Percent Non-white/Minority (Total population - white alone)/Total population	15.88%	15.33%	9.33%
	125 Percent of COC (125 x COC Percent Non-white/Minority)	19.85%	**AC <125% COC**	**AC <125% COC**
	Potential Minority EJ Impact?		**No**	**No**