ENVIRONMENTAL ASSESSMENT

APPENDIX E: RED FLAG INVESTIGATION AND HAZARDOUS MATERIALS

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: May 17, 2019

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

From: Aaron Grisel
HNTB Corporation
111 Monument Circle, Suite 1200
Indianapolis, IN 46204
tgrisel@hntb.com

Re: RED FLAG INVESTIGATION
Des. Nos. 1592385 & 1600808
Interchange Reconstruction
I-65/I-70 North Split
Marion County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) is proposing an interchange reconstruction project at the I-65/I-70 North Split interchange in Indianapolis, Marion County, Indiana (Des. Nos. 1592385 & 1600808). The project includes reconstruction of the I-65/I-70 North Split interchange as well as bridge and pavement replacement south along I-65/I-70 to the Washington Street interchange, west along I-65 to approximately Meridian Street, and east along I-70 to approximately the bridge over Valley Avenue (west of the Keystone Avenue/Rural Street interchange). Proposed bridge work is listed in Table 1. Proposed small structure work is listed in Table 2. The project is within Center Township, Beech Grove United States Geological Survey (USGS) Topographic Quadrangle, in Section 36, Township 16N, Range 3E; Sections 1 and 12, Township 15N, Range 3E; and Section 31, Township 16N, Range 4E.

Table 1: Proposed Scope of Work Bridge Inventory

Scope of Work	*Quantity*	*Existing Bridge File/Structure Nos.*
Replacement due to new geometry and current loading requirements	23	I65-111-05725 A, I65-111-05728 A, I65-111-05730 B, I65-111-05732 BNBL, I65-111-05731 B, I65-111-05734 ANBL, I65-111-05733 ASB, I65-111-05735 ANBL, I65-111-05736 ASBL, (I65) I70-079-05737 ANBL, I65-112-05738 BSB, I70-083-05739 BWBL, I65-112-05666 A, I65-112-05749 A, I65-112-05748 ANBL, I65-112-05745 A, I65-112-05746 A, I65-112-05747 CNBL, (I70) I65-112-05741 BEBL, I65-112-05743 B, I65-112-05744 BSBL, I70-083-02434 DWBL, I70-0832-02432 CEBL
Replace Superstructure and Bridge Widening	1	I65-111-02431 A
Bridge to be Taken Out of Service	3	I65-112-05750 B, I70-082-05751 DWBL, I65-112-05742 BNBL

Rehabilitate and Widen, Including Deck Overlay	2	I70-083-05701 DEBL, I65-112-02419 C
Preventative Maintenance Deck Overlay	3	I70-083-05701 DWBL, I70-084-05702-JDEB; I70-084-05702 DWBL

Table 2: Proposed Scope of Work Small Structure Inventory

Scope of Work	*Quantity*	*Existing Small Structure Nos.*
To be determined	5	CV I65-049-112.52, CV I65-049-112.53, CV I65-049-112.56; CV I70-049-82.91; CV I70-049-83.04

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # See Tables 1 and 2

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

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

Proposed right of way: Temporary ☐ # Acres N/A Permanent ☐ # Acres N/A

Type of excavation: Excavation associated with the removal and replacement of the bridge piers is anticipated to be approximately 10 feet below ground surface (bgs). Pile driving for bridges could extend 80 feet or greater bgs. Excavation for the installation of mechanically stabilized earth (MSE) walls is anticipated to be a minimum of three (3) feet bgs. However, depending on the quality of the soils there is the potential that deeper excavation may be necessary to remove poor soil and backfill with good material. Excavation for the road pavement is anticipated to be approximately three (3) feet bgs. It is possible a detention pond will be constructed within the interchange area. The location and depth of the pond are not yet known.

Maintenance of traffic: The MOT plan has not yet been developed for the project. It could include phased construction with the closure of highway segments and ramps with an official state detour. Local streets will likely also be used to access downtown Indianapolis during construction.

Work in waterway: Yes ☐ No ☒ Above ordinary high-water mark: Yes ☐ No ☐

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure

Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:

Religious Facilities	**34**	Recreational Facilities	**11**
Airports[1]	**6**	Pipelines	**N/A**
Cemeteries	**N/A**	Railroads	**11**
Hospitals	**1**	Trails	**11**
Schools	**12**	Managed Lands	**12**

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

Explanation:

- *Religious Facilities*: Thirty-four (34) religious facilities are located within the 0.5-mile search radius. Twelve (12) religious facilities (Goodwill Baptist Church, Corinthian Baptist Church, New Bethel Baptist Church, Church of God in Christ, Central Avenue United Methodist Church, Eastern Star Baptist Church, Allen African Methodist

Episcopal Chapel, East Side New Hope Baptist Church, Grace Missionary Baptist Church, Saint Clair Street Wesleyan Church, Faith Apostolic Mission, and Saints Peter and Paul Roman Catholic Cathedral) are adjacent to the project area. Traffic will be maintained through the use of a lane closures and detours. No impact is expected; however, coordination with the identified religious facilities will occur.

- *Schools*: Ten (10) schools are located within the 0.5-mile search radius. Two (2) additional schools have campuses that extend into the 0.5-mile search radius and have been included in the total count. The nearest school, Indiana Non-Public Education Association, is adjacent to the project area, approximately 0.04 mile west of the project area. No impact is expected; however, coordination with local schools (IPS) will occur.

- *Recreational Facilities*: Eleven (11) recreational facilities are located within the 0.5-mile search radius. The nearest recreational facility, Old Northside Soccer Park, extends to the project area. Coordination with Indy Parks and Recreation will occur.

- *Airports*: Four (4) airports, one public and three private, are mapped within the 0.5-mile search radius. Two (2) additional public airports were identified within the 3.8-mile search radius. Coordination with INDOT Aviation will occur. In addition, direct coordination with the private airports, Methodist Hospital, Pielet Brothers, and Channel 13, will occur.

- *Railroads*: Eleven (11) railroad segments are located within the 0.5-mile search radius. Nine (9) railroad segments are within or adjacent to the project area. Coordination with INDOT Utilities and Railroads will occur.

- *Hospitals*: Although mapped adjacent to the 0.5-mile search radius, the Methodist Hospital of Indiana campus is located within the 0.5-mile search radius. Coordination with the hospital will occur to identify any potential issues arising with emergency services.

- *Trails*: Eleven (11) trail segments are located within the 0.5-mile search radius. Four (4) mapped trail segments (Monon Rail Trail, 10th St./Monon Trail to Spades Park, Northeast Corridor, and Old Northside) are located within the project area. Coordination with Indy Parks and Recreation will occur.

- *Managed Lands*: Twelve (12) managed land areas are located within the 0.5-mile search radius. Four (4) mapped managed lands are adjacent to the project area. One (1) managed land, Frank and Judy O'Bannon Soccer Field, borders the northern portion of the project area. Coordination with Indy Parks and Recreation will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
NWI - Points	**N/A**	Canal Routes - Historic	**1**
Karst Springs	**N/A**	NWI - Wetlands	**1**
Canal Structures – Historic	**N/A**	Lakes	**1**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**2**
NWI-Lines	**2**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**3**	Sinkhole Areas	**N/A**
Rivers and Streams	**4**	Sinking-Stream Basins	**N/A**

Explanation:

- *NWI-Wetlands*: One (1) NWI-wetland is located within a 0.5-mile search radius. The wetland is approximately 0.43 mile west of the project area. No impact is expected.

- *Lakes*: One (1) lake is located within the 0.5-mile search radius. The lake is mapped approximately 0.08 mile north of the project area. Further analysis of the 2016 Marion County NAIP Aerial Imagery indicates the lake appears to be a residential lawn. No impact is expected.

- *NWI-Lines*: Two (2) NWI-Line segments are located within a 0.5-mile search radius. The mapped NWI-line segments are approximately 0.13 mile east of the project area. No impact is expected.

- *IDEM 303d Listed Streams and Lakes (Impaired)*: Three (3) IDEM 303d Listed Stream segments are located within the 0.5-mile search radius. The nearest listed stream is located approximately 0.1 mile east of the project area. No impact is expected.

- *Rivers and Streams*: Four (4) rivers and streams segments are located within the 0.5-mile search radius. The nearest stream, Pogue's Run, is approximately 0.1 mile east of the project area. No impact is expected.

- *Canal Routes - Historic:* One (1) canal route -- historic is located within the 0.5-mile search radius. The mapped canal route, Central Canal, is approximately 0.43 mile west of the project area. No impact is expected.

- *Floodplain-DFIRM*: Two (2) Floodplain-DFIRM segments are located within the 0.5-mile search radius. The floodplain, associated with Pogue's Run, is approximately 0.08 mile east of the project area. No impact is expected.

URBANIZED AREA BOUNDARY SUMMARY

- *Urbanized Area Boundary:* This project lies within the Indianapolis (Marion County) UAB. Post-construction Storm Water Quality BMPs may need to be considered. An early coordination letter with topographic and aerial maps depicting the project area will be sent to the Indianapolis (Marion County) Storm Water Coordinator at 1200 Madison Avenue, Suite 200, Indianapolis, IN, 46225.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	**1**	Mineral Resources	**N/A**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation:

- *Petroleum Wells:* One (1) petroleum well is located within a 0.5-mile search radius. The well is located approximately 0.22 mile southwest of the project area. No impact is expected.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**2**
RCRA Generator/ TSD	**33**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**20**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**83**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**8**	Brownfields	**92**
Construction Demolition Waste	**N/A**	Institutional Controls	**80**
Solid Waste Landfill	**N/A**	NPDES Facilities	**22**
Infectious/Medical Waste Sites	**1**	NPDES Pipe Locations	**15**
Leaking Underground Storage (LUST) Sites	**45**	Notice of Contamination Sites	**N/A**
Landfill Boundaries	**N/A**		

Explanation:

The following list includes a summary of potential hazardous material concerns sites. Sites of concern and recommendations are identified in more detail in Table 3 Potential Hazardous Materials Concerns. Supplemental Hazardous Materials Concern mapping is included following Table 3.

- *RCRA Generator/TSD*: Thirty-three (33) RCRA generator/TSD facilities are located within the 0.5-mile search radius.
- *State Cleanup Sites*: Twenty (20) state cleanup sites are located within the 0.5-mile search radius.
- *Underground Storage Tanks (UST) Sites*: Eighty-three (83) UST sites are located within the 0.5-mile search radius.
- *Voluntary Remediation Program*: Eight (8) voluntary remediation program sites are located within the 0.5-mile search radius.
- *Infectious/Medical Waste Sites*: One (1) infectious/medical waste site is located within the 0.5-mile search radius.
- *Leaking Underground Storage Tanks (LUST) Sites*: Forty-five (45) LUST sites are located within the 0.5-mile search radius.
- *Manufactured Gas Plants*: Two (2) manufactured gas plants are located within the 0.5-mile search radius.
- *Brownfield Sites*: Ninety-two (92) brownfield sites are located within the 0.5-mile search radius.
- *Institutional Control Sites*: Eighty (80) institutional control sites are located within the 0.5-mile search radius.
- *NPDES Facilities*: Twenty-two (22) NPDES facilities are located within the 0.5-mile search radius.
- *NPDES Pipe Locations*: Fifteen (15) NPDES pipe locations are located within the 0.5-mile search radius.

Ecological Information

The Marion County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of endangered species within the 0.5-mile search radius.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is in an urban area surrounded by commercial and residential properties. The most recent INDOT Bridge Inspection Reports for each bridge listed in Table 2 have been reviewed for the presence or absence of bats below. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

Table 2: INDOT Inspection Report Bat Presence/Absence Survey

Existing Bridge File/Structure No.	*BIAS Inspection Date*	*Presence of Bats**
I65-111-05725 A; I65-111-05728 A; I65-111-05732 BNBL; I65-111-05733 ASBL	11/14/2017	N/A*
I65-111-05734 ANBL; I65-111-05735 ANBL; I65-111-05736 ASBL	11/17/2017	N/A*
(I65) I70-079-05737 ANBL; I65-112-05738 BSBL; I70-083-05739 BWBL	11/20/2017	N/A*
I65-111-05731 B	11/21/2017	No
I70-083-02434 CWBL; I70-0832-02432 CEBL; I65-112-05750 B; I70-082-05751 DWBL	11/21/2017	N/A*
I65-112-05749 A; I65-112-05748 ANBL; I65-112-05745 A; I65-112-05746 A	11/27/2017	N/A*
I65-112-05747 CNBL; (I70) I65-112-05741 BEBL; I65-112-05743 B; I65-112-05742 BNBL	11/27/2017	No
I65-112-05666 A	11/28/2017	N/A*
I65-112-02419 C	3/19/2018	N/A*
I65-112-05744 BSBL	4/5/2018	N/A*
I70-083-05701 DEBL; I70-083-05701 JDWB; I70-084-05702-JDEB; I70-084-05702 DWBL	4/5/2018	No
CV I70-049-82.91; CV I70-049-83.04	5/10/2018	N/A*
CV I65-049-112.52; CV I65-049-112.53; CV I65-049-112.56	7/10/2018	No
I65-111-05730 B; I65-111-02431 A	11/16/2018	N/A*

**The presence of bats on structures is denoted as "N/A" for all structures that do not include the confirmation of the presence or absence of bats within the INDOT Structure Inspection Report. Additional investigation to confirm the presence or absence of bats within or on the structures will be necessary.*

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumblebee, in or within 0.5 mile of the project area. No impact is expected.

RECOMMENDATIONS

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE:

- *Religious Facilities*: Twelve (12) religious facilities (Goodwill Baptist Church, Corinthian Baptist Church, New Bethel Baptist Church, Church of God in Christ, Central Avenue United Methodist Church, Eastern Star Baptist Church, Allen African Methodist Episcopal Chapel, East Side New Hope Baptist Church, Grace Missionary Baptist Church, Saint Clair Street Wesleyan Church, Faith Apostolic Mission, and Saints Peter and Paul Roman Catholic Cathedral) are located adjacent to the project area. Coordination with the identified religious facilities will occur.

- *Schools*: One (1) school, Indiana Non-Public Education Association, is located approximately 0.04 mile west of the project area. No impact is expected; however, coordination with local schools (IPS) will occur.

- *Recreational Facilities*: Old Northside Soccer Park, is mapped 0.01 mile north of the project area. Coordination with Indy Parks and Recreation will occur.

- *Airports*: Four (4) airports, one public and three private, are mapped within the 0.5-mile search radius. Two (2) additional public airports were identified within the 3.8-mile search radius. Coordination with INDOT Aviation will occur. In addition, direct coordination with the private airports, Methodist Hospital, Pielet Brothers, and Channel 13, will occur.

- *Railroads*: Nine (9) railroad segments are within or adjacent to the project area. Coordination with INDOT Utilities and Railroads will occur.

- *Hospitals*: Methodist Hospital of Indiana is located within the 0.5-mile search radius. Coordination with the hospital will occur.

- *Trails*: Four (4) trail segments, associated with Monon Rail Trail, 10th St./Monon Trail to Spades Park, Northeast Corridor, and Old Northside, cross the project area. Coordination with Indy Parks and Recreation will occur.

- *Managed Lands*: Frank and Judy O'Bannon Soccer Field borders the northern portion of the project area. Coordination with Indy Parks and Recreation will occur.

WATER RESOURCES: N/A

URBANIZED AREA BOUNDARY: The project lies within the Indianapolis (Marion County) UAB. Post-construction Storm Water Quality BMPs may need to be considered. An early coordination letter with topographic and aerial maps depicting the project area will be sent to the Indianapolis (Marion County) Storm Water Coordinator at 1200 Madison Avenue, Suite 200, Indianapolis, IN, 46225.

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: Please see Table 3 Potential Hazardous Materials Concerns.

ECOLOGICAL INFORMATION:
Coordination with USFWS and IDNR will occur. Additional investigation to confirm the presence or absence of bats within or on the structures will be necessary. The range-wide programmatic consultation for the Indiana Bat and

Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: Nicole Fohey-Breting (Signature)

May 21, 2019

Prepared by:

Aaron Grisel
Scientist I
HNTB

Graphics:

A map for each report section with a 0.5-mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

GENERAL SITE MAP SHOWING PROJECT AREA: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

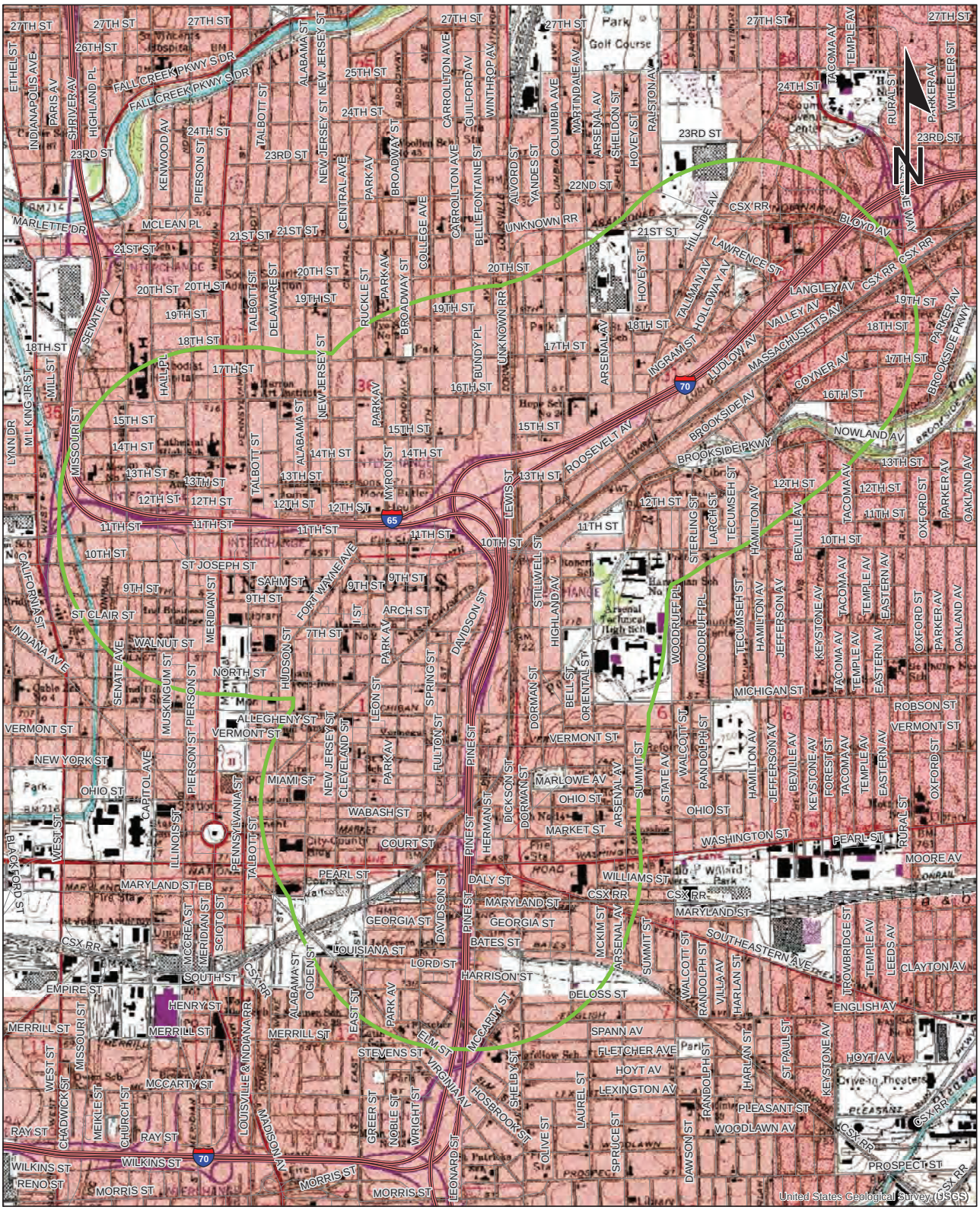
HAZMAT CONCERNS: YES

URBAN AREA BOUNDARY MAP: YES

TABLE 3 POTENTIAL HAZARDOUS MATERIALS CONCERNS: YES

HAZMAT CONCERNS DETAILED MAPS: YES

Red Flag Investigation - Site Location
I-65/I-70 North Split
Des. Nos.1592385 and1600808, Interchange Reconstruction
Marion County, Indiana

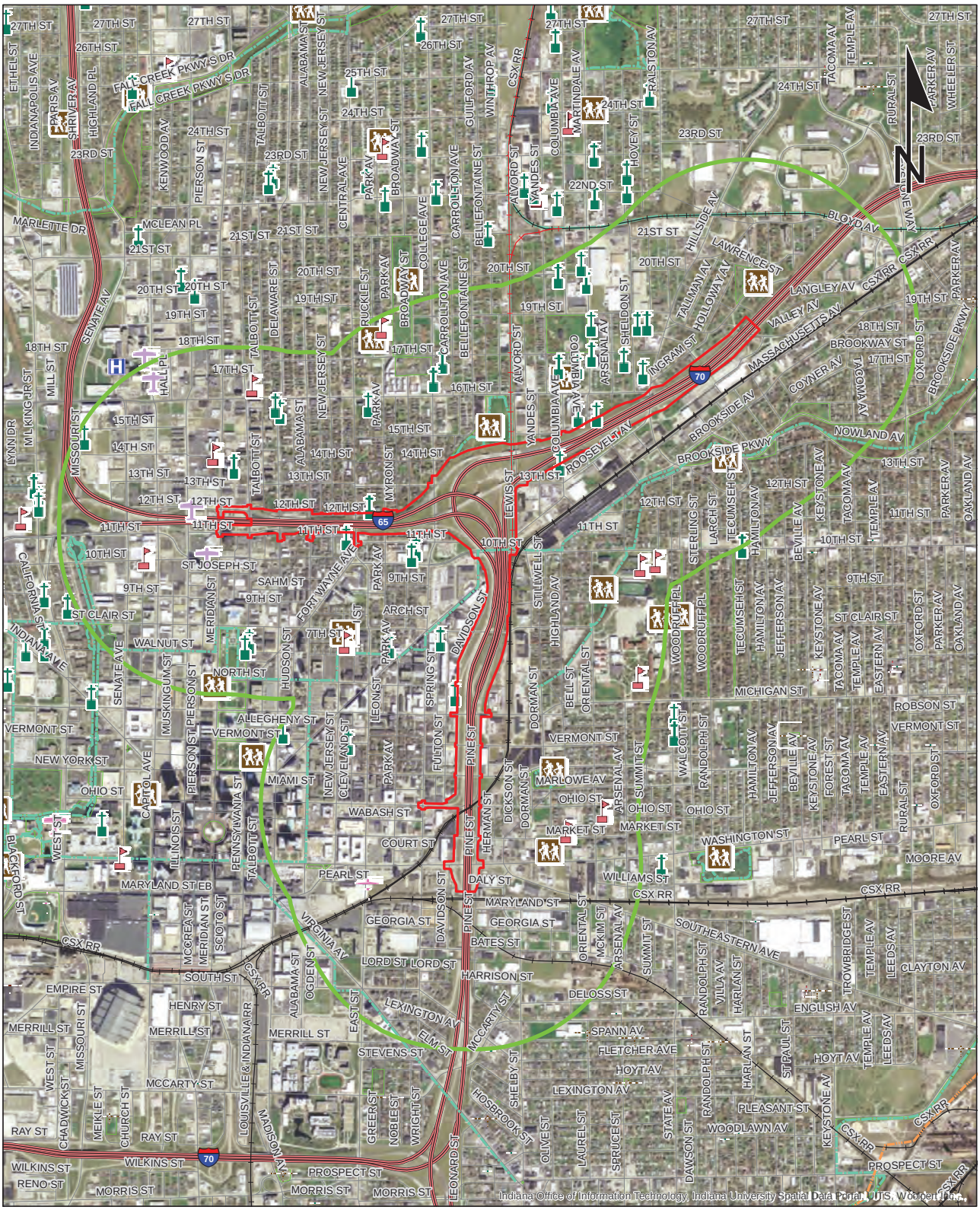


Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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

Indianapolis West and
Indianapolis East Quadrangles
USGS Topographic Map
7.5 Minute Series

Red Flag Investigation - Infrastructure
I-65/I-70 North Split
Des. Nos.1592385 and1600808, Interchange Reconstruction
Marion County, Indiana



0 0.5 1 Miles

Sources:

Non Orthophotography

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Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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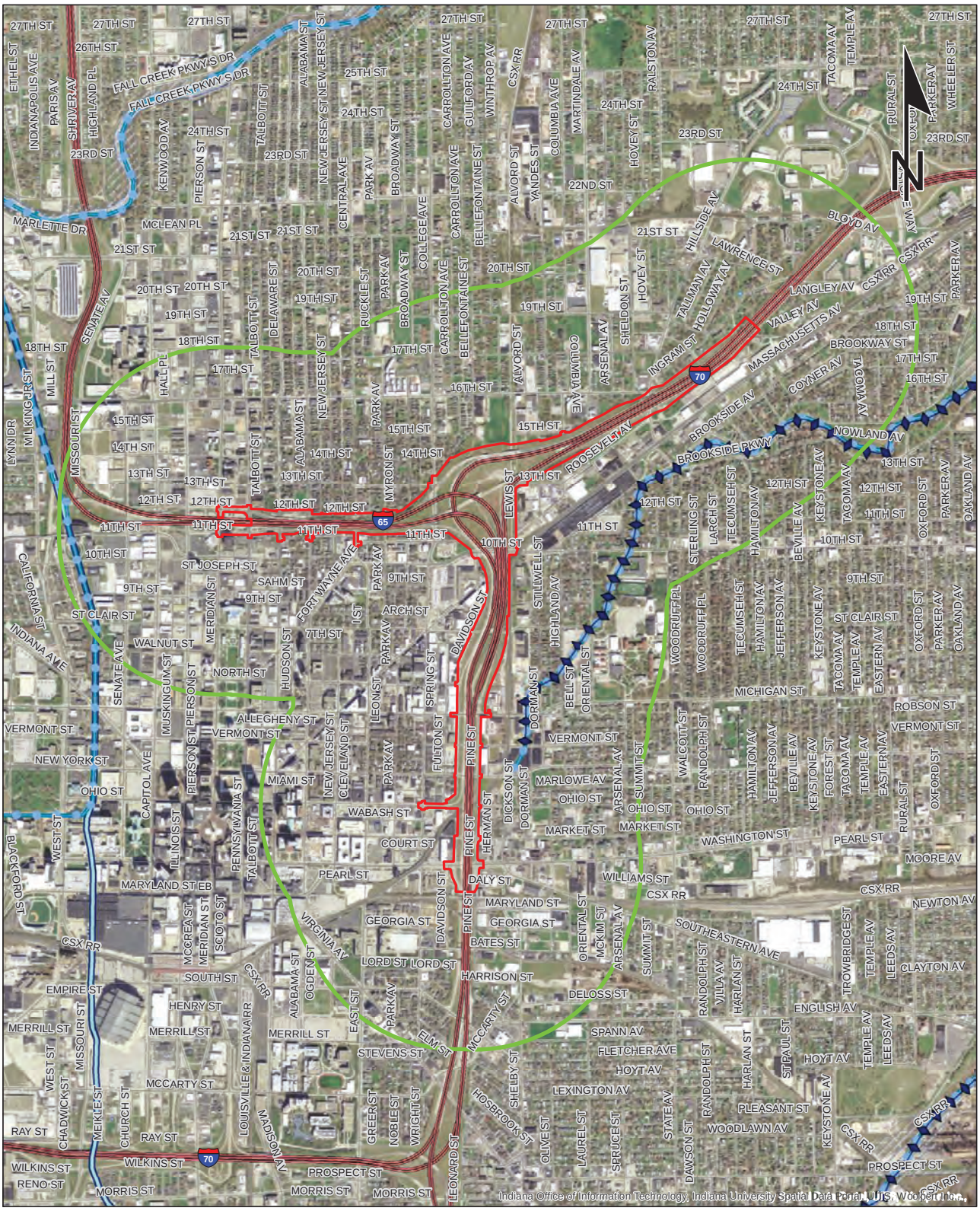
- Religious Facility
- Religious Facility Indiana Map
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Water Resources
I-65/I-70 North Split
Des. Nos.1592385 and1600808, Interchange Reconstruction
Marion County, Indiana



0 0.5 1 Miles

Sources:

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

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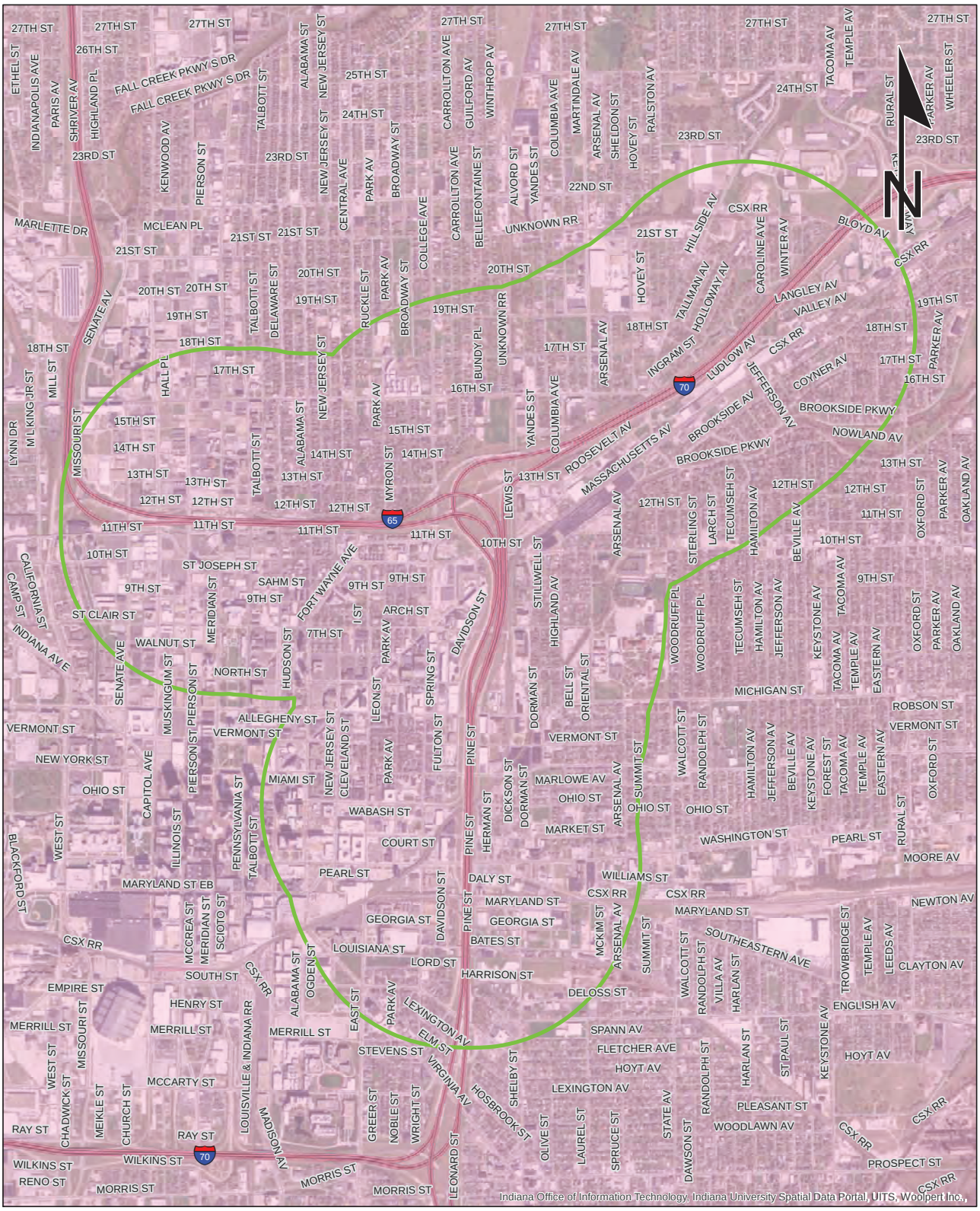
- NWI - Point
- Karst Spring
- Canal Structure - Historic
- NWI- Line
- Stream - Impaired
- NPS NRI listed
- River
- Canal Route - Historic
- Wetlands
- Lake - Impaired
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- County Boundary
- Project Area
- Half Mile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

Red Flag Investigation - Urbanized Area Boundary
I-65/I-70 North Split
Des. Nos.1592385 and1600808, Interchange Reconstruction
Marion County, Indiana



0.5 0.25 0 0.5 Miles

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

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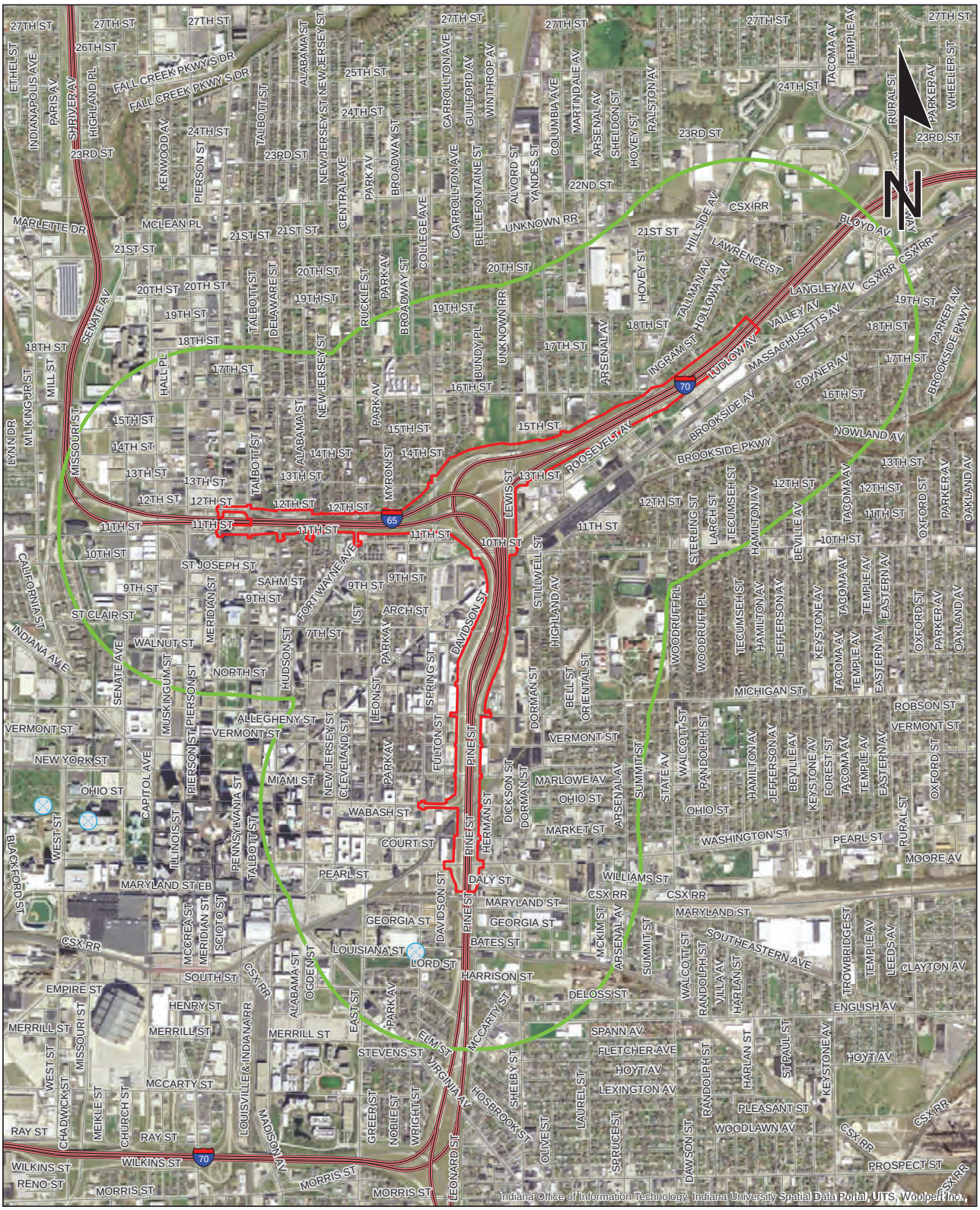
UAB
County Boundary
Project Area
Half Mile Radius
Toll
Interstate
State Route
US Route
Local Road

Red Flag Investigation - Mining/Mineral Exploration
I-65/I-70 North Split
Des. Nos.1592385 and1600808, Interchange Reconstruction
Marion County, Indiana



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Sources:

Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N Map Datum: NAD83

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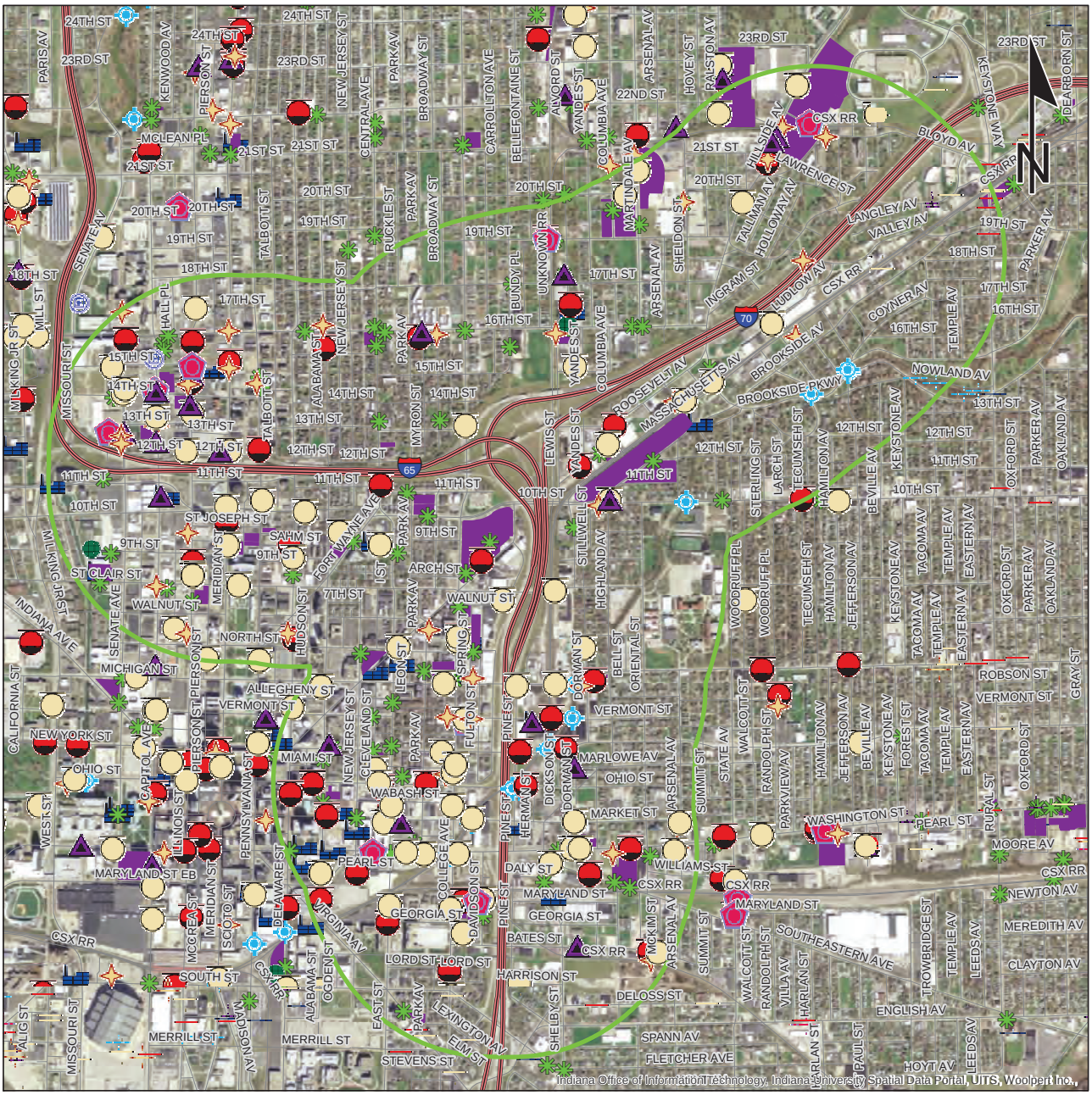
- Petroleum Well
- Mine - Surface
- Mine - Underground
- Petroleum Field
- County Boundary
- Project Area
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Hazardous Material Concerns
I-65/I-70 North Split
Des. Nos.1592385 and1600808, Interchange Reconstruction
Marion County, Indiana



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

0 0.5 1 Miles

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Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N Map Datum: NAD83

May 13, 2019

Des 1592385 & 1600808
I-65/I-70 North Split Interchange Project
Indianapolis, Marion County

Table 3: Potential Hazardous Material Concerns

Cells highlighted in green = additional action required

Table includes sites within and/or adjacent to project area. Property addresses were obtained using the Marion County GIS website.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
101	Infectious / Medical Waste Site (AI ID#: 24190 / Reg#: 49-14)	Medical Safe Tech	1508 North Capitol Avenue	0.33 mile northwest	Medical waste	None	A review of the IDEM VFC was completed and no impact is expected.
102	RCRA Generator (AI ID#: 26562, Reg#: IND016420622) State Cleanup Program (AI ID#:26562 SCP#: 000000298) Voluntary Remediation Program (VRP #: 6020101) Brownfield Site (AI ID#: 18386 / Reg#: 4141201)	Kardstadt Reed Cleaners	1449 North Illinois Street	0.25 mile northwest	VOCs	None	**IDEM VFC Title: No Further Action Letter** **Date: 8/25/2008** **VFC#: 32967430** **Summary of Findings:** IDEM issued a No Further Action determination August 25, 2008. **IDEM VFC Title: IDEM Contained-In Letter** **Date: 11/17/2015** **VFC#: 80175425** **Summary of Findings:** IDEM issued a Contained-In Determination for the site November 17, 2015. The letter specifies soils and groundwater generated at the facility must be sampled and analyzed to determine proper disposal methods. **IDEM VFC Title: Groundwater Monitoring & Remedial Progress Report** **Date: 10/4/2018** **VFC#: 82627165** **Summary of Findings:** The facility operated as a commercial dry-cleaning facility from 1954 to 2007. April 2018 groundwater samples indicated concentrations of PCE and TCE above TWSLs and CVIGWSLs. The plume extends offsite in a southwesterly direction intersecting Capitol Avenue, Illinois Street, Senate Street, 14th Street and 13th Street. PCE and TCE were detected as far south as the 13th Street & Senate Avenue intersection at concentrations above TWSLs and RVIGWSLs. Groundwater monitoring activities are ongoing. Impacts are migrating offsite in a southwestern direction, outside of the project area footprint. Due to the delineated plume location and direction of groundwater gradient, no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
103	State Cleanup Program (AI ID#:28328 SCP#: 200409062) Voluntary Remediation Program (VRP#: 6070101)	Cohn & Son Incorporated (Former Shuron Site)	1402 North Capitol Avenue	0.25 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
104	State Cleanup Program (AI ID#: 23287 / SCP#: 200403014) Voluntary Remediation Program (VRP#: 6090502)	Michaelis Development LLC.	1352 North Illinois Street	0.17 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
105	RCRA Generator (AI ID#: 17331 / Reg#: IND984971838) Voluntary Remediation Program (VRP#: 6160804) State Cleanup Program (SCP#: 00308081)	Stewart Manufacturing	1280 North Senate	0.32 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
106	State Cleanup Program (AI ID#: 24834 / SCP#: 200606202) Institutional Control Site	Greater Diversified Supply	1234 North Capitol Avenue	0.21 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
107	Underground Storage Tank (AI ID#: 20581; FID#: 6344)	Norm's Carwash Incorporated	1219 North Meridian Street	0.04 mile north	TPH and petroleum VOCs	None	**IDEM VFC Title: Notification of Underground Storage Tanks** **Date: 12/16/1992** **VFC#: 23297279** **Summary of Findings:** Three (3) 6,000-gallon USTs were registered for use at the site in 1992. **IDEM VFC Title: UST Removal Report** **Date: 1/24/1995** **VFC#: 23297206** **Summary of Findings:** The three (3) USTs were removed from the site in August 1994. Confirmatory soil samples indicated trace concentrations of TPH remain on-site, but do not appear to extend into the project area. No impact is expected.
108	Leaking Underground Storage Tank (AI ID#: 20689 / FID#: 2606)	Brink Inc.	1222 Pennsylvania Street	0.03 mile north	VOCs	None	**IDEM VFC Title: Closure Certification Report** **Date: 3/1990** **VFC#: 19619578** **Summary of Findings:** One (1) 2,500-gallon UST was removed from the site 1990. Petroleum impacted soil was encountered at the time of removal and an incident reported to IDEM. **IDEM VFC Title: No Further Action Letter** **Date: 10/1/1999** **VFC#: 1961803** **Summary of Findings:** IDEM issued a No Further Action Letter determination for the site October 1, 1999. No impact is expected.
109	State Cleanup Program (AI ID#: 22919 / SCP#: 199403511)	Greg Heendel Real Estate	1202 North Pennsylvania Street	Adjoining to the north	Unknown	Additional coordination with IDEM	**IDEM VFC Title: N/A** **Date: N/A** **VFC#: N/A** **Summary of Findings:** Facility adjoins the project area to the north. A search of the VFC did not reveal any documentation on file for the facility under this agency identification number or regulatory identification number. Coordination will occur with IDEM to determine that there are no violations, spills, or releases associated with the site.
110	Brownfield Site (AI ID#: 109879/ Reg#: 4150210) Institutional Control Site	Gulf Service Station	1305-1309 Central Avenue	0.11 mile north	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
111	State Cleanup Program (AI ID#: 107816 / SCP#:201010080) Institutional Control Site (FID#: 201010080)	Historical Landmark Foundation	1225 North Central Avenue	0.06 mile north	TPH, Petroleum VOCs and PAHs	None (No groundwater impacts)	**IDEM VFC Title: Further Site Investigation** **Date: 11/29/2010** **VFC#: 60260476** **Summary of Findings:** In October 2010, (1) 1,000-gallon UST was removed from the site. Confirmatory soil samples collected from the UST pit contained detectable concentrations of total petroleum hydrocarbons (TPH). Groundwater samples indicated no detectable concentrations of BTEX or PAHs. TPH remains in the former UST pit and has not migrated offsite. No impact is expected. **IDEM VFC Title: Environmental Restrictive Covenant** **Date: 12/17/2010** **VFC#: 63533924** **Summary of Findings:** An ERC recorded on the property deed December 17, 2010, no impact is expected.
112	Brownfield Site (AI ID#: 22743 / Reg#: 4030011)	Vacant Parcel 1333 Broadway Street	1333 Broadway Street	0.08 mile northwest	Metals, VOCs, TPH	None	A review of the IDEM VFC was completed and no impact is expected.
113	State Cleanup Program (AI ID#: 23402 / SCP#: 200512035) Institutional Control Site	FR Indianapolis Partners LP	1013-1019 North Capitol Avenue	0.19 mile west/southwest	TPH, VOCs, PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
114	Underground Storage Tanks (AI ID#: 18925 / Reg#: 16021)	Video Indiana Incorporated dba WTHR TV 13	1000 North Meridian Street	Adjacent south	TPH / Petroleum VOCs	None	**IDEM VFC Title: Notification for Underground Storage Tanks** **Date: 5/1/1989** **VFC#: 25241180** **Summary of Findings:** One (1) 2,000-gallon diesel UST was registered to the facility in 1989. **IDEM VFC Title: Underground Storage Tank In-Place Closure Report** **Date: 11/24/1998** **VFC#: 25241209** **Summary of Findings:** One (1) 1,000-gallon diesel UST was closed in place at the site in November 1998. Confirmatory soil samples indicated detectable concentration of TPH, but contamination does not appear to extend to the project area. No impact is expected.
115	Underground Storage Tank (2 entries) (AI ID#: 19214 Reg#: 18222)	Collins Leasing	1011 North Pennsylvania Street	0.07 mile south	TPH / Petroleum VOCs	Add commitment to EA	**IDEM VFC Title: Notification For Underground Storage Tanks** **Date: 8/27/1992** **VFC#: 23457926** **Summary of Findings:** Five (5) USTs consisting of one (1) 1,000-gallon motor oil UST, (1) 1,000-gallon kerosene UST, one (1) 550-gallon used oil UST, (1) 3,000-gallon diesel UST, and one (1) 3,000-gallon fuel oil UST were registered as being removed from the facility in April 1991. Documentation indicating confirmatory samples collected or any spills, or releases associated with the former USTs were not encountered during this investigation. If petroleum contamination is encountered during excavation then, before proper removal and disposal of soil and/or groundwater, analysis for lead will be necessary.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
116	Underground Storage Tank (AI ID#: 20662 / Reg#: 9847)	Pride Vending	225 East 10th Street	0.10 mile south	TPH and petroleum VOCs	None	**IDEM VFC Title: Notification of Underground Storage Tanks** **Date: 5/1/1986** **VFC#: 21191096** **Summary of Findings:** One (1) gasoline UST was registered at the site in 1986. Additional information indicating any spills or releases associated with the UST was not encountered during this investigation. No impact is expected.
117	Leaking Underground Storage Tank (AI ID#: 20633/ Reg#: 490)	Paul R. Hosler	1101 Central Avenue	Adjoining south	TPH and petroleum VOCs	None	**IDEM VFC Title: No Further Action Letter** **Date: 3/13/2002** **VFC#: 20774178** **Summary of Findings:** IDEM issued a No Further Action determination for the site March 13, 2002. According to the letter, confirmatory soil samples following the removal of the onsite UST indicated no detectable concentrations of TPH. No impact is expected.
118	Brownfield Site (AI ID#: 15905 / Reg#: 4141014) Institutional Control Site	Frank E. Irish Incorporated / Park Avenue Church of Christ	625 E. 11th Street & 620 E. 10th Street	0.05 mile south	VOCs	If excavation extends beyond 20 ft-bgs, then a Phase II ESA may be warranted.	**IDEM VFC Title: Comfort Letter Reissue** **Date: 1/9/2015** **VFC#: 80011720** **Summary of Findings:** The site was occupied by an auto garage, multiple auto repair facilities, a filling station, printing shop and machine shop. Three (3) USTs were removed in 1990. August 2014 groundwater samples indicated concentrations of cis-1,2-dichloroethene at concentrations above TWSLs. Groundwater impacts have not been delineated. If excavation extends beyond 20 ft-bgs, then a Phase II ESA may be warranted. **IDEM VFC Title: Environmental Restrictive Covenant** **Date: 3/17/2015** **VFC#: 80110362** **Summary of Findings:** An ERC recorded on the property deed March 17, 2015, no impact is expected.
119	RCRA Generator (AI ID#: 16911/ Reg#: IND0002101723)	Henley's Kustom Painting Incorporated	1310 North Capitol Avenue	0.24 mile northwest	Metals & VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
120	RCRA Generator (AI ID#: 16746/ Reg#: IND149981599) Leaking Underground Storage Tank (AI ID#: 16746 / Reg#: 2145 Incident#: 199409521)	Goodyear Auto Service Center	627 North Delaware Street	0.41 mile south	VOCs & TPH	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
121	RCRA Generator (AI ID#: 17486/ Reg#: IND984976381)	Johnson Controls Incorporated	1225 North Senate Avenue	0.32 mile west	Metals & VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
122	RCRA Generator (AI ID#: 15998/ Reg#: IND016413080) Brownfield Site (AI ID#: 15998/ Reg#: 4140102) NPDES Facility (Permit#: INR10I568)	Payton Wells Chevrolet / American Red Cross Office Building	1510 North Meridian Street	0.27 mile northwest	VOCs & Metals	None	**IDEM VFC Title: Annual Manifest Report** **Date: 8/14/2002** **VFC#: 390882932** **Summary of Findings:** The facility was registered as SQG of ignitable, corrosive and arsenic wastes. In 2002 the facility was registered as a CESQG. The types of waste associated with the facility were not included on the Hazardous Waste Handler Identification form. Current RCRA Generator status is unknown. **IDEM VFC Title: Comfort Letter** **Date: 8/14/2002** **VFC#: 80039634** **Summary of Findings:** The site operated as an auto sales and service center from circa 1930 until 2005. The building was demolished in 2013. Several USTs were removed or closed in place. PCE was detected in 2013 soil and groundwater samples above MTG and TWSLs. Onsite impacts were determined most likely associated with the adjoining Kardstadt Reed property. Groundwater impacts associated with the Kardstadt Reed plume are migrating offsite in a southwestern direction, outside of the project area footprint. No impact is expected.
123	RCRA Generator (AI ID#: 12266/ Reg#: IND016427080) Brownfield Site (AI ID#: 12266 Reg#: 4080104) Institutional Control Site	Finish Master Incorporated	923 North Meridian Street	0.18 mile south	VOCs & Metals	None	**IDEM VFC Title: Hazardous Waste Handler Identification** **Date: 1/21/2003** **VFC#: 39017693** **Summary of Findings:** The facility operated as a SQG in 2003. The document did not note the kind of waste generated. **IDEM VFC Title: Environmental Restrictive Covenant** **Date: 8/11/2016** **VFC#: 80380873** **Summary of Findings:** The ERC prohibits use or extraction of groundwater for any purpose including, but not limited to, human or animal consumption, gardening, industrial processes, or agriculture without prior IDEM approval. **IDEM VFC Title: Phase II Environmental Site Assessment** **Date: 3/15/2016** **VFC#: 8028447** **Summary of Findings:** The site was used as a filling station, auto sales and service facilities and for manufacturing. Subsurface investigations have been conducted since 2007. The 2016 subsurface investigation identified PCE and arsenic in soils at concentrations below IDEM RCG SLs. PCE was detected in groundwater at concentrations above TWSLs. Groundwater in the region is presumed to flow to the southwest, away from the project area. No impact is expected.
124	**Site number was not used in this analysis**						

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
125	RCRA Generator (AI ID#: 17453/ Reg#: IND984973305)	Litho Press	800 North Capitol Avenue	0.36 mile southwest	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
126	**Site number was not used in this analysis**						
127	RCRA Generator (AI ID#: 17324/ Reg#: IND006938211)	Indiana Gas Co. Inc.	1630 North Meridian Street	0.35 mile north	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
128	RCRA Generator (AI ID#: 20004/ Reg#: IND984898189)	Design Printing Company Incorporated	626 North Illinois Street	0.45 mile southwest	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
129	State Cleanup Program (AI ID#: 16780/ SCP#: 198206017)	United Service Station 6118	615 East 16th Street	0.26 mile northwest	Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
130	Brownfield Site (AI ID#: 18012 Reg#: 4160105)	Payton Wells Collision Center	1450 North Pennsylvania Street	0.22 mile north	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
131	Brownfield Site (AI ID#: 18366 Reg#: 4980005)	McFarling Foods	133 West 14th Street	0.37 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
132	Brownfield Site (AI ID#: 17829 Reg#: 4080804)	CVS Proposed 4080804	1545 North Meridian Street	0.26 mile north	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
133	Brownfield Site (AI ID#: 23853 Reg#: 4070522)	Gas Station	1602 North Central Avenue	0.39 mile northwest	Petroleum VOCs and PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
134	Brownfield Site (AI ID#: 22691 Reg#: 4010006)	1534 Central Avenue	Titan Homes	0.34 mile north	VOCs & PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
135	Brownfield Site (AI ID#: 22704 Reg#: 4030019) Institutional Control Site	1520 North Alabama Street	Metro Taxi Company	0.31 mile north	VOCs & PAHs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
136	Brownfield Site (AI ID#: 22744 Reg#: 4030030)	General Tire (f)	838 North Delaware Street	0.25 mile south	Petroleum VOCs and TPH	None	A review of the IDEM VFC was completed and no impact is expected.
137	Brownfield Site (AI ID#: 25002 Reg#: 4040013) Institutional Control Site	Herron Art Foundry	230 East 16th Street	0.37 mile north	VOCs, PAHs, Metals	None	A review of the IDEM VFC was completed and no impact is expected.
138	Brownfield Site (AI ID#: 28909 Reg#: 4180605)	Vacant Store	143 West 16th Street	0.39 mile northwest	Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
139	Brownfield Site (AI ID#: 101339 Reg#: 4110305)	Gateway Building & Parking Lots	950 North Meridian Street	0.13 mile southwest	VOCs, TPH and PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
140	Brownfield Site (AI ID#: 103945 Reg#: 4111004)	Metro Motor Hotel	1415 Pennsylvania Street	0.21 mile north	Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
141	Brownfield Site (AI ID#: 104330 Reg#: 4111205) NPDES Facility (Permit#: INR10P282)	Kirkbride Bible Company / 9 On Canal – Phase II	335 West 9th Street	0.40 mile southwest	Petroleum VOCs, Metals, PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
142	Brownfield Site (AI ID#: 108385 Reg#: 4140702)	Gardner Building	350 West St. Clair Street	0.46 mile southwest	VOCs, Metals, PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
143	Brownfield Site (AI ID#: 106808 Reg#: 4130806) Institutional Control Site	Superior Distributing	918 Fort Wayne Avenue	0.17 mile south	Metals & PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
144	Brownfield Site (AI ID#: 107602 Reg#: 4140303)	DMP Capitol LLC.	733 North Capitol Avenue	0.35 mile southwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
145	Brownfield Site (AI ID#: 116681 Reg#: 4161212)	Turner Property	727 North Illinois Street	0.36 mile southwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
146	Brownfield Site (AI ID#: 119255 Reg#: 4171002)	Parking Lot – 11th Street	322 West 11th Street	0.37 mile west	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
147	Brownfield Site (AI ID#: 120853 Reg#: 4180604)	Capitol View III Office Grocery	120 West 15th Street	0.37 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
148	Brownfield Site (AI ID#: 121089 Reg#: 4180606)	Fire H2O Property	155 West 16th Street	0.39 mile northwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
149	Brownfield Site (AI ID#: 25196 Reg#: 24988)	Central Parking Corporation	269 West 16th Street	0.43 mile northwest	Petroleum VOCs & PAHs	None	A review of the IDEM VFC was completed and no impact is expected.
150	NPDES Facility (Permit#: INR10I559)	Indianapolis Fire Station #37	441 East 10th Street	0.15 mile south	N/A	None	A review of the IDEM VFC was completed and no impact is expected.
151	NPDES Facility (Permit#: INR10J839)	Park 10	620 East 10th Street	0.09 mile south	N/A	None	A review of the IDEM VFC was completed and no impact is expected.
152	**Site number was not used in this analysis**						
153	NPDES Facility (Permit#: INR10K678)	Stutz Business & Arts Center Tenant Parking Lot	1019 North Capitol Avenue	0.20 mile west	N/A	None	A review of the IDEM VFC was completed and no impact is expected.
154	NPDES Facility (Permit#: INR10H724)	The American Red Cross of Indianapolis – New Headquarters	1550 Meridian Street	0.24 mile northwest	N/A	None	A review of the IDEM VFC was completed and no impact is expected.
155	RCRA Generator (AI ID#: 23824/ Reg#: IND985026558)	Shurgard Self Storage	933 North Illinois Avenue	0.18 mile southwest	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
201	Underground Storage Tank (AI ID#: 21429 Reg#: 19700)	Vacant Lot	1304-1310 North College Avenue	Adjacent northwest	TPH and petroleum VOCs	None	**IDEM VFC Title: UST System Closure Report Review** **Date: 12/6/1995** **VFC#: 24678060** **Summary of Findings:** Four (4) USTs were removed from the site in September 1995. Thirteen (13) confirmatory soil samples were collected and analyzed for TPH. Soil samples indicated no detectable concentrations of TPH. Groundwater was not encountered or sampled during this investigation. No impact is expected.
202	**Site number was not used in this analysis**						
203	Brownfield Site (AI ID#: 28662/ Reg#: 4170903) Institutional Control Site	Omar Baker Warehouse	1555 Bellfontaine Street	0.14 mile north	VOCs	None	**IDEM VFC Title: Request for Comfort Letter** **Date: 9/6/2017** **VFC#: 80527191** **Summary of Findings:** The facility was used for residential and light industrial purposes. A November 2016 Phase II ESA indicated concentrations of PAHs and TCE in soils above MTG and CVIGWSLs. In 2017, one (1) 1,000-gallon UST and one (1) 15,000-gallon AST were removed from the site. Confirmatory soil samples indicated concentrations of PAHs below IDEM RCG SLs. TCE detected along the northern portion of the facility in 2016 is most likely associated with a known TCE plume associated with the eastern adjoining property. Evidence indicating any contamination plume associated with the facility was not encountered during this investigation. No impact is expected. **IDEM VFC Title: Environmental Restrictive Covenant** **Date: 5/11/2018** **VFC#: 82605926** **Summary of Findings:** An ERC was recorded on the property deed May 7, 2015, no impact is expected.
204	Brownfield Site (AI ID#: 16191/ Reg#: 4180712) Voluntary Remediation Program (VRP#: 6140901) State Cleanup Program (SCP#: 200803020)	Wash Rite/ Rough Riders Motorcycle	1720 Alvord Street	0.32 mile north	VOCs	None	**IDEM VFC Title: Remediation Work Plan Implementation Report** **Date: 2/7/2017** **VFC#: 80417024** **Summary of Findings:** October 2016 soil samples indicated PCE at concentrations above IDEM RCG TWSLs. **IDEM VFC Title: 2017 Annual Groundwater Monitoring Report** **Date: 1/16/2018** **VFC#: 80592532** **Summary of Findings:** The most recent groundwater samples collected at the site indicated concentrations of PCE above TWSLs and RVIGWSLs. TCE was detected at concentrations above TWSLs and CVIGWSLs. There are multiple CoC plumes in the vicinity of this site. It does not appear as though the plume assigned to the Rough Riders Motorcycle Club extends to the project area. No impact is expected.
205	**Site number was not used in this analysis. See Site No. 230**						

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
206	Brownfield Site (AI ID#: 23624/ Reg#: 4150210 / 4070904) RCRA Generator (AI ID#: 15792/ Reg#: IND984866954) Institutional Control Site	Tinker Flats / Big Four Metals, Inc	1101 East 16th Street	0.12 mile north	VOCs, PAHs, Metals	Phase II – Soil and groundwater samples should be collected from the northern portion of the project area, and within the project area from areas south of East 15th Street and north of East 13th Street where excavation depths will encounter groundwater. Groundwater is anticipated at depths ranging between 14' and 16' bgs. Coordination appears necessary regarding Monon ERC.	**IDEM VFC Title: Environmental Restrictive Covenant** **Date: 11/7/2016** **VFC#: 80585556** **Summary of Findings:** An ERC was recorded on the property deed November 7, 2016, **IDEM VFC Title: Semi-Annual Groundwater Sampling Report** **Date: 10/31/2017** **VFC#: 80553208** **Summary of Findings**: The facility operated as a furniture manufacturer, recycling facility, and lead acid reclamation and metals recycling facility. The facility was associated with several releases and operations violations including acid from batteries draining into a storage tank in a containment pit with inadequate secondary containment, improper storage of scrap metal from the batteries and an unpermitted battery storage area. In 2008, three (3) aboveground storage tanks (ASTs) and a boiler were removed. July 2017 groundwater monitoring indicated onsite and offsite concentrations of TCE above TWSLs and CVIGWSLs. Impacts have been delineated approximately 190 feet off-site to the west of the site along the northern edge of O' Bannon Park & 16th Street intersection. Documentation of delineation of off-site impacts was not encountered during this investigation; therefore, impacts may have migrated to the Project area. If excavation occurs in this area, VOCs could be encountered in groundwater. Therefore, a Phase II ESA appears warranted. **IDEM VFC Title: Draft Environmental Restrictive Covenant** **Date: 10/30/2018** **VFC#: 82641771** **Summary of Findings:** A draft ERC was submitted to IDEM by IWM Consulting. The ERC would restrict groundwater use and require a vapor mitigation system for occupancy of a dwelling or work place. The depiction of the restricted area appears to abut the north extent of the project area along most of the property. The proposed restricted area extends to cover the Monon Trail, and to dip down into the project area at the south end. Coordination appears necessary.
207	Underground Storage Tank (AI ID#: 20506 Reg#: 15945) Brownfield Site (AI ID#: 20506 / Reg#: 4181212)	Indianapolis Public Schools – Building & Grounds	1129 East 16th Street	0.05 mile north	TPH and petroleum VOCs	None	**IDEM VFC Title: UST Assessment Report** **Date: 3/14/1994** **VFC#: 24207211** **Summary of Findings:** Two (2) USTs were removed from the site in November 1993. Confirmatory soil samples following UST removal activities indicated no detectable TPH. Groundwater was not encountered during removal activities and was not sampled. **IDEM VFC Title: UST Inspection Report** **Date: 3/3/2017** **VFC#: 80428888** **Summary of Findings:** The facility currently has one (1) gasoline UST registered for use. The March 3, 2017 UST Inspection Report indicated no spills or leaks were observed in association with the UST, however, the dispenser sump lock on the UST was missing and the notification form required approval. No impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
208	Leaking Underground Storage Tanks (AI ID#: 20307 / Reg#: 6059)	Nabisco Inc.	1102 Roosevelt Avenue	Adjoining east	TPH and petroleum VOCs	None	**IDEM VFC Title: Initial Incident Report Log** **Date: 7/18/1990** **VFC#: 24083045** **Summary of Findings:** Two (2) USTs were removed from the site in 1990. During removal activities petroleum impacted soils were encountered. Confirmatory soil samples at the site did not indicate any detectable concentrations of petroleum related chemicals of concern. No impact is expected.
209	Leaking Underground Storage Tank (AI ID#: 14006 / Reg#: 17220)	Inland Paperboard & Packaging Inc. (formerly Pakway Container)	1225 Roosevelt Avenue	0.15 mile east	TPH and petroleum VOCs	None	**IDEM VFC Title: No Further Action Letter** **Date: 8/10/2000** **VFC#: 25182668** **Summary of Findings:** IDEM issued a No Further Action determination for the facility August 10, 2000. No impact is expected.
210	Brownfield Site (AI ID#: 111616/ Reg#: 4160212) Institutional Control Site	Star Laundry & Drycleaners	1251 / 1245 Roosevelt Avenue 1231-1245 Roosevelt Avenue	0.12 mile east	VOCs, PAHs, Metals	Phase II – Soil and groundwater samples should be collected from the portion of the project area west of Lewis street and south of East 13th Street. Soil and groundwater should be analyzed for VOCs. Groundwater is anticipated at depths ranging between 19' and 30' bgs.	**IDEM VFC Title: Comfort Letter** **Date: 11/4/2016** **VFC#: 80376259** **Summary of Findings:** The facility operated as a commercial/industrial laundry and dry-cleaning facility between the 1940s and 1970s. January 2016 soil samples indicated concentrations of PAHs, VOCs, and metals below IDEM RCG SLs. January 2016 groundwater samples indicated concentrations of PCE above TWSLs. IDEM recommended an ERC/land use restriction on the property deed. Documentation indicating the migration of the onsite impacts to the project area was not encountered during this investigation. **IDEM VFC Title: Environmental Restrictive Covenant** **Date: 11/11/2016** **VFC#: 82556511** **Summary of Findings:** An ERC recorded on the property deed November 11, 2016, prohibits the extraction or use of groundwater at the facility. Based on the lack of documentation and the unknown extent of impacts potentially associated with the facility, a Phase II ESA appears warranted.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
211	State Cleanup Program (AI ID#: 23293 / SCP#: 200403226) Voluntary Remediation Program (VRP#: 6150102) Brownfield Site (BRP# 4141025) RCRA Generator (AI ID#: 19947 Reg#: IN0000018101)	B & E Realty / Circle City Industrial Complex	1125 Brookside Avenue	Depicted 0.14 mile east Physically adjoining to the east	VOCs and Lead	Phase II – west of Lewis Street and north of East 10th Street in the vicinity of I-65/I-70 Groundwater is anticipated to be encountered at depths ranging between 19' and 30' bgs.	**IDEM VFC Title: Lender Comfort Letter** **Date: 4/4/2018** **VFC#: 80639590** **Summary of Findings:** The facility consists of a multi-tenant office and industrial building utilized by auto body shops and miscellaneous commercial and light industrial entities. November 2017 groundwater samples indicated chlorinated VOCs at concentrations above TWSLs and RVIGWSLs. Off-site impacts were delineated to the project area north of the East 10th Street & eastbound I-70 intersection. Within the project area, TCE and vinyl chloride were detected above TWSLs and RVIGWSLs. Cis-1,2-dichloroethylene was detected at concentrations above TWSLs. If excavation occurs in this area, it is likely that VOCs will be encountered. A Phase II ESA appears warranted.
212	Brownfield Site (AI ID#: 108715 / Reg#: 4160814) Institutional Control Site	Former Auto Service Station	1324 East 16th Street	0.09 mile north	VOCs, PAHs, Metals	None	A review of the IDEM VFC was completed and no impact is expected.
213	Brownfield Site (AI ID#: 106410/ Reg#: 4130502)	Williams Property	1601 Dr. Andrew J. Brown Avenue	0.09 mile north	Petroleum VOCs	None	**IDEM VFC Title: Petroleum Eligibility Determination Form** **Date: 4/29/2013** **VFC#: 68031783** **Summary of Findings:** The facility applied to have environmental site assessment work completed at the site under the USEPA Brownfield Assessment Grant for petroleum substances. According to the application, the facility operated as an auto repair facility with no known impacts. Documentation indicating any subsurface investigations, spills, leaks, or other releases was not encountered during this investigation. The facility is not associated with any violations, spills, or releases, no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
214	RCRA Generator (AI ID#: 26038, Reg#: IND075979864) Underground Storage Tank Reg#: 892 Underground Storage Tanks (AI ID#: 26038 / Reg#: 892)	Indiana Property Services, LLC.	1401 Newman Street	0.08 mile south	Metals and VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
215	**Site number was not used in this analysis**						
216	Underground Storage Tank (AI ID#: 21124 Reg#: 22472)	Downtown West Mechanical Incorporated	1402 Commerce Avenue	0.04 mile to the south	TPH / Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
217	Brownfield Site (AI ID#: 116685 / Reg#: 4161213)	Precision Piston Range	1417 Commerce Avenue	0.05 mile south	VOCs	Phase II, soil and groundwater should be sampled for cVOCs	**IDEM VFC Title: Comfort Letter** **Date: 9/15/2017** **VFC#: 80519118** **Summary of Findings:** IDEM issued a Comfort Letter for the facility September 15, 2017. According to the letter, the facility operated as a machine shop, coal yard, dry cleaner and lumber yard. A sub-slab soil gas investigation was conducted at the facility in July 2016. Four (4) indoor air and sub-slab soil samples were collected. 1,2-dichloroethane was detected in one (1) sub-slab soil sample above IDEM RCG residential indoor air SLs (RAISLs). No other constituents were detected at concentrations above IDEM RCG SLs. No sampling of soil and ground water has occurred. IDEM recommended additional investigation of the site. IDEM also recommended development of a Program-approved sampling plan for the presence or absence of vapor intrusion into indoor air though a second round of "winter worst case scenario" sampling. Chlorinated VOCs in soil and groundwater have not been delineated; therefore, groundwater impact may affect the project area. A Phase II ESA appears warranted.
218	Underground Storage Tank (AI ID#: 10575 Reg#: 8432)	Mitchel & Scott Machine Company Inc.	1841 Ludlow Avenue	0.05 mile southeast	TPH / Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
219	RCRA Generator (AI ID#: 11507 / Reg ID#: IND006421820)	IVC Industrial Coatings Incorporated	2245-2250 Valley Avenue	0.18 mile east	Metals and VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

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220	RCRA Generator (AI ID#: 17071 / Reg#: IND984877670)	Antique Chrome Shop	1925 Massachusetts Avenue	0.10 mile south	Metals and VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
221	RCRA Generator (AI ID#: 19912/ Reg#: IND016417925) State Cleanup Program (SCP#: 200209124) Brownfield Site (AI ID#: 19912/ Reg#: 4100508) Institutional Control Site	Industrial Laundry and Dry Cleaners	2121 Hillside Avenue	0.37 mile north	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
222	RCRA Generator (AI ID#: 17684/ Reg#: IN0001884543)	Parker Machinery Movers	2024 Hillside Avenue	0.30 mile north	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
223	RCRA Generator (AI ID#: 17453/ Reg#: IND984973305)	Clarian Health / Allen & Roots North Allen & Roots Addition L69 and L70	1602 East 16th Street	Adjoining to the north	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
224	State Cleanup Program (AI ID#: 25171 / SCP#: 200711059)	Gillate	2510 Roosevelt Avenue	0.35 mile northeast	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
225	State Cleanup Program (AI ID#: 23258 / SCP#: 000000179)	Production Products Incorporated	2151 Roosevelt Avenue	0.32 mile northeast	TPH	None	A review of the IDEM VFC has been conducted and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
226	State Cleanup Program (AI ID#: 10939 / SCP#: 7100054) Brownfield Site (AI ID#: 10939 / Reg#: 4140310)	Adjustable Forms Incorporated of Indiana / American Lead	2102 Hillside Avenue	0.32 mile north	Metals	None	A review of the IDEM VFC has been conducted and no impact is expected.
227	Voluntary Remediation Program (AI ID#: 18590 VRP#: 6120303) Brownfield Site (AI ID#: 18590 Reg#: 4180711)	Burgess Custom Plating and Polishing	1050 East 19th Street	0.42 mile north	VOCs & Metals	None	A review of the IDEM VFC has been conducted and no impact is expected.
228	Brownfield Site (AI ID#: 18866 Reg#: 4100303)	Smith Diesel Service	1964 Hillside Avenue	0.24 mile north	Metals	None	A review of the IDEM VFC has been conducted and no impact is expected.
229	Brownfield Site (AI ID#: 19718 Reg#: 4050027)	Ertel Manufacturing Company	2045 Dr Andrew J Brown Avenue	0.49 mile northwest	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
230	Brownfield Site (AI ID#: 19605 Reg#: 4130501) Manufactured Gas Plant (AI ID#: 25252 / Reg#: 200712345)	Gleaners Food Bank/Former Indiana Gas	1651 Alvord Street/1102 E. 16th Street	0.23 mile north	Petroleum VOCs, SVOCs, metals	None	**IDEM VFC Title: Phase II Environmental Site Assessment** **Date: January 3/7/2014** **VFC#: 69752573** **Summary of Findings:** Facility includes 2 parcels, Parcel # 1067281 includes a former manufactured gas plant and coal storage yard at the intersection of 16th Street and Monon Trail. Eighteen soil borings and 16 piezometers were installed within the site. In soil, VOCs were not detected in any soil boring. Arsenic and lead were detected in eleven soil borings above IDEM RCG migration to groundwater SLs. Arsenic exceed RDCLs in 13 soil borings. Lead exceeded RDCLs in B-6 and B-12. Groundwater samples from piezometers throughout the site indicated no detectable dissolved metals with the exception of Barium which was detected below IDEM TWSLs. SVOCs were detected in groundwater only in piezometer B-11 near the center of the former MGP. SVOC detections were below RCG TWSLs. SVOCs were not detected in surrounding soil borings. **IDEM VFC Title: No Further Action Determination Former National Wine & Spirits** **Date: 10/5/2009** **VFC#: 51805368** **Summary of Findings:** Document indicated that registered tanks at the site, including a 5,000-gallon waste oil UST and 7,500-gallon UST with unknown contents were permanently removed in April 1989. The IDEM database indicates a No Further Action Determination was issued April 4, 1990. There is no indication of groundwater impacts that would impact the Project Area. The horizontal extent of soil impacts (metals) has not been delineated. Tinker Flats, (Site # 206), lies between this site and the Project area. A Phase II ESA is recommended for Tinker Flats. Based on the nature of site contaminants and distance to the project area, no impact is expected.
231	Brownfield Site (AI ID#: 101283 Reg#: 4110302) State Cleanup Site (AI ID#: 101283 Reg#: 4110302)	Moran Electric Property	1931 Dr. Andrew J Brown Avenue	0.36 mile north	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
232	Brownfield Site (AI ID#: 106683 Reg#: 4130706)	Fletcher Park	1429 Brookside Avenue	0.21 mile southeast	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
233	Brownfield Site (AI ID#: 109875 Reg#: 4150209)	Sanders Property	902 East 17th Street	0.32 mile north	Petroleum VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
234	Brownfield Site (AI ID#: 21741 Reg#: 20355)	M & L Liquors	1950 North Rural Street	0.49 mile northeast	Petroleum VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.

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235	Brownfield Site (AI ID#: 18871 Reg#: 2263)	Village Pantry 542	1856 North Rural Street	0.43 mile northeast	Petroleum VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
236	NPDES Facility (Permit#: INR10N094)	Monon Lofts	Alvord Street & 16th Street	0.20 mile north	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
237	NPDES Pipe Location (Permit #: IN002318036C)	Indianapolis Belmont & Southport AWTP	Nowland Avenue & Tecumseh Street	0.30mile southeast	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
238	NPDES Pipe Location (Permit #: IN0023183097C)	Indianapolis Belmont & Southport AWTP	Brookside Parkway South Drive & Keystone Avenue	0.45 mile east/south	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
239	NPDES Pipe Location (Permit #: IN0023183097C)	Indianapolis Belmont & Southport AWTP	Tacoma Avenue & Nowland Avenue	0.49 mile south	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
240	NPDES Pipe Location (Permit #: IN0023183095C)	Indianapolis Belmont & Southport AWTP	Brookside Parkway South Drive & Coyner Avenue	0.28 mile south	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
241	NPDES Pipe Location (Permit #: IN0023183096C)	Indianapolis Belmont & Southport AWTP	Brookside Parkway South Drive & Nowland Avenue	0.30 mile southeast	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
242	RCRA Generator (AI ID#: 11505/ Reg#: IND039995121) Voluntary Remediation Program (VRP#: 6030906) Institutional Control Site	Mid State Chemical & Supply Corporation	2100 Greenbrier Lane	0.31 mile northeast	Metals & VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
243	RCRA Generator (AI ID#: 11509/ Reg#: IND006421887) Brownfield Site (AI ID#: 11509/ Reg#: 4130208)	Zimmer Paper Products	1420 East 20th Street	0.36 mile north	Metals, PAHs, VOCs	Phase II ESA	**IDEM VFC Title: Hazardous Waste Handler Identification** **Date: 2/27/2003** **VFC#:64502077** **Summary of Findings:** In 2002 the facility was in operation as an LQG of ignitable and flammable waste. The document identified 2002 was the last year for the facility as operating as an LQG. Additional information regarding the current generator status was not encountered during this investigation. **IDEM VFC Title: Comfort Letter** **Date: 5/16/2013** **VFC#:68158454** **Summary of Findings:** The site has been used for manufacturing since the late 1870s. The facility manufactured cannons, cannon balls, locomotive engine parts and chemical solvents. A 2013 subsurface investigation detected concentrations of metals, PAHs, TCE and PCE in soil above MTG and RDCSLs. VOCs were detected in groundwater above TWSLs and RVIGWSLs. Groundwater impacts were not delineated beyond the property line; therefore, impacts may have migrated to the Project area. IDEM requested an ERC to be recorded on the property deed, however, documentation indicating the date of any ERC recorded on the property was not encountered during this investigation. A Phase II appears warranted.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
244	Voluntary Remediation Program (VRP#: 6160613) Brownfield Site (AI ID#: 16225 Reg#: 4121210)	Threaded Rod	1929 Columbia	0.44 mile northwest	Metals, VOCs	Phase II ESA, sample groundwater for cVOCs	**IDEM VFC Title: Lender Comfort Letter** **Date: 3/15/2019** **VFC#:82725326** **Summary of Findings:** From 1937 until the early 1980s, site was used for manufacture of doorway exit devices. From 1937 until 1961, site was operated by Paramount Foundry and Hardware. Threaded Rod, Inc. acquired the site for manufacturing threaded metal rods in 1986. Water soluble oils and electroplating chemicals were used. IDEM issued Incident #2009020203 due to a release of petroleum hydrocarbons, metals and VOCs on 12/31/2008. In February 2015 TCE and PCE were detected in well vaults of two monitoring wells above RCG residential VESLs. In March 2017, five soil borings were installed. One soil concentration of TCE was detected above the RCG RDCSL, and in five soil borings PCE and/or TCE were detected above RCG MTG. A Partial Remediation Work Plan was approved November 2018 to address cVOC contamination in on-site shallow soil only, due to possible groundwater migration of cVOCs from an upgradient source. An ERC was recorded on the property deed 1/22/16 (VFC #82690918). **IDEM VFC Title: Partial Remediation Work Plan Approval** **Date: 11/14/2018** **VFC#:82648690** **Summary of Findings:** RWP approved, however, Partial RWP does not address all the impacts associated with the site. Groundwater impacts have not been delineated; therefore, groundwater impacts may have migrated to the Project area A Phase II appears warranted to determine the presence of cVOCs in groundwater.
301	State Cleanup Program (AI ID#: 25195 / SCP#: 200710114)	Carpenters Local / United Brotherhood of Carpenters & Jointers	531 East Market Street	0.25 mile west	VOCs, BTEX/MTBE	None	A review of the IDEM VFC was completed and no impact is expected.
302	Leaking Underground Storage Tank (AI ID#: 16226 / Reg#: 6548)	Teledyne National	600 Ohio Street	0.09 mile west	VOCs (Toluene)	None	A review of the IDEM VFC was completed and no impact is expected.
303	Underground Storage Tank (AI ID#: 19633 Reg#: 7143)	John K. Wood	220 North College Avenue	0.04 mile west	TPH / Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
304	Underground Storage Tank (AI ID#: 18100 Reg#: 16143)	Pierson Hollowell	631 East New York Street	0.08 mile northwest	TPH / Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
305	RCRA Generator (AI ID#: 16374/ Reg#: 0000006933944)	Hilltop Press Inc.	624 East Walnut Street	0.22 mile west	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
306	Underground Storage Tank (AI ID#: 18386 / Reg#: 5158)	Loomis Armored Incorporated	122 North College Avenue	0.02 mile southwest	TPH and petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
307	State Cleanup Program (AI ID#: 23998 / SCP#: 200605114)	Tuchman Cleaners 15	350 East New York Street	0.37 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
308	Brownfield Site (AI ID#: 17135 Reg#: 4130801)	Shirley Engraving Company	460 Virginia Avenue	0.43 mile southwest	Metals & VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
309	Brownfield Site (AI ID#: 17567 Reg#: 4090306)	Maxwell Residential Development & Desoto	520 Ohio Street & 515 East New York Street	0.16 mile west	Metals, PAHs, VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
310	Brownfield Site (AI ID#: 21523 Reg#: 4040026) Institutional Control Site	Town Homes & Retail Building Proposed	151 South East Street	0.32 mile southwest	Petroleum VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
311	Brownfield Site (AI ID#: 21974 Reg#: 4160109)	Parking Lot	420 North East Street	0.29 mile southwest	VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
312	Brownfield Site (AI ID#: 105655/ Reg#: 4121008) Institutional Control Site	North Lockerbie Apartments	510 North College Avenue	0.07 mile west	VOCs, PAHs, Metals	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
313	Brownfield Site (AI ID#: 19641 Reg#: 4120508) State Cleanup Program (AI ID#: 19641 Reg#: 201126126)	Ropkey Graphics	117 North East Street	0.20 mile southwest	Petroleum VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
314	Brownfield Site (AI ID#: 22913 Reg#: 4140704)	Market Square Development Project	300 Market Street	0.38 mile southwest	VOCs, PAHs, Metals	None	A review of the IDEM VFC has been conducted and no impact is expected.
315	**Site number was not used in this analysis**						
316	Brownfield Site (AI ID#: 26495 Reg#: 4150602) Voluntary Remediation Program (AI ID#: 26495 Reg#: 6080601) Institutional Control Site	LAZ Parking Lot	131 North Alabama	0.39 mile southwest	Petroleum VOCs &PAHS	None	A review of the IDEM VFC has been conducted and no impact is expected.
317	Brownfield Site (AI ID#: 59013& 58745 Reg#: 4750101 & 4750310) NPDES Facility (Permit#: NR10N971)	Indianapolis CW Assessment / Indianapolis FMG Cleanup / City County Building Plaza	200 East Washington Street	0.52 mile southwest	Unknown	None	A review of the IDEM VFC did not indicate any documents on file for the facility no impact is expected.
318	Brownfield Site (AI ID#: 22956 Reg#: 4120807)	Former Indiana Bell Telephone Company	450 East Washington Street	0.33 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
319	Brownfield Site (AI ID#: 100924 Reg#: 4100405)	Bank One Garage	101 North New Jersey Street	0.30 mile southwest	VOCs, PAHs, Metals	None	A review of the IDEM VFC has been conducted and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
320	Brownfield Site (AI ID#: 108557 Reg#: 4140807) Institutional Control Site	Fire Department & Credit Union	501 & 555 New Jersey Street	0.39 mile west	VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
321	Brownfield Site (AI ID#: 115407 Reg#: 4160807)	East Vermont Street Apartments	416-418 East Vermont Street	0.36 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
322	Brownfield Site (AI ID#: 120712 Reg#: 4180501)	Lockerbie Place	528-540 North Park Avenue & 525-529 East North Street	0.21 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
323	Brownfield Site (AI ID#: 121046 Reg#: 4180603)	Lockerbie Marketplace	324 East New York Street / 303 North Alabama Street	0.39 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
324	Brownfield Site (AI ID#: 109622 Reg#: 4150106)	Parking Lot	222 North Alabama Street	0.38 mile west	Petroleum VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
325	Brownfield Site (AI ID#: 121787 Reg#: 4180804)	Harrison College	550 East Washington Street	0.21 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
326	Brownfield Site (AI ID#: 110345 Reg#: 4150408) Institutional Control Site	Lockerbie Property East	302 North East Street	0.22 mile west	VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
327	Brownfield Site (AI ID#: 110346 Reg#: 4150409)	Lockerbie Property New York	437 East New York Street	0.27 mile west	Metals, VOCs, PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
328	NPDES Facility (Permit#: INR10J145)	Indianapolis Downtown Transit	201 East Washington Street	0.48 mile southwest	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
329	NPDES Facility (Permit#: INR10I559)	Penrose On Mass	530 Massachusetts Avenue	0.36 mile west	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.

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330	NPDES Facility (Permit#: INR10J042)	North Lockerbie	640 East Michigan Street	0.14 mile west	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
331	NPDES Facility (Permit#: INR10J753)	Cummins Indianapolis Distribution Headquarters	55 North Alabama	0.30 mile southwest	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
332	NPDES Facility (Permit#: INR10L483)	Barton Annex Parking Lot Improvements	501 North East Street	0.28 mile west	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
333	NPDES Facility (Permit#: INL057614)	Hendricks County RSD	355 South Washington Street	0.44 mile southwest	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
334	NPDES Facility (Permit#: INR10J495)	Market Square North	360 East Market Street	0.33 mile southwest	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
335	NPDES Facility (Permit#: INR10H819)	The Lofts At Pulliam Square	152 East New York Street	0.50 mile west	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
336	NPDES Pipe Location (Permit #: IN0023183A38C)	Indianapolis Belmont & Southport AWTP	Davidson Street & Washington Street	0.10 mile west	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
401	Brownfield Site (AI ID#: 25618/ Reg#: 4160301)	Cunningham Quality Painting	920 North Dorman Street	0.08 mile east	VOCs, PAHs, Metals	None	**IDEM VFC Title: Comfort Letter** **Date: 4/21/2017** **VFC#: 80449098** **Summary of Findings:** IDEM issued a Comfort Letter for the facility April 21, 2017. According to the document, uses of the site included a veneering facility, gasoline filling station and home appliance store. Impacts appear confined to the site. No impact is expected.
402	Underground Storage Tank (AI ID#: 20897 / Reg#: 15214)	Hogan Transfer & Storage Incorporated	825 East St. Clair Street	Adjacent to the west	TPH / Petroleum VOCs	None	**IDEM VFC Title: UST #3 Closure Final Report** **Date: 5/26/1992** **VFC#: 25220759** **Summary of Findings:** One (1) 6,000-gallon kerosene tank was cleaned and closed in-place with a concrete slurry. Confirmatory soil samples indicated a detectable concentration of TPH. The TPH was confined to the UST pit and did not impact the project area. No impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
403	Underground Storage Tanks (AI ID#: 20982 / Reg#: 8433) Leaking Underground Storage Tanks (AI ID#: 10455 / Reg#: 17407) Brownfield Site (AI ID#: 106093 & 10455 / Reg#: 4130216 & 4130217) Institutional Control Site NPDES Facility (Permit#: INR10H090)	Plant #2 (Mitchel & Scott Machining Co.)	627 / 727 North College Avenue	0.10 mile west	RCRA metals, VOCs, PAHs	Phase II, groundwater should be sampled for cVOCs	**IDEM VFC Title: Revised ERC – Comfort Letter** **Date: 7/26/2013** **VFC#: 68595645** **Summary of Findings:** Between 1989 and 2012 subsurface and remediation activities were conducted at the site. The investigation conducted in 2012 indicated concentrations of polycyclic aromatic hydrocarbons (PAHs), lead, and arsenic in soils above IDEM RDC SLs. Arsenic was detected in soils above IDEM commercial/industrial SLs. TCE was detected in groundwater at the site at concentrations above TWSLs. **IDEM VFC Title: Environmental Restrictive Covenant** **Date: 7/30/2013** **VFC#: 69977374** **Summary of Findings:** An ERC was recorded on the property deed July 30, 2013. **IDEM VFC Title: Comfort Letter Request** **Date: 11/14/2017** **VFC#: 80557563** **Summary of Findings:** A Comfort Letter Request was submitted on November 14, 2017. **IDEM VFC Title: Lender Comfort Letter** **Date: 2/28/19** **VFC#: 82709296** **Summary of Findings:** 2019 Re-evaluation of 2009 and 2012 Investigation Reports indicates there is no risk related to lead levels, the calculated average concentration of lead in onsite soil is below its RDCSL of 400 ppm. The is no risk related to arsenic levels detected in on-site soil, the average concentration falls within the known background levels for arsenic in Indiana soil (2-13 ppm). December 2008 and December 2012 Historic Groundwater Concentrations indicate TCE was detected above the TWSL and VE GWSL. No indications of delineation of TCE impacts were identified in the file. A Phase II ESA is recommended due to possible impacts from TCE in groundwater
404	Brownfield Site (AI ID#: 22758 / Reg#: 4040021) Institutional Control Site	Corinthian Missionary Baptist Church	721 East North Street	0.07 mile west	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
405	RCRA Generator (AI ID#: 15997 / Reg#: IND016412223)	Handschy Industries Incorporated	528 Fulton Street	0.06 mile west	Metals and VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
406	Underground Storage Tanks (AI ID#: 19499 / Reg#: 6587)	J&B Trucking Service Company	1010 East Michigan Street	0.10 mile east	Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
407	Underground Storage Tank (AI ID#: 20341 / Reg#: 12199)	Midland Arts & Antique Market	907 East Michigan Street	Adjacent to the east	Petroleum VOCs	Phase II – west of North Pine Street and south of East Michigan Street in the project area along I-70. Soils and groundwater should be analyzed for petroleum VOCs. Groundwater is anticipated to be encountered at depths ranging between 19' and 30' bgs.	**IDEM VFC Title: Notification for Underground Storage Tanks (various documents)** **Date: 10/24/1991** **VFC#: 21240297** **Summary of Findings:** Three (3) USTs were registered for use at the site sometime prior to 1986. One (1) 500-gallon UST was removed in March 1989. Additional information indicating any confirmatory soil samples collected, spills or releases associated with the USTs was not encountered during this investigation. No other investigation has been conducted on this property. Due to the location of the site adjacent to the Project Area, a Phase II ESA appears warranted.
408	RCRA Generator (AI ID#: 24946 / Reg#: IN0002101608)	School No. 9 IMG Headquarters	407 Fulton Street	0.02 mile west	Lead	None	A review of the IDEM VFC was completed and no impact is expected.
409	Leaking Underground Storage Tank (AI ID#: 16033 / Reg#: 1783)	Flint Ink Corp. Indianapolis	1000 East Vermont Street	0.09 mile east	TPH and petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
410	State Cleanup Program (AI ID#: 26486 / SCP#: 200803197) NPDES Pipe Location (Permit#: IN0023183137C)	Koschnick Company LLC. / Indy Downtown Doggie Daycare	925 Vermont Avenue	0.07 mile east	VOCs and PAHs	None	**IDEM VFC Title: Further Site Investigation Report** **Date: 6/15/2009** **VFC#: 49193885** **Summary of Findings:** Several USTs located at the site were reportedly removed sometime in 1973. A 2008 subsurface investigation indicated onsite soils and groundwater impacted with petroleum chemicals of concern. A release was reported to IDEM and the facility assigned incident number 200803197. Between 2008 and 2009, subsurface investigations and remediation activities were conducted at the site. Remediation activities included excavation and disposal of approximately 1,477 tons of petroleum impacted soils and application of oxygen releasing compounds in former UST pit locations. Soil samples following remediation activities indicated concentrations of VOCs and polycyclic aromatic hydrocarbons (PAHs) below applicable IDEM RCG soil residential direct contact (RDC) SLs. **IDEM VFC Title: UST Removal Report** **Date: 1/23/2012** **VFC#: 64789771** **Summary of Findings:** Between 2008 and 2011, groundwater was monitored quarterly at the site. October 2011 groundwater sampling indicated concentrations of naphthalene above the IDEM RCG residential vapor intrusion ground water screening levels (RVIGWSLs). Groundwater in the region is northwesterly. Groundwater impacts were identified. The extent of the groundwater impacts was delineated within the site. **IDEM VFC Title: Completion of Independent Closure Process** **Date: 10/30/2013** **VFC#: 69273619** **Summary of Findings:** IDEM issued a Completion of Independent Closure Letter for the site October 30, 2013. **IDEM VFC Title: UST Removal Report** **Date: 5/14/2015** **VFC#: 80070046** **Summary of Findings:** In 2015, an additional UST tank vault was discovered. Soil samples contained concentrations of PAHs above MTG SLs. Impacts were confined to the UST vault and did not appear to have migrated offsite. Impacts appear confined to the site.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
411	Underground Storage Tanks (2 entries) (AI ID#: 16758 Reg#: 10445) Voluntary Remediation Program (VRP #: 6030701)	Progress Linen Y	711 East Vermont Street	0.06 mile west	Chlorinated VOCS	Phase II – Soil samples should be collected from the project area east of Davidson Street, west of Pine Street and north of East Ohio Street and south of New York Street and analyzed for VOCs. Groundwater samples may be required within the project area east of South Davidson Street if excavation will encounter groundwater. Groundwater is anticipated at depths ranging between 19' and 30' bgs.	**IDEM VFC Title: Soil and Groundwater Assessment Progress Linen** **Date: 2/7/2003** **VFC#: 45527916** **Summary of Findings:** The facility has operated as an industrial laundry since the 1950s. Soil and groundwater samples collected in 2003 indicated concentrations of VOCs and PAHs above IDEM RCG SLs. **IDEM VFC Title: Application Acceptance** **Date: 9/2/2003** **VFC#: 45527942** **Summary of Findings:** The facility was accepted into the IDEM VRP in September 2003. Since 2003 subsurface investigations, remediation activities, vapor intrusion investigations and quarterly monitoring have been conducted at the site. **IDEM VFC Title: Notification for Underground Storage Tanks** **Date: 4/8/2008** **VFC#: 25738102** **Summary of Findings:** Six (6) USTs containing dry cleaning solvent were registered at the site in 1986 **IDEM VFC Title: Groundwater Monitoring Well Installations** **Date: 10/23/2018 V** **FC#: 82639377** **Summary of Findings:** June 2018 groundwater monitoring indicated concentrations of PCE above the TWSLs and CVIGWSLs. Elevated concentrations of PCE were detected off-site to the east past Davidson Street and into the project area along I-65/I-70 at concentrations above TWSLs and CVIGWSLs. If excavation occurs in this area, it is likely that chlorinated contamination will be encountered. A Phase II ESA appears warranted.
412	Leaking Underground Storage Tank (AI ID#: 21072 Reg#: 9281)	Capitol City Fence Co. Inc. / Capitol City Ironworks	920 East New York Street	0.05 mile east	TPH and petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
413	Underground Storage Tank (2 entries) (AI ID#: 20437 / Reg#: 17153)	Wholesale TV	231 North College Avenue	0.09 mile west	Petroleum VOCs and lead	Phase II	**IDEM VFC Title: Notification of Underground Storage Tanks** **Date: 2/22/1994** **VFC#: 24205624** **Summary of Findings:** Two (2) 1,000-gallon USTs were registered at the site in 1990. The USTs were removed in June 1990. Additional information indicating any confirmatory soil samples collected, spills or releases associated with the UST was not encountered during this investigation. No indication that further investigation has ever been done was encountered in the IDEM VFC. In addition to petroleum contamination, it is likely that lead would be in the soil/groundwater. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Before proper removal and disposal of soil and/or groundwater, analysis for lead will be necessary.
414	RCRA Generator (AI ID#: 16289/ Reg #: IND046388153)	Bill Lawrence Company	221 North College Avenue	0.09 mile west	Metals and VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
415	NPDES Pipe Location (Permit#: IN0023183137C) NPDES Pipe Location (Permit #: IN0023183152C)	Indianapolis Belmont & Southport AWTP	CSO – Pine Street & Ohio Street (2 entries)	Adjoining project area to the east	N/A	None	**IDEM VFC Title: Bypass / Overflow Incident Report** **Date: 1/7/2019** **VFC#: 82673332** **Summary of Findings:** In early January 2019, an incident was filed when the sanitary sewer overflow became blocked by grease. The blockage was removed and debris removed from the area. This is the location of a combined sewer outflow. No impact is expected.
416	Leaking Underground Storage Tanks (AI ID#: 21071 / Reg#: 9280)	Capitol City Fence / Capitol City Fence Co. Inc.	920 East Ohio Street	0.07 mile east	TPH and petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
417	State Cleanup Program (AI ID#: 23352 SCP#:200506171)	New Again Properties	228 Dorman Street	0.16 mile east	SVOCs	None	A review of the IDEM VFC was completed and no impact is expected.
418	Underground Storage Tank (2 entries) (AI ID#:21749 / 21774 / Reg#: 10878 / 15995)	Service Supply Company Incorporated	752 East Market Street	0.06 mile west	Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
419	RCRA Generator (AI ID#: 18012/ Reg#: IN0002101723) Brownfield Site (AI ID#: 21754/ Reg#: 4160112) Institutional Control Site	Autokraft Collision & Industrial Service	1050 East Washington Street	0.11 mile east	VOCs, PAHs, Metals	None	A review of the IDEM VFC was completed and no impact is expected.
420	Underground Storage Tank (AI ID#: 18899/18386 Reg#: 8945)	Salvation Army	711 East Washington Street	0.05 mile west	Petroleum VOCs and lead	Phase II	**IDEM VFC Title: UST Removal and Tank Assessment Report** **Date: 2/22/1994** **VFC#: 22889951** **Summary of Findings:** One (1) UST was removed from the site in July 1992. Additional information indicating any confirmatory soil samples collected, spills or releases associated with the UST was not encountered during this investigation. No indication that further investigation has ever been done was encountered in the IDEM VFC. In addition to petroleum contamination, it is likely that lead would be in the soil/groundwater. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Before proper removal and disposal of soil and/or groundwater, analysis for lead will be necessary.
421	Underground Storage Tanks (AI ID#: 16724 / Reg#: 6795)	Fleet Care & Bart's Break Technicians	1001 Southeastern Avenue	0.09 mile southeast	TPH and petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
422	Underground Storage Tank (AI ID#: 10950 Reg#: 14933) Leaking Underground Storage Tank (LUST # N/A)	U.S. Sprint Pop Building	95 South Davidson Street	0.06 mile southwest	TPH / Petroleum VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
423	Brownfield Site (AI ID#: 16224/ Reg#: 4140104) Institutional Control	Quality Finishing Incorporated	966 East Maryland Street	0.12 mile southeast	VOCs, PAHs, Metals	None	A review of the IDEM VFC was completed and no impact is expected.
424	**Site number was not used in this analysis**						

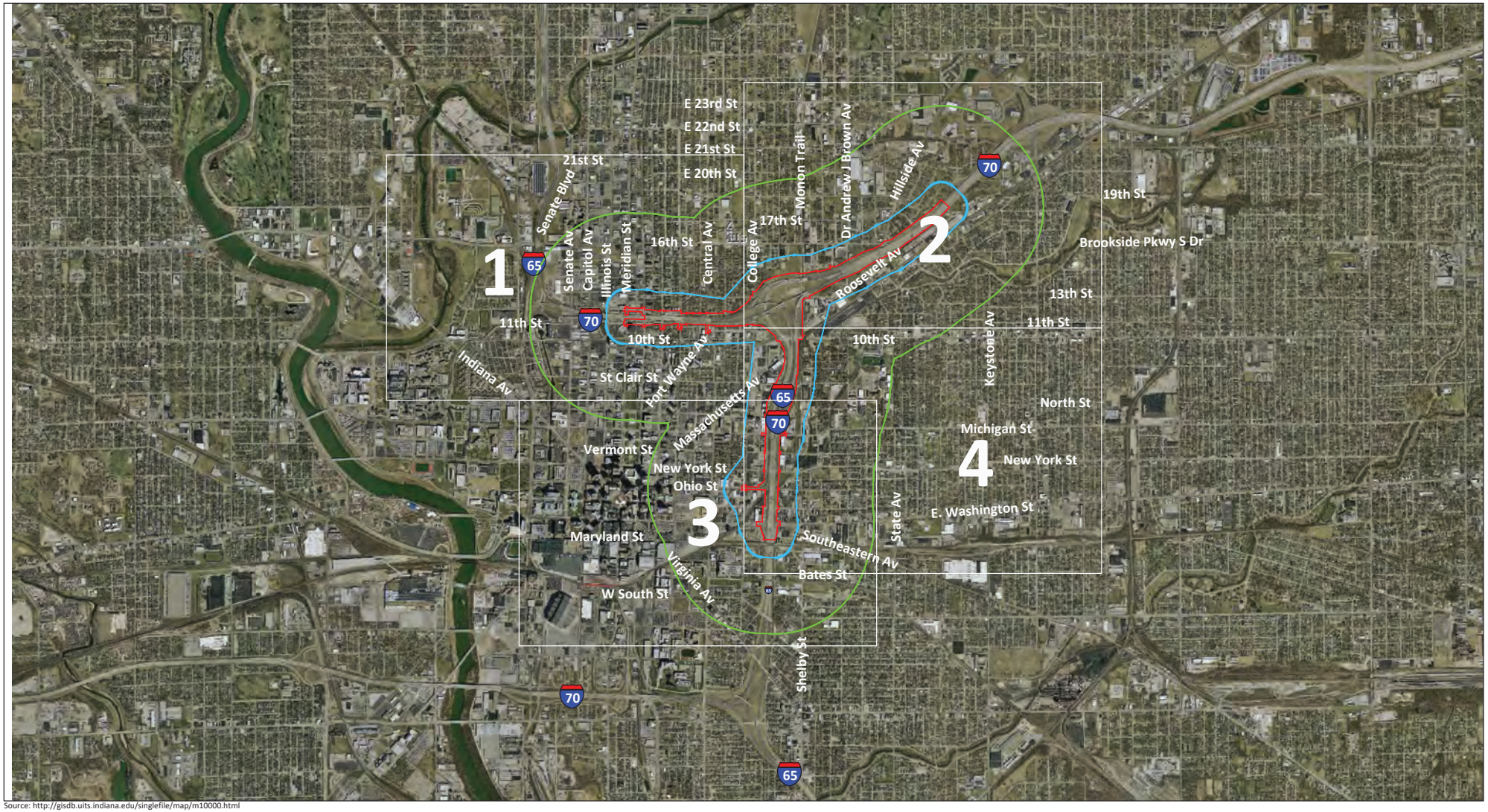
Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
425	NPDES Pipe Location (Permit #: IN0023183035C)	Indianapolis Belmont & Southport AWTP	Arsenal Avenue & 10th Street	0.38 mile east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
426	Brownfield Site (AI ID#: 122299 Reg#: 4181002)	Ivy Tech Parking Lots	1401 East Washington Street / 1427 Williams Street / 41 South Oriental Avenue	0.38 mile southeast	VOCs, & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
427	RCRA Generator (AI ID#: 16572/ Reg#: IND982206872)	Laibe Supply	1440 Bates Street	0.47 mile southeast	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
428	RCRA Generator (AI ID#: 11490/ Reg#: IND016415655)	Horner Electric Incorporated	1521 East Washington Street	0.45 mile east	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
429	RCRA Generator (AI ID#: 20077/ Reg#: 0000008993772 Leaking Underground Storage Tank (AI ID#: 20077 / Reg#: 22888) Institutional Site Control Brownfield Site (AI ID#: 20077/ Reg#: 4960015)	American Recycling	1125 East Michigan Street	0.20 mile east	VOCs & TPH	None	A review of the IDEM VFC was completed and no impact is expected.
430	State Cleanup Program (AI ID#: 23430 / SCP#: 200709202)	Fred Abel	958-1030 East Washington Street	0.09 mile east	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
431	State Cleanup Program (AI ID#: 12214 / SCP#: 2003060944)	Commercial Plating	1142 Bates Street	0.26 mile southeast	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
432	Voluntary Remediation Program (AI ID#: 17342 VRP#: 6980702) Brownfield Site (BFD#: 4140903) Institutional Control Site	Lilly Industries Incorporated Perfection Paint Bus	715 East Maryland Street	0.10 mile southwest	VOCs	None	A review of the IDEM VFC was completed and no impact is expected.
433	Brownfield Site (AI ID#: 18683 Reg#: 4091204)	Former Sweeney Construction	1030 East 9th Street	0.05 mile east	VOCs & Metals	None	A review of the IDEM VFC has been conducted and no impact is expected.
434	Brownfield Site (AI ID#: 18687 Reg#: 4151104) State Cleanup Site (AI ID#: 18687 Reg#: 0000613)	IPS Service Center	901 North Carrolton Avenue	0.12 mile west	VOCs	Phase II – Soil and groundwater samples should be collected from the portion of the project area east of the Bellefontaine Street & 10th Street intersection.	**IDEM VFC Title: Comfort Letter** **Date: 8/4/2017** **VFC#: 80500106** **Summary of Findings**: The facility was used for commercial and light industrial purposes beginning in 1914. Historical uses include a machine shop, auto repair and painting shop, drycleaners, rubber company and bottling works. Subsurface investigations have been conducted since the 1990s. VOCs were detected in November 2016 groundwater samples above TWSLs and CVIGWSLs. The offsite contamination plume has been delineated to the project area east of Bellefontaine Street immediately west and under I-70, where concentrations of VOCs above TWSLs were reported. If excavation occurs in this area, it is likely that chlorinated VOCs will be encountered. A Phase II ESA appears warranted.
435	Brownfield Site (AI ID#: 16443 Reg#: 4141101)	IPS Mallory-Ford Assembly	1316 Southeastern Avenue	0.35 mile southeast	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
436	Brownfield Site (AI ID#: 20788 Reg#: 4160113)	Banquet Dairy Products	1102 East Washington Street	0.16 mile east	Petroleum VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
437	Brownfield Site (AI ID#: 21031 Reg#: 4150406)	Home Elevator Company	1142 Southeastern Avenue	0.21 mile east	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
438	Brownfield Site (AI ID#: 19550 Reg#: 4160114) Institutional Control Site	Reliable Insurance Agency Incorporated	1140 East Washington Street	0.19 mile east	VOCs & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
439	Brownfield Site (AI ID#: 19714 Reg#: 4150407)	Banquet Dairy Products Incorporated	1214 Southeastern Avenue	0.30 mile southeast	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
440	Brownfield Site (AI ID#: 118643 Reg#: 4170806)	Sablosky Store	804-812 Massachusetts Avenue	0.17 mile west	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
441	Brownfield Site (AI ID#: 110919 Reg#: 4150901)	Noppenburger Properties	115 & 119 South Davidson Street	0.12 mile south	Metals & PAHs	None	A review of the IDEM VFC has been conducted and no impact is expected.
442	NPDES Facility (Permit#: INR10J753)	Angie's List Parking Lot	50 South Shelby Street	0.14 mile southeast	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
443	NPDES Facility (Permit#: INR10L855)	White River Lower Pogues Run Tunnel (LP-DS-02)	East Market Street & Pine Street	Adjoining to the east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
444	NPDES Pipe Location (Permit #: IN0023183034C)	Indianapolis Belmont & Southport AWTP	Michigan Street & Dorman Street	0.15 mile east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
445	NPDES Pipe Location (Permit #: IN0023183136C)	Indianapolis Belmont & Southport AWTP	New York Street & Dorman Street	0.10 mile east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
446	NPDES Pipe Location (Permit #: IN0023183138C)	Indianapolis Belmont & Southport AWTP	College Avenue & Washington Street	0.10 mile west	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
447	NPDES Pipe Location (Permit #: INS040001028S)	Indianapolis Municipal Storm Sewer System	Pogues Run & Vermont Street	0.15 mile east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
448	NPDES Pipe Location (Permit #: INS040001018S)	Indianapolis Municipal Storm Sewer System	Pogues Run & New York Street (inactive since 11/1/2013)	0.11 mile east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
449	Brownfield Site (AI ID#: 21715 Reg#: 4160602) Institutional Control Site	Woodruff Place Service Center	1844 East 10th Street	0.50 mile southeast	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
450	Brownfield Site (AI ID#: 105155 Reg#: 4120801)	Subway	1622 East 10th Street	0.51 mile east	VOCs	None	A review of the IDEM VFC has been conducted and no impact is expected.
451	NPDES Facility (Permit#: INR10K198)	Pogues Run Greenway Phase I	East 10th Street & Monon Trail	Adjoining to the east	N/A	None	A review of the IDEM VFC has been conducted and no impact is expected.
452	RCRA Generator (AI ID#: 15933/ Reg#: IND0000351452)	William S Connor Company	405 North College Avenue	0.15 mile west	VOCs & Metals	None	A review of the IDEM VFC was completed and no impact is expected.
453	RCRA Generator (AI ID#: 23768/ Reg#: IND0102234135)	GKN Sinter Metals	1302 East Washington Street	0.31 mile east	VOCs & Metals	None	**IDEM VFC Title: Notifier Database Update Form** **Date: 9/2/1997** **VFC#: 42734322** **Summary of Findings:** The site was registered as an SQG of spent halogenated solvents, corrosive waste, chromium, and lead in 1997. **IDEM VFC Title: IDEM Generator Letter** **Date: 9/18/2002** **VFC#: 38999917** **Summary of Findings:** In 2002 the site was registered as a CESQG and small quantity handler of universal waste. A November 2002 inspection did not report any violations. Additional documentation identifying any spills, releases or violations associated with the facility were not encountered during this investigation. The facility is not associated with any violations, spills, or releases, therefore; no impact is expected.

Site #	Site Type(s)	Site Name	Site Address	Location Relative to Project Area (Within/Adjacent /Distance From)	Potential Contaminants of Concern	Additional Investigations Recommended	VFC Information
501	Brownfield Site (AI ID#: 16036 Reg#: 4070801) Institutional Control Site	Threaded Rod / Roger Popp Building	1029 Fletcher Avenue & 718 Shelby Street	0.54 mile southeast	BTEX/MTBE, PAHs	None	**IDEM VFC Title: Phase II Subsurface Investigation** **Date: 9/7/2007** **VFC#: 66745152** **Summary of Findings:** A dry cleaner was formerly located in the current parking lot area of the Fletcher Avenue property. Threaded Rod Company conducted wire-drawing, threading and metal-plating at 1029 Fletcher Avenue from the early 1960s to the late 1980s. Soil analytical results indicated all VOCs and TPH-GRO were below detection limits. One detection of TPH-ERO was reported at 89 mg/kg which slightly exceeds the IDEM RISC RDCL of 80mg/kg. Groundwater was analyzed for VOCs and TPH-GRO by Method 8260 and TPH-ERO by Method 8015. All of the piezometers sampled indicated low levels of TPH-ERO in groundwater. **IDEM VFC Title: No Further Action Determination (Re-issue)** **Date: 10/14/2015** **VFC#: 80146985** **Summary of Findings:** IDEM agreed to re-evaluate the most recently submitted site reports against the current screening levels in the RCG to determine what, if any, land use restrictions are necessary. In comparing historical analytical data to the now-applicable RCG screening levels, none of the analyzed constituents, including naphthalene, were detected in soil or ground water at levels above their respective RCG residential screening levels. Furthermore, TPH-GRO and TPH-ERO are no longer substances regulated by IDEM. IDEM approved an unconditional residential closure. No impact is expected.



Source: http://gisdb.uits.indiana.edu/singlefile/map/m10000.html

Hazardous Materials Concerns Map
I-65/I-70 North Split Interchange Project
Center Township, Indianapolis,
Marion County, Indiana
Des. No. 1592385 & 1600808
Overview Map

All locations approximate

- Project Study Area
- Project Buffer Area (500 feet)
- Project Buffer Area (0.5 Mile)

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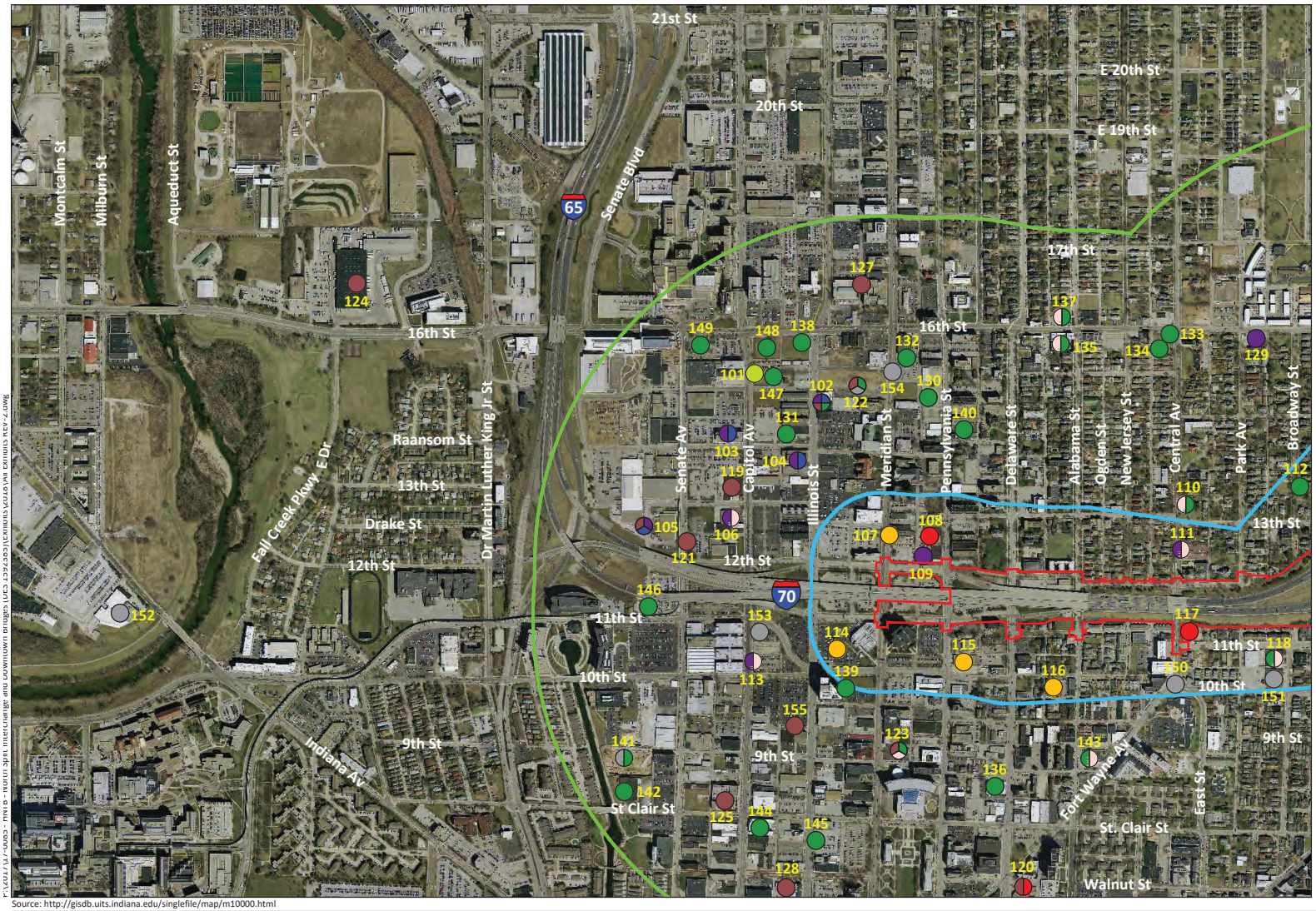

Source: http://gisdb.uits.indiana.edu/singlefile/map/m10000.html

Hazardous Materials Concerns Map
I-65/I-70 North Split Interchange Project
Center Township, Indianapolis,
Marion County, Indiana
Des. No. 1592385 & 1600808
Sheet 1 of 5

All locations approximate

- Project Study Area
- Project Buffer Area (500 feet)
- Project Buffer Area (0.5 Mile)
- Brownfields Sites
- Leaking Underground Storage Tank (LUST)
- Infectious Waste Sites
- NPDES Piping Sites
- Voluntary Remediation Program
- Underground Storage Tank (UST)
- Manufactured Gas Plant
- RCRA Sites
- State Cleanup Sites
- Institutional Control Sites
- Multiple colors indicates multiple databases

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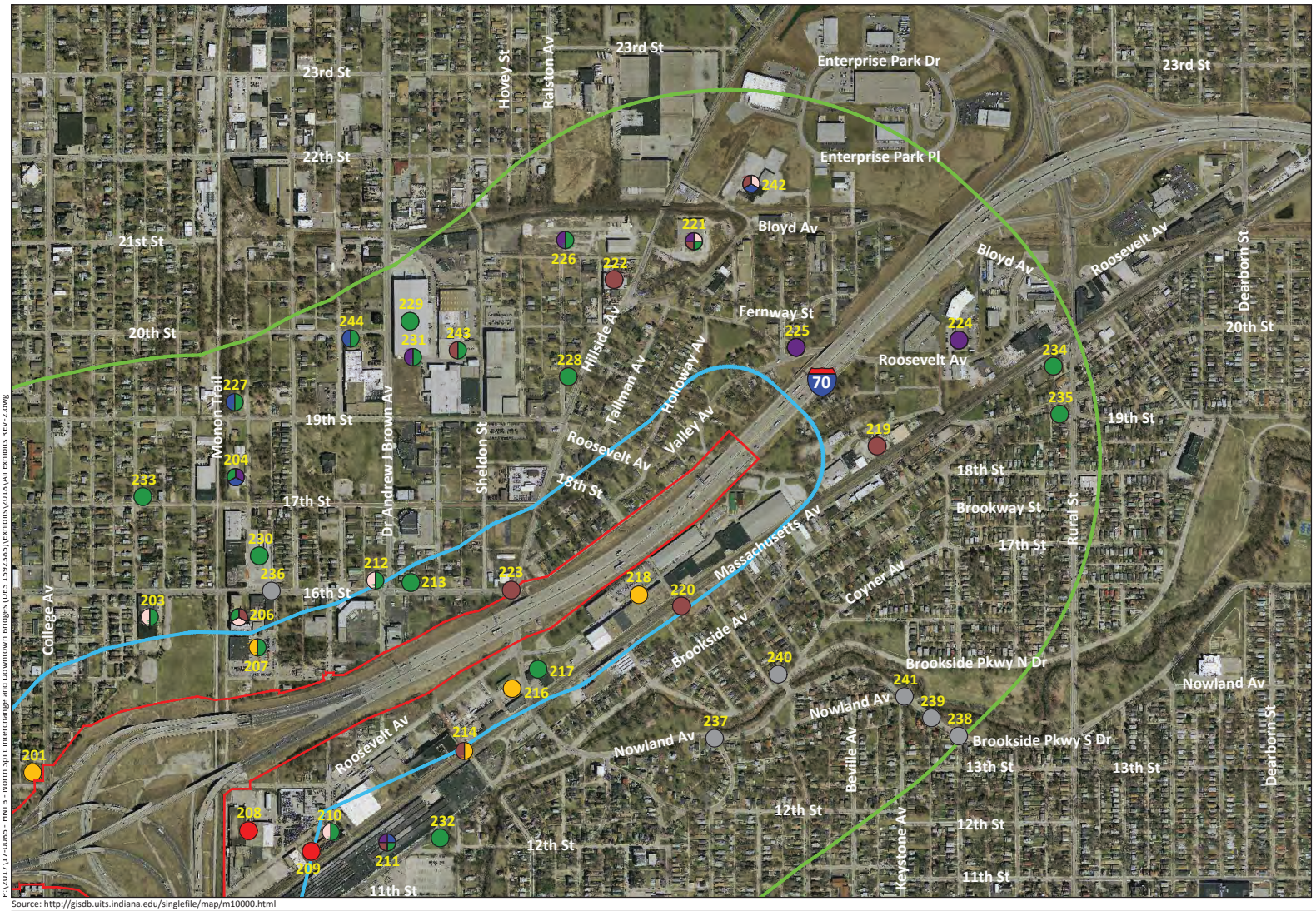

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Hazardous Materials Concerns Map
I-65/I-70 North Split Interchange Project
Center Township, Indianapolis,
Marion County, Indiana
Des. No. 1592385 & 1600808
Sheet 2 of 5

All locations approximate

- Project Study Area
- Project Buffer Area (500 feet)
- Project Buffer Area (0.5 Mile)
- Brownfields Sites
- Leaking Underground Storage Tank (LUST)
- Infectious Waste Sites
- NPDES Piping Sites
- Voluntary Remediation Program
- Underground Storage Tank (UST)
- Manufactured Gas Plant
- RCRA Sites
- State Cleanup Sites
- Institutional Control Sites
- Multiple colors indicates multiple databases

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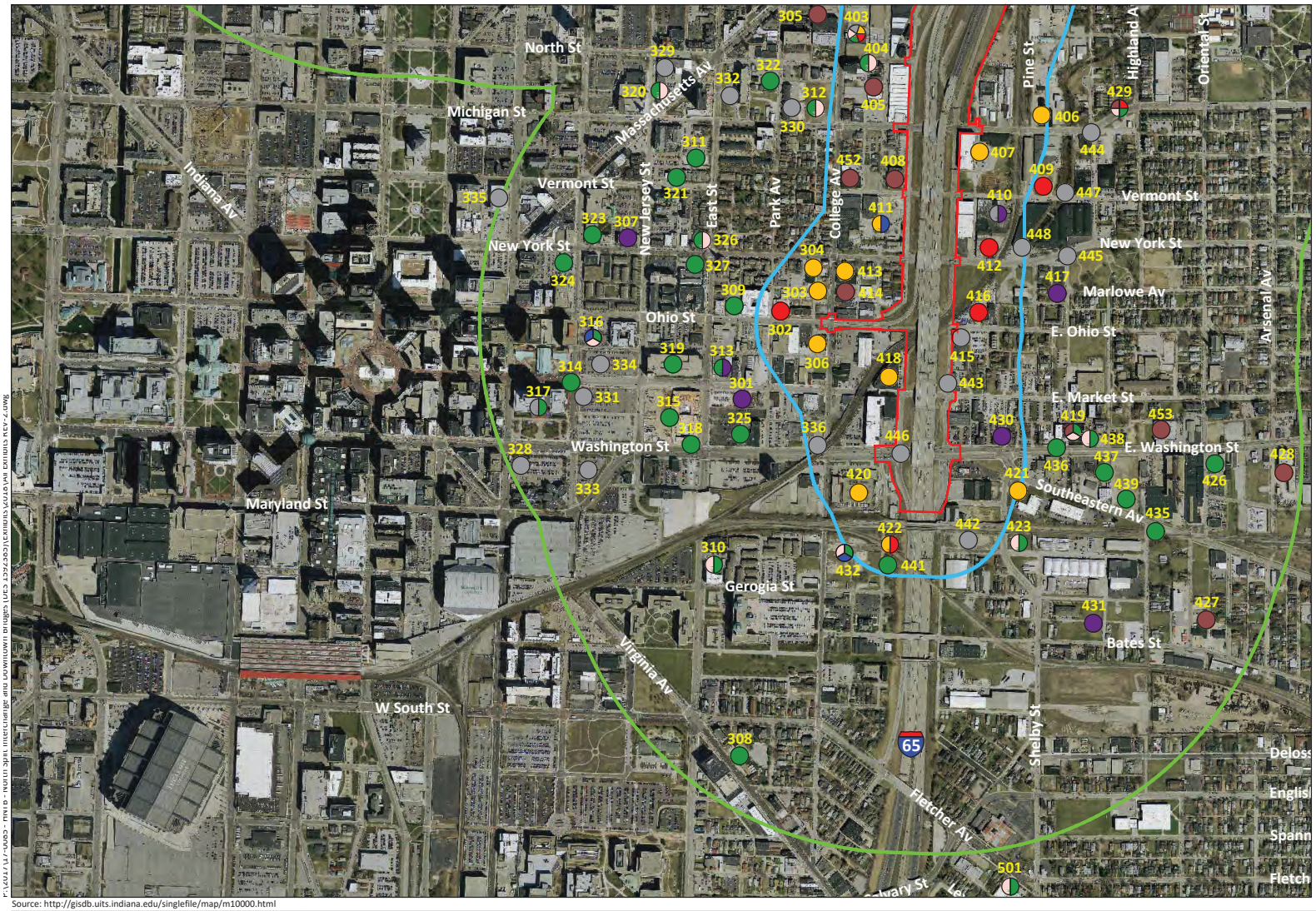

Source: http://gisdb.uits.indiana.edu/singlefile/map/m10000.html

Hazardous Materials Concerns Map
I-65/I-70 North Split Interchange Project
Center Township, Indianapolis,
Marion County, Indiana
Des. No. 1592385 & 1600808
Sheet 3 of 5

All locations approximate

- Project Study Area
- Project Buffer Area (500 feet)
- Project Buffer Area (0.5 Mile)

- Brownfields Sites
- Leaking Underground Storage Tank (LUST)
- Infectious Waste Sites
- NPDES Piping Sites
- Voluntary Remediation Program
- Underground Storage Tank (UST)
- Manufactured Gas Plant
- RCRA Sites
- State Cleanup Sites
- Institutional Control Sites
- Multiple colors indicates multiple databases

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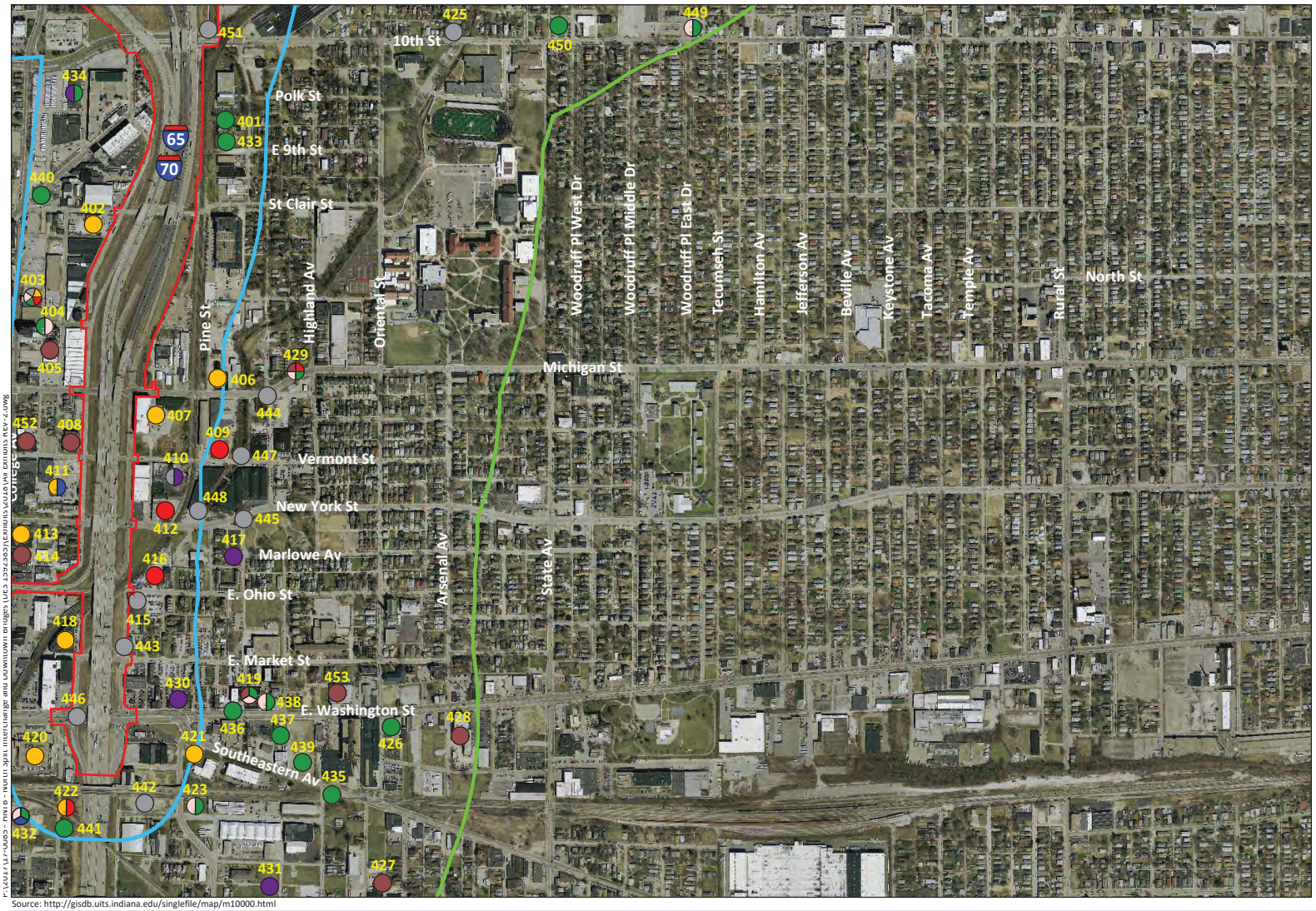
Scale

METRIC ENVIRONMENTAL



Source: http://gisdb.uits.indiana.edu/singlefile/map/m10000.html

Hazardous Materials Concerns Map
I-65/I-70 North Split Interchange Project
Center Township, Indianapolis,
Marion County, Indiana
Des. No. 1592385 & 1600808
Sheet 4 of 5

All locations approximate

- Project Study Area
- Project Buffer Area (500 feet)
- Project Buffer Area (0.5 Mile)
- Brownfields Sites
- Leaking Underground Storage Tank (LUST)
- Infectious Waste Sites
- NPDES Piping Sites
- Voluntary Remediation Program
- Underground Storage Tank (UST)
- Manufactured Gas Plant
- RCRA Sites
- State Cleanup Sites
- Institutional Control Sites
- Multiple colors indicates multiple databases

N W E S
0 800'
Scale

METRIC ENVIRONMENTAL

Indiana County Endangered, Threatened and Rare Species List

County: Marion

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Cyprogenia stegaria	Eastern Fanshell Pearlymussel	LE	SE	G1Q	S1
Epioblasma obliquata perobliqua	White catspaw	LE	SE	G1T1	SX
Epioblasma torulosa rangiana	Northern Riffleshell	LE	SE	G2T2	S1
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Fusconaia subrotunda	Longsolid	C	SE	G3	SX
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cicatricosus	White Wartyback	LE	SE	G1	SX
Plethobasus cooperianus	Orangefoot Pimpleback	LE	SE	G1	SX
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Pleurobema plenum	Rough Pigtoe	LE	SE	G1	S1
Pleurobema pyramidatum	Pyramid Pigtoe		SE	G2G3	SX
Ptychobranchus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Hymenoptera					
Bombus affinis	Rusty-patched Bumble Bee	LE	SE	G1	S1
Insect: Lepidoptera (Butterflies & Moths)					
Hyperaeschra georgica	A Prominent Moth			G5	S2
Insect: Neuroptera					
Sisyra sp. 1	Indiana Spongilla Fly		ST	GNR	S2
Fish					
Percina evides	Gilt Darter		SE	G4	S1
Amphibian					
Lithobates pipiens	Northern Leopard Frog		SSC	G5	S2
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake	C	SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Thamnophis butleri	Butler's Garter Snake		SE	G4	S1
Bird					
Aimophila aestivalis	Bachman's Sparrow			G3	SXB
Ardea alba	Great Egret		SSC	G5	S1B
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B

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

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

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

Indiana County Endangered, Threatened and Rare Species List

County: Marion

Species Name	Common Name	FED	STATE	GRANK	SRANK
Botaurus lentiginosus	American Bittern		SE	G5	S2B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Buteo platypterus	Broad-winged Hawk		SSC	G5	S3B
Certhia americana	Brown Creeper			G5	S2B
Chordeiles minor	Common Nighthawk		SSC	G5	S4B
Falco peregrinus	Peregrine Falcon		SSC	G4	S2B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Helmitheros vermivorus	Worm-eating Warbler		SSC	G5	S3B
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SE	G5	S1B
Rallus elegans	King Rail		SE	G4	S1B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Sitta canadensis	Red-breasted Nuthatch			G5	S1B
Wilsonia citrina	Hooded Warbler		SSC	G5	S3B
Mammal					
Lasiurus borealis	Eastern Red Bat		SSC	G3G4	S4
Myotis lucifugus	Little Brown Bat	C	SSC	G3	S2
Myotis septentrionalis	Northern Long Eared Bat	LT	SSC	G1G2	S2S3
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Chelone obliqua var. speciosa	Rose Turtlehead		WL	G4T3	S3
Crataegus grandis	Grand Hawthorn		SE	G3G5Q	S1
Deschampsia cespitosa	Tufted Hairgrass		SR	G5	S2
Hydrastis canadensis	Golden Seal		WL	G3G4	S3
Juglans cinerea	Butternut		WL	G4	S3
Melanthium virginicum	Virginia Bunchflower		SE	G5	S1
Panax quinquefolius	American Ginseng		WL	G3G4	S3
Poa wolfii	Wolf Bluegrass		SR	G4	S2
Rubus odoratus	Purple Flowering Raspberry		ST	G5	S2
Trifolium stoloniferum	Running Buffalo Clover	LE	SE	G3	S1
High Quality Natural Community					
Forest - flatwoods central till plain	Central Till Plain Flatwoods		SG	G3	S2
Forest - floodplain mesic	Mesic Floodplain Forest		SG	G3?	S1
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3

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Indiana County Endangered, Threatened and Rare Species List

County: Marion

Species Name	Common Name	FED	STATE	GRANK	SRANK
Forest - upland dry-mesic Central Till Plain	Central Till Plain Dry-mesic Upland Forest			GNR	S2
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest			GNR	S3
Wetland - fen	Fen		SG	G3	S3
Wetland - marsh	Marsh		SG	GU	S4

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MEETING SUMMARY

Date: July 8, 2019
Time: 1:00-3:00 p.m.
Meeting: North Split INDOT/IDEM Hazardous Materials Meeting
Location: INDOT Room N642

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*Complete attendee list begins on page 2.

1. Introductions/Purpose of Meeting

INDOT Site Assessment & Management (SAM) started the meeting and attendees introduced themselves. The North Split project is a large project and construction is anticipated to start in late 2020 or early 2021. INDOT's concerns related to hazardous materials are for worker safety and proper disposal of materials. INDOT SAM is identifying locations for Phase II sampling and wanted to coordinate with IDEM to make sure nothing is missed. The results of the Phase II sampling will be included in the contract documents.

2. Potential Hazardous Material Concerns

IDEM indicated that dewatering is likely a larger concern for the project, soils are likely less of a concern. Citizens Energy Group (CEG) has had substantial dewatering efforts as part of their deep rock tunnel project. They may have some data on ground water levels. INDOT stated the dewatering for the North Split project will likely be short and not long-term.

INDOT said these studies are more about presence/absence of hazardous materials. Often sites are not well delineated within the INDOT right-of-way. IDEM suggested looking more at areas or sites where not as much information is known. They are more concerned about sites they don't know about. They have a dry cleaner database and may be able to provide additional data. INDOT asked if IDEM would be willing to review the proposed sampling points and they agreed.

Several specific sites of concern were discussed. INDOT SAM was aware of most of these sites based on their database review. IDEM agreed to provide additional information if needed.

3. Next Steps

INDOT SAM will set up a follow up meeting the next week. IDEM will provide information from their dry cleaner database and review the proposed sampling locations.

Attendees:

Marlene Mathas	INDOT Site Assessment & Management (SAM)
Nicole Fohey-Breting	INDOT SAM
Runfa Shi	INDOT Project Manager
Brandon Miller	INDOT Environmental Services Division (ESD)
Bruce Oertel	IDEM
Michael McCann	IDEM
Ryan Groves	IDEM
John Schilling	ATC
Kia Gillette	HNTB

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

SUBSURFACE INVESTIGATION REPORT

I-65 / I-70 NORTH SPLIT
INDIANAPOLIS, MARION COUNTY, INDIANA
INDOT DES #1600808

ATC PROJECT NO. 170DOT0054

September 3, 2019

PREPARED FOR:

INDIANA DEPARTMENT OF TRANSPORTATION
100 NORTH SENATE AVENUE, ROOM N901
INDIANAPOLIS, INDIANA 46204

ATTN: MS. MARLENE MATHAS

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

September 3, 2019

ATC Group Services LLC

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Ms. Marlene Mathas
Indiana Department of Transportation
100 N. Senate Avenue, Rm N642
Indianapolis, Indiana 46204

Re: **Subsurface Investigation Report**
I-65 / I-70 North Split
Indianapolis, Marion County, Indiana
INDOT Des #1600808
ATC Project No. 170DOT0054

Dear Ms. Mathas:

ATC Group Services LLC (ATC) is pleased to provide the Indiana Department of Transportation (INDOT) with this *Subsurface Investigation Report* documenting the environmental investigation activities that were conducted in the Area of Interest (AOI) along the I-65/I-70 North Split corridor located in Indianapolis, Indiana (AOI). The work performed, findings, and conclusions of the subsurface investigation are provided in this submittal.

We appreciate the opportunity to be of service to you on this project. Please contact either of the undersigned if you have any questions or comments.

Sincerely,

ATC Group Services LLC

Matt Myers
Staff Geologist
Direct line: (317) 579-4070
Matt.myers@atcgs.com

John Schilling, LPG (IN#2163)
Senior Project Geologist
Direct line: (317) 579- 4080
John.schilling@atcgs.com

Cc: Ms. Nicole Fohey-Breting – INDOT (nfoheybreting@indot.IN.gov)

Table of Contents

1.0 Introduction

ATC was retained by the INDOT, through the existing On-Call Hazardous Materials and Remedial Plan Development Services contract, to complete subsurface investigation along the Interstate 65 (I-65) and Interstate 70 (I-70) corridor located within the city limits of Indianapolis, Marion County, Indiana. A Red Flag Investigation (RFI) report, dated May 21, 2019, identified several properties within 0.5 miles of the proposed project area that represented potential environmental concerns. This area, defined as the AOI for purposes of this investigation, is depicted on the illustration provided as **Figure 1**. Given the results of the RFI and the urban setting of the proposed roadway construction, subsurface environmental assessment was deemed warranted, specifically, where construction activities are anticipated to include trenching, excavation, or drilling. The initial design concept for the roadway improvements provided zones of potential construction locations and estimated depths of excavation; however, the exact locations and depths of construction activities is not fully known at this time, due to the design-build nature of the project. However, a preliminary review of potential subsurface conditions was deemed necessary to assist with project and cost development. The collection of soil and groundwater data within the AOI will be utilized to identify contaminants of concern (COCs) in the subsurface in order to evaluate potential worker exposure and assist in the projects needs of management of soil and/or groundwater generated during construction. COCs identified for the scope of this project are not all encompassing, but were selected based on the results of the RFI.

Between July 29 and August 21, 2019, 30 soil borings were advanced and then converted into temporary monitoring wells across the AOI to allow for the collection of soil and groundwater samples. A total of 11 deep soil borings (DB) were advanced to a depth of 80 feet-below ground surface (ft-bgs) with an additional 19 soil borings (GP) completed to termination depths of 35 ft-bgs or until groundwater was encountered. In addition, as some locations were not accessible for the drill rig, existing data from several of the identified properties of concern were evaluated to assist in the exposure assessment. This report provides the field methodologies, locations, and results of the subsurface investigation.

1 Project Area Characteristics

1.1 AOI Description

The AOI is located along the I-65/I-70 north split corridor inside the city limits of Indianapolis, Marion County, Indiana. The AOI is currently the northbound and southbound I-65/I-70 interstate with the north split of I-65 heading west northwest and the I-70 split heading northeast. The topography slightly dips to the west with an approximate elevation between 715 and 770 feet above mean sea level (ft-MSL). The AOI located within the I-65/I-70 north split consists of approximately 0.29-square miles located in an area characterized primarily by residential and commercial land use. A scaled map with a legend, compass directions, and other current surface features is provided as **Figure 2**.

1.2 Hydrogeologic Setting

According to the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey[1], the soils beneath the AOI consist of urban land – Fox complex consisting of well drained soil with 0 to 3 percent slopes and urban land – Miami complex consisting of moderately well drained soil with 0 to 6 precent slopes.

Based on the information obtained from IndianaMAP[2], the project is located in the Central Till Plain. The unconsolidated material has an average thickness of approximatley 100 feet. The bedrock beneath the area consists of Devonian-aged dolomite and limestone of the Muscatatuck Group. The elevation of the bedrock surface is approximately 600 ft-MSL. According to the Indiana Department of Natural Resources (IDNR) Water Well Records, bedrock in the vicinity of the project is encountered between approximately 93 ft-bgs and 118 ft-bgs. Bedrock was not encountered in the soil borings advanced during the investigation.

Surface runoff in the AOI is controlled primarily by infiltration into the ground surface and overland flow into drainage basins located along the interstate. The closest surface water body is Pogues Run, which runs parallel to the southeast and has an approximate distance at the closest point of 0.15 miles to the east of the project area. Based on the *Potentiometric Surface Map of the Unconsolidated Aquifers of Marion County, Indiana* map[3], the groundwater flow direction for the unconsolidated aquifer in the vicinity of downtown Indianapolis appears to be to the west-southwest towards the White River. Based on the *Potentiometric Surface Map of the Bedrock Aquifers of Marion County, Indiana* map[4], the groundwater flow direction for the bedrock aquifer in the vicinity interstate appears to be to the southwest towards the White River. A complete hydrogeologic investigation would be necessary to determine actual local groundwater flow direction. Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

[1] https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx
[2] http://maps.indiana.edu/
[3] https://www.in.gov/dnr/water/files/19_Marion_County_UNC_PSM_map.pdf
[4] https://www.in.gov/dnr/water/files/19_Marion_County_BED_PSM_map.pdf

2 Work Performed

2.1 Drilling Activities

Prior to the start of the field activities, ATC contacted the Indiana Underground Plant Protection Service (IUPPS) and requested the member utilities to identify the underground utility locations in the right-of-ways surrounding the AOI. ATC reviewed the location of marked underground utilities and moved soil boring locations as necessary to avoid potentially contacting underground utilities. Additionally, a project-specific health and safety plan was prepared and reviewed with all field personnel before commencing with the field activities.

Between July and August 2019, to evaluate the soil and groundwater quality, 30 soil borings were advanced and then converted into temporary monitoring wells. Soil boring/well locations are illustrated on **Figure 2**.

2.2 Soil Investigation

On July 29 through August 16, 2019, ATC advance 11 deep soil borings (DB-1 through DB-6, DB-8, DB-9, and DB-11 through DB-13) across the AOI to terminal depths of 80 ft-bgs. Soil borings DB-7 and DB-10 were located in areas that were upon further inspection not safely accessible by the drill rig and therefore, were not advanced. Shallow soil borings (GP-1 and GP-3 through GP-20) were also advanced across the AOI to terminal depths ranging between 16 and 48 ft-bgs. The initial locations proposed for soil borings GP-1 and GP-2 were determined to be on private property thus, the locations were moved to within the ROW on the adjacent cross street and reduced to the single location GP-1.

Each boring was initially advanced using a stainless steel hand auger to a depth of approximately 5 ft-bgs to minimize the potential hazards associated with buried utilities. Due to the location of underground utilities at five locations (GP-1, GP-11, GP-12, GP-14, and GP-15), a vacuum truck equipped with an air-knife was used to clear those locations to a depth of approximately 6 ft-bgs. The soil borings were then advanced further and soil samples collected continuously in 2-foot intervals to the desired depths using a Hollow Stem Auger (HSA) drill rig or a Geoprobe® drill rig equipped with 2-foot long, nominal 2-inch diameter split spoon sampler.

When the split spoon samplers were opened at ground surface, an ATC geologist collected a sub-sample from the 2-foot interval for potential laboratory analysis using Terra Core® Samplers (United States Environmental Protection Agency (US EPA) Method 5035A) and additional laboratory-supplied sample containers. A second sub-sample (field aliquot) was placed into sealable plastic bags to be analyzed in the field using a photo-ionization detector (PID), which measures total photo-ionizable vapors (TPVs) in parts per million (ppm). Additionally, a Model 2241-2 Ratemeter/Digital Scaler, that can measure exposure and contamination of alpha, beta, and gamma rays in micro Rems/hour (mR/hr) was used to screen soils at nine of the soil borings (DB-1 through DB-5, GP-6 through GP-8, and GP-19) from the 0 to 10 ft-bgs intervals. Each soil sample was classified in accordance with the Unified Soil Classification System (USCS), and visually inspected in the field for physical evidence of environmental impact such as staining, odors, free product, etc. Soil boring logs documenting the soil classification and field screening results are provided in **Appendix A**.

Three soil samples were retained for laboratory analysis from each of the soil borings. The samples retained for laboratory analysis were the shallow subsurface interval which ranged between 0-2 ft-bgs, 2-4 ft-bgs, and 4-6 ft-bgs; the subsurface sample interval above the groundwater exhibiting the greatest potential for contamination (i.e., highest TPV reading, staining, odors,etc.). If there were no indications of contamination, the interval directly above groundwater was collected. An additional soil sample was collected from one soil boring (GP-5) due to an elevated shallow TPV reading.

For quality assurance/quality control (QA/QC) purposes, five soil duplicate samples and five matrix spike/matrix spike duplicate (MS/MSD) soil samples were collected and submitted for laboratory analysis. The soil duplicate samples were collected as follows: DUP-SL-1 was collected from DB-3 at the 78-80 ft-bgs interval, DUP-SL-2 was collected from DB-12 at the 30-32 ft-bgs interval, DUP-SL-3 was collected from DB-11 at the 22-24 ft-bgs interval, DUP-SL-4 was collected from GP-11 from the 28-30 ft-bgs interval, and DUP-SL-5 was collected from GP-17 from the 34-36 ft-bgs interval. The MS/MSD soil samples were collected from GP-4 at the 2-4 ft-bgs interval, GP-6 at the 18-20 ft-bgs interval, GP-14 at the 8-10 ft-bgs interval, GP-15 at the 22-24 ft-bgs interval, and DB-13 at the 78-80 ft-bgs interval. In addition, one trip blank accompanied the sample containers each day.

The soil samples selected for laboratory analysis were placed into laboratory-supplied sample containers, labeled with a unique identification, placed in a cooler with ice, and transported to Pace Analytical Services, LLC (Pace) under chain-of-custody controls. The soil samples were analyzed for volatile organic compounds (VOCs) via US EPA SW-846 Methods 8260, Polycyclic Aromatic Hydrocarbons (PAHs) via US EPA SW-846 Method 8270SIM, and total metals (Barium, Cadmium, Chromium, Lead, Nickel, Zinc, and Mercury) via US EPA SW-846 Method 6010/7471. The shallow subsurface soil samples collected were also analyzed for Polychlorinated Biphenyls (PCBs) via US EPA SW-846 Method 8082. Additionally, due to a potential historical source identified in the Red Flag Investigation report, dated May 21, 2019, shallow soil samples collected from borings DB-1 through DB-5, GP-6, GP-7, GP-8, and GP-19 were analyzed for Uranium via US EPA SW-846 Method 6020A.

2.3 Well Installation

Following collection of soil samples, the deep soil borings were completed as two-inch diameter PVC temporary monitoring wells, the shallow soil borings were finished as one-inch diameter PVC temporary monitoring wells. The deep temporary monitoring wells were installed at the termination depths of the borings at a depth of approximately 80 ft-bgs. The shallow temporary monitoring wells were installed to a depths ranging from 16 ft-bgs and 48 ft-bgs dependent upon the depth to groundwater observed during drilling. Each well utilized a ten foot length of 0.010’ of factory machine slotted PVC well screen installed at the bottom of the boring. The well locations are illustrated on **Figure 2**. The natural caving of the sand materials while the augers were pulled filled the well annuli. When the caving materials didn’t provide the necessary granular fill depth, a sand pack was gravity poured until a minimum of 2 feet above the well screen was obtained. A grout slurry mixture was tremied to the ground surface at the deep temporary monitoring well locations. The shallow well locations were sealed utilizing hydrated bentonite chips above the sand pack. Details of the construction of the temporary monitoring wells are presented on the boring logs provided in **Appendix A**.

Following well installation, the deep temporary monitoring wells were developed using a Hurricane Pro® submersible pump or equivalent piece of equipment. A minimum of ten well volumes of groundwater was removed from each of the deep temporary monitoring wells or until they purged dry. Finally, the deep soil

boring/temporary monitoring well locations were surveyed using data collected from a Global Positioning System (GPS) unit.

2.4 Groundwater Sampling

Between July 29, 2019 and August 21, 2019, groundwater samples were collected from the temporary monitoring wells. Groundwater samples collected from the shallow temporary monitoring wells (GP-1, GP-3 through GP-16, and GP-18 through GP-20) were collected via one-inch bailers immediately after well installation. Following the collection of the shallow groundwater samples, the shallow temporary monitoring wells were abandoned. The deep temporary monitoring well locations (DB-1 through DB-6, DB-8, DB-9, DB-11, DB-12, and DB-13) were installed to a depth of approximately 80 ft-bgs. Prior to installation, a grab groundwater sample (DB-#-WT-S) was collected directly from the HSA via disposable bailer from the first shallow water-bearing unit encountered. Upon installation of the deep temporary monitoring wells, an electric submersible pump was utilized to develop each temporary well. The incremental groundwater sampling was performed to determine if a potential COC concentration gradient existed within that particular sample location. Rationale for the data collection was that the data may be useful as construction methods and depths have not yet been determined. Following well development, the wells were opened and allowed to equilibrate to atmospheric pressure prior to gauging with an electronic water level indicator, which measures depth to groundwater to the nearest 0.01-foot. The depth-to-water measurements for deep temporary monitoring wells are included in **Table 1**.

For the deep temporary monitoring wells sampled via bailer method, a minimum of three well volumes of water was purged from each well prior to collecting the groundwater samples (DB-#-WT-D) for laboratory analysis. If, during the purging process the well went dry, groundwater was allowed to recharge and samples were subsequently collected once the groundwater level had recharged sufficiently to allow sample collection. The extraction of groundwater from the temporary monitoring wells was accomplished by lowering a new, disposable bailer and polypropylene rope into the well and removing the calculated water volume.

All groundwater samples collected during this sampling event were placed into laboratory supplied sample containers, labeled with a unique identification, placed in a cooler and transported to Pace under chain-of-custody controls. The groundwater samples were analyzed for VOCs via US EPA SW-846 Methods 8260, Polycyclic Aromatic Hydrocarbons (PAHs) via US EPA SW-846 Method 8270SIM, Total, and Dissolved Metals (Barium, Cadmium, Chromium, Lead, Nickel, Zinc, and Mercury) via US EPA SW-846 Method 6010/7471. Additionally, the shallow groundwater samples collected from borings DB-1 through DB-5, GP-6 through GP-8, and GP-19 were analyzed for Uranium via US EPA SW-846 Method 6020A.

For QA/QC purposes, two groundwater duplicate samples and two matrix MS/MSD groundwater samples were collected and submitted for laboratory analysis. The groundwater duplicate samples were collected as follows: DUP-WT-1 was collected from temporary monitoring well GP-9 and DUP-WT-2 was collected from temporary monitoring well DB-8. The MS/MSD groundwater samples were collected from DB-12 and GP-13. In addition, one trip blank accompanied the sample containers each day.

Non-dedicated equipment that came in contact with subsurface media was cleaned using a solution of non-phosphate detergent followed by a potable water rinse prior to each usage. Soil cuttings, purge water, and decontamination water was placed into labeled 55-gallon drums that are pending disposal.

3 Findings

3.1 Hydrogeology and Soil Screening Results

Based on the results of the subsurface investigation, silty clay with sand, brick, stone/gravel, and glass fragments were encountered beneath the surface cover (top soil and asphalt/concrete) across the AOI to depths ranging between approximately 1.5 ft-bgs and 8 ft-bgs. Due to the lateral extent of borings across the investigation, there were variations in soil lithology particularly noticeable between the west extent and the east extent of the subject area.

Generally, from the west, the soil lithology encountered beneath the fill consisted primarily of medium-dense, gravelly sand to depths of approximately 10 to 25 ft-bgs. Below that interval was a finer and denser sand extending to about 35 ft-bgs. That interval was underlain by a gravelly, rocky, dense sand until about 45 ft-bgs, followed by a stiff, silty clay with trace gravel down to the termination depth of the borings (80 ft-bgs). For the borings completed in the center portion of the AOI (North Split), the gravelly sand stopped around 20-25 ft-bgs and transitioned into a stiff, silty clay until about 30 ft-bgs. Underlying that interval was a medium dense sand with gravel, which ends between 50-55 ft-bgs. Followed by a silty clay, with some fine, dense sand between 75-80 ft-bgs. South of the north split, gravelly, medium dense sand exists below the fill/topsoil, ranging from about 5-25 ft-bgs. From 25-35 ft-bgs, there was a stiff silty clay underlain by more gravelly, dense sand until about 50 ft-bgs terminated by a stiff silty clay until 80 ft-bgs. On the furthest east extent of the investigation, there was a soft silty clay from about 5-25 ft-bgs, underlain by a coarse-grained, medium-dense sand.

Field screening results from the soil borings ranged between 0.1 ppm and 126 ppm with the elevated PID measurement noted at GP-17 at the 16-18 ft-bgs interval. No staining or odor was noted at any of the soil borings during the investigation. The PID field screening measurements are provided on the boring logs located in **Appendix A.**

In general, depth to groundwater was encountered between 22 and 43.75 feet below ground surface. The inferred groundwater flow direction is to the southwest, with an approximate hydraulic gradient of 0.007 feet per foot between temporary monitoring wells DB-1 and DB-12. A Potentiometric Surface Map using the data collected during this investigation is presented as **Figure 3**.

3.2 Soil Analytical Results

The soil samples were analyzed within the established holding times using U.S. EPA-approved Methods as described in the EPA publication, Test Methods for Evaluation of Solid Wastes, Physical/Chemical Methods (SW-846, 3rd Edition, Update III). The Method Detection Limits (MDLs) and Estimated Quantification Limits (EQLs) were low enough to determine if the reported COC concentrations, if any, were in excess of the IDEM's Remediation Closure Guide Screening Levels (RCG) SLs. QA/QC was performed in accordance with the RCG.

The soil analytical results were compared to the IDEM RCG SLs (updated March 2019):

- Migration to Groundwater – residential (IDEM MTG RSL)
- Direct Contact – residential (IDEM RCG DC RSL)
- Direct Contact – commercial/industrial (IDEM RCG DC CISL)
- Direct Contact – excavation (IDEM RCG DC ESL)

Based on the laboratory analytical results, the following COCs were detected at concentrations above the IDEM RCG SLs:

Total Metals

- Cadmium: DB-6 (78-80') above IDEM MTG RSLs
- Lead: GP-19 (0-2') above IDEM RCG DC RSLs
- Mercury: GP-19 (0-2') above IDEM RCG DC ESLs

PAHs

- Naphthalene: DB-1 (0-2'), DB-3 (78-80'), and DB-6 (78-80') above the IDEM MTG RSLs.

The detection of cadmium from DB-6 (78-80 ft-bgs) and the concentrations of lead detected in DB - 1 (0- 2 ft-bgs), DB-8 (2-4 ft-bgs), GP-10 (0-2 ft-bgs), GP-12 (2-4 ft-bgs), GP-19 (0-2 ft-bgs), and GP-20 (0-2 ft-bgs) exceeded the Resource Conservation and Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) 20X rule. Therefore, should soil removal in the vicinity of those soil borings identified above, additional soil analysis will be required to determine the proper disposal facility. Additional sampling of the soil originating in those areas requires TCLP analysis at a minimum, to exclude those soils as a hazardous waste based on toxicity. The TCLP analysis should be completed prior to soil disturbance activities in those areas.

No other COCs were detected above their respective IDEM RCG SLs in the soil samples collected during the subsurface investigation. The results of the laboratory analyses and the comparison to the above-referenced IDEM RCG SLs are summarized in **Table 2** through **Table 4**, and illustrated on **Figure 4**. Copies of the laboratory analytical reports are provided in **Appendix C**.

3.3 Groundwater Analytical Results

The groundwater samples were analyzed within the established holding times using U.S. EPA-approved Methods as described in the EPA publication, Test Methods for Evaluation of Solid Wastes, Physical/Chemical Methods (SW-846, 3rd Edition, Update III). The MDLs and EQLs were low enough to determine if the reported COC concentrations, if any, are in excess of the IDEM's RCG SLs. QA/QC was performed in accordance with the RCG.

The groundwater analytical results were compared to IDEM RCG screening levels (updated March 2019):

- Tap – residential (IDEM RCG RTWSL)
- Vapor exposure – residential (IDEM RCG VE RSL)
- Vapor exposure – commercial/industrial (IDEM RCG VE CISL)

Based on the laboratory analytical results, the following COCs were detected at concentrations above the IDEM RCG RTWSLs during the most recent groundwater sampling event:

Total Metals

- Barium, total – DB-1-WT-S, DB-4-WT-S, DB-5-WT-S, DB-6-WT-S, DB-8-WT-S, DB-9-WT-S, DB-11-WT-S, DB-12-WT-S, DB-13-WT-S, GP-1-WT, GP-4-WT GP-5-WT, GP-7-WT, GP-9-WT, GP-10-WT, GP-11-WT, GP-12-WT, GP-14-WT, GP-15-WT, GP-16-WT, GP-18-WT, and GP-20-WT
- Cadmium, total – DB-1-WT-S, DB-3-WT-S, DB-4-WT-S, DB-5-WT-S, DB-6-WT-S, DB-8-WT-S, DB-9-WT-S, DB-11-WT-S, DB-12-WT-S, DB-13-WT-S, GP-1-WT, GP-3-WT, GP-4-WT GP-5-WT, GP-7-WT, GP-9-WT, GP-10-WT, GP-11-WT, GP-12-WT, GP-14-WT, GP-15-WT, GP-16-WT, GP-18-WT, and GP-20-WT
- Chromium, total – DB-1-WT-S, DB-3-WT-S, DB-4-WT-S, DB-5-WT-S, DB-6-WT-S, DB-8-WT-S, DB-9-WT-S, DB-11-WT-S, DB-12-WT-S, DB-13-WT-S, GP-1-WT, GP-3-WT, GP-4-WT GP-5-WT, GP-7-WT, GP-9-WT, GP-10-WT, GP-11-WT, GP-12-WT, GP-14-WT, GP-15-WT, GP-16-WT, GP-18-WT, and GP-20-WT
- Lead, total – DB-1-WT-S, DB-3-WT-S, DB-4-WT-S, DB-5-WT-S, DB-6-WT-S, DB-8-WT-S, DB-9-WT-S, DB-11-WT-S, DB-12-WT-S, DB-13-WT-S, GP-1-WT, GP-3-WT, GP-4-WT GP-5-WT, GP-7-WT, GP-9-WT, GP-10-WT, GP-11-WT, GP-12-WT, GP-14-WT, GP-15-WT, GP-16-WT, GP-18-WT, and GP-20-WT
- Nickel – DB-1-WT-S, DB-3-WT-S, DB-4-WT-S, DB-5-WT-S, DB-6-WT-S, DB-8-WT-S, DB-9-WT-S, DB-11-WT-S, DB-12-WT-S, DB-13-WT-S, GP-1-WT, GP-4-WT GP-5-WT, GP-7-WT, GP-9-WT, GP-10-WT, GP-11-WT, GP-14-WT, GP-15-WT, GP-16-WT, GP-18-WT, and GP-20-WT
- Zinc – DB-11-WT-S, DB-13-WT-S, GP-7-WT, GP-9-WT, GP-10-WT, and GP-14-WT
- Uranium – DB-1-WT-S, DB-2-WT-S, and DB-4-WT-S

Groundwater grab samples collected directly from the HSA or temporary monitoring wells have the tendency to be turbid, having suspended sediment in the samples based on the nature of the collection. Total metal analysis of turbid groundwater has the tendency to result in bias high metal concentrations. Therefore, groundwater samples were also analyzed for dissolved metals following laboratory filtering to remove suspended sediment from the sample. Dissolved metal concentrations were not detected above the IDEM RCG RTWSLs in the filtered groundwater samples during the investigation. Hence, the total metals concentrations exhibited in the groundwater samples collected appear to be the result of turbidity in the samples and not from an anthropogenic source. Uranium samples were not included in the filtered dissolved analysis but are inferred to also be biased high, due to sediment based on this investigation.

The remaining COCs were not detected above their respective IDEM RCG SLs in the groundwater samples collected during the event. The groundwater analytical results and comparison to the IDEM RCG SLs are summarized in **Table 5** through **Table 7** and illustrated on **Figure 5**. Copies of the laboratory analytical reports are provided in **Appendix C**.

3.4 Additional Information Evaluation

Due to access restrictions and safety concerns, several proposed soil borings/temporary monitoring well locations were not advanced. The area south of temporary monitoring wells DB-4 and DB-6 and north of DB-11 and GP-15 were not accessible during the investigation (**Figure 2**). The RFI completed prior to the investigation identified several current and historical properties that were used to evaluate potential subsurface conditions in advance of the roadway improvement. Information from the properties located at 901 Carrollton Avenue, 1251/1231-1245 Brookside Avenue, and 1125 Brookside Avenue were utilized to supplement the data gap. In addition, the property located at 711 East Vermont Street was also included, as it is adjacent to the southern portion of the AOI. The locations of the properties referenced are illustrated on **Figure 6**.

3.4.1 901 Carrollton Avenue

The Indiana Public School/Coca Cola (IPS) site, State Cleanup #0000613, located at 901 Carrollton Avenue in Indianapolis, has undergone multiple environmental investigations. There is a substantial amount of data available on the IDEM Virtual File Cabinet (VFC) under the Agency Interest (AI) ID #18687. Based on the data reviewed from the VFC, VOCs, specifically chlorinated solvents, are present in the subsurface on, and hydraulically down gradient from, the property. Historical soil samples collected along the western boundary of the southbound lanes of I-65/I-70 did not indicated any detections of chlorinated VOCs. However, shallow grab groundwater samples collected along the western boundary of the southbound lanes detected chlorinated VOCs above the IDEM RCG RTWSL. The most recent results indicate groundwater trichloroethene (TCE) concentrations as high as 38.8 µg/L at a depth to groundwater of 32 ft-bgs. However, the concentrations identified were down gradient of the AOI more than 200 ft way from the extent of the anticipated project area and are unlikely to be present in the proposed project area.

3.4.2 1251/1231-1245 Brookside Avenue

Star Laundry & Dry Cleaners 1245 Roosevelt Avenue aka 1251 and 1231-1245 Roosevelt Avenue in Indianapolis is listed as a Brownfield Site (AI #111616) and formerly operated as a commercial/industrial dry-cleaning facility. Multiple environmental investigations have been conducted at the site, which included elevated concentrations of COCs above the IDEM RCG SLs. Soil concentrations were not identified above the IDEM RCG RDCSLs; however, the most recent groundwater samples collected (2016) indicated tetrachlorethene (PCE) in concentrations above IDEM RCG RTWSLs with a maximum concentration of 23.1 µg/L. This data was available in the summary of an approved IDEM Comfort Letter in November 2016. Given the distance from the AOI to the Star Laundry & Dry Cleaners operations of greater than 500 ft, elevated PCE concentrations in groundwater are unlikely to be present in the proposed construction area.

3.4.3 1125 Brookside Avenue

The B&E Realty (B&E) facility located at 1125 Brookside Avenue listed in the State Cleanup as #200403226 and the AI #23293. The property was a former diesel and auto component manufacturing facility that has subsequently been divided into multiple independent spaces for various commercial and industrial uses. In 2015, the facility was purchased for re-development, for which the use continues to include a variety of commercial and industrial tenants. The environmental history includes various releases of multiple COCs including VOCs, PAHs, and metals. The most recent groundwater sampling event resulted in chlorinated VOC concentrations above the IDEM RCG RTWSLs. There are as many as 13 monitoring well locations within the area of the AOI beginning on the north side of 10th Street extending for ~315 ft north (**Figure 6**). Groundwater concentrations of TCE, cis-1, 2, dichloroethene

(DCE), and vinyl chloride (VC) were present at several of the wells within this area of the proposed construction project. A maximum concentration of TCE of 43.8 µg/L and DCE of 906 µg/L were identified in the report. With depth to groundwater averaging between 23 ft and 34 ft-bgs in the wells located in the area, the exposure to these contaminates is only likely if construction activities include drilling or the installation of structures in the subsurface that extends to these depths.

3.4.4 711 East Vermont Street

The former Progress Linen facility (Progress), Voluntary Remediation Program (VRP) #6030701, located at 711 East Vermont Street is located adjacent to the southern portion of the AOI. The facility has undergone multiple environmental investigations and there is a substantial amount of data available on the IDEMs VFC under the AI ID #16758. Based on the data reviewed from the VFC, chlorinated VOCs specifically TCE was present at the site in groundwater at a distance of less than 50 ft from the AOI at a concentration of 5.3 µg/L. The location is hydraulically down gradient from the construction area and dissolved VOCs are unlikely to be present in elevated concentrations within the proposed construction zone. Soil samples were not identified in the AOI in concentrations above the IDEM RCG RDCSLs.

4 Conclusions & Recommendations

An initial pre-construction screening of the AOI was completing by generating an RFI, which identified several properties that represented an environmental concern for the project. Records available on the IDEM VFC indicate the presence of several plumes within the AOI. Additionally, data gaps were also identified within the corridor that warranted further evaluation to provide guidance on worker safety and proper handling and disposal of waste generated during the proposed construction project.

Therefore, between July 29 and August 21, 2019, a subsurface investigation to evaluate the soil and groundwater quality in the vicinity of the proposed roadway construction project was completed. Eleven deep soil borings (DB-1 through DB-6, DB-8, DB-9, and DB-11 through DB-13) and 19 shallow soil borings (GP-1 and GP-3 through GP-20) were advanced then converted into either 1-inch or 2-inch temporary monitoring wells across the AOI. A total of 92 soil samples and 39 groundwater samples were collected from the soil borings/temporary monitoring wells and submitted for laboratory analysis.

Soil Summary and Recommendations

Results of the analysis performed on soil samples collected during the subsurface investigation indicated that concentrations of cadmium were detected at a concentration above the IDEM RCG SLs in the temporary monitoring well DB-6 from the 78-80 ft-bgs interval. Lead and mercury were detected at concentrations above the IDEM RCG SLs in the temporary monitoring well GP-19 from the 0-2 ft- bgs interval. Additionally, a concentration of naphthalene was detected above the IDEM RCG SLs from samples collected from temporary monitoring wells DB-1 (0-2 ft-bgs), DB-3 (78-80 ft-bgs), and DB-6 (78-80 ft-bgs). The remaining analyses did not result in concentrations above the IDEM RCG SLs or laboratory detection limits.

Based on the results, the potential for exposure from direct contact with soil containing elevated concentrations of COCs does not appear to be greater than would be encountered during typical construction projects. The concentration of naphthalene discovered at the surface sample from temporary monitoring well DB-1 was detected at a level above the IDEM RCG SLs that requires notification of presence, but does appear to warrant further special handling, if localized. Verification of soil conditions in the vicinity of these locations should be implemented during excavation activities. A competent person should screen the soil while working in the area. Communication of the conditions, dust control, field screening, soil management, and sample collection may be required to protect workers and ensure proper handling, based on the competent person's assessment while working in this area.

Mercury and lead containing surface soil in the immediate vicinity of temporary monitoring well GP-19 was discovered in concentrations that exceed the IDEM RCG SLs. The concentrations identified were high enough that if the area is to be disturbed, then additional provisions, including soil sampling to delineate the extent of the elevated concentrations of mercury, will need to be implemented. The removal and disposal of the soil will need to be defined and sampled to characterize the nature and extent of the concentrations within the constraints of the roadway construction activities to be completed in that location. This data will be required to determine the best management practice required to handle and properly disposal of the soil.

Furthermore, concentrations of lead were identified at multiple locations that exceeded 100 mg/kg, which is not above the IDEM RCG SLs; however, it is above the Resource Conservation and Recovery

Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) 20X rule. These temporary well locations DB-1, DB-8, GP-12, GP-19, and GP-20 identified lead above the criteria stated above. If soil is to be disposed of from the vicinity of these locations, the soil will need to be containerized and sampled for waste disposal parameters (i.e. a minimum of TCLP lead and anything additional that may be required by the selected disposal facility). Based on the limited data collected, the lead concentrations do not appear to limit the excavation and reuse of the soil in these areas. Best practices such as dust control measures, etc., should be implemented to minimize the potential of exposure to surface lead concentrations during construction activities. There was also an elevated detection of cadmium in soil from temporary monitoring well DB-6 (78-80 ft-bgs). Based on the depth of this exceedance, it is unlikely to be unearthed and become a concern; however, if soil from this depth is encountered, the above provisions should be implemented. The limited scope of this investigation does not account for all potential exposure pathways to workers nor to all contaminates. When a concern or change in condition is observed during any activity, a stop work and assessment of the situation should be implemented to protect against exposure or mishandling of contaminated materials.

Groundwater Summary and Recommendations

Results of the analysis performed on groundwater samples collected during the subsurface investigation, indicated elevated total metal detections in the groundwater samples collected across the AOI. Based on the sampling methodology, (i.e. grab samples from within the augers and temporary monitoring wells) the collection also included the analysis of dissolved metals following laboratory filtering of the samples to remove suspended sediment (turbidity). Thus, the results indicate that levels of the metals analyzed were below the applicable IDEM RCG SLs. Uranium was not included in the filtered dissolved metals analysis, but are inferred to also be biased high due to sediment based on this investigation. Additionally, the remaining groundwater COCs analyzed did not result in concentrations that exceeded the IDEM RCG SLs or were below laboratory detection limits.

Several properties with environmental concerns were identified with elevated chlorinated solvent concentrations in groundwater in the RFI (**Figure 6**). The residual concentrations, based on data reviewed on the IDEM VFC, are relatively low level, but groundwater in this area will require containerization and proper handling, if encountered. Therefore, provisions for the management of this material will need to be implemented if saturated soil or groundwater (dewatering) will be brought to the surface during construction activities in this area. A competent person should provide best practices to manage materials extracted from depth in this area. Communication of the conditions, containment of the liquids, controls to prevent runoff of extracted groundwater onto the surface, and sample collection at a minimum may be required to protect workers and ensure proper handling. Site conditions near the soil boring locations have been assumed to be consistent with the results of the investigation across the working area. However, if conditions are encountered during subsurface activities that appear to be a concern then, as above, a stop work and assessment of the situation should be implemented to protect against exposure or mishandling of contaminated materials.

Lastly, be aware that personnel are required to be trained to handle and perform hazardous waste operations. Personnel who may be exposed to hazardous substances are required to be Hazardous Waste Operations and Emergency Response (HAZWOPER 29 CFR 1920.120) trained; if they meet any of the following conditions:

- Engaged in clean-up operations at an uncontrolled waste site (forced or voluntary),
- Implementing corrective actions covered by RCRA,
- Perform operations involving hazardous waste which are conducted at treatment, storage and disposal facilities, and
- Emergency response operations for releases of, or substantial threats of release of, hazardous substances.

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Tables

Table 1
Summary of Well Gauging Data
INDOT - North Split
I-65 / I-70 North Split
Indianapolis, Indiana
INDOT DES #
ATC Project No. 170DOT0054

Well Number	Date	Stick-up Height (feet)	Surface Elevation (ft-MSL)	Top of Casing Evevation (ft-MSL)	Depth to Groundwater (ft-TOC)	Groundwater Elevation (ft-MSL)
DB-1	08/22/19	1.67	723.39	725.06	23.45	701.61
DB-2	08/22/19	2.20	736.95	739.15	38.83	700.32
DB-3	08/22/19	1.92	721.07	722.99	22.16	700.83
DB-4	08/22/19	2.04	736.77	738.81	38.04	700.77
DB-5	08/22/19	0.96	719.83	720.79	23.77	697.02
DB-6	08/22/19	0.00	721.35	721.35	DRY	DRY
DB-8	08/22/19	0.38	717.38	717.76	33.06	684.70
DB-9	08/22/19	1.33	721.60	722.93	34.42	688.51
DB-11	08/22/19	2.00	719.60	721.60	25.84	695.76
DB-12	08/22/19	0.46	723.10	723.56	43.75	679.81
DB-13	08/22/19	2.00	717.74	719.74	31.83	687.91

Notes:
ft-MSL = feet above mean sea level
ft-TOC = feet below top of well casing
Groundwater Elevation = Top of Casing Elevation - Depth to Groundwater
TMW top of casing elevation = Ground surface elevation + Stick-up Height

Table 2
Summary of Soil Analytical Results - Metals and PCBs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Metals + Uranium								Polychlorinated Biphenyls (PCBs)						
			Barium	Cadmium	Chromium	Lead	Nickel	Zinc	Uranium	Mercury	PCB-1016 (Aroclor 1016)	PCB-1221 (Aroclor 1221)	PCB-1232 (Aroclor 1232)	PCB-1242 (Aroclor 1242)	PCB-1248 (Aroclor 1248)	PCB-1254 (Aroclor 1254)	PCB-1260 (Aroclor 1260)
IDEM RCG Res. Soil MTG SL			**1700**	**7.5**	**1000000**	**270**	**510**	**7500**	**270**	**2.1**	**2.7**	**0.016**	**0.016**	**0.24**	**0.24**	**0.41**	**1.1**
IDEM RCG Res. DC SL			***21000***	***99***	***NE***	***400***	***2100***	***32000***	***22***	***3.1***	***5.7***	***2.8***	***2.4***	***3.2***	***3.2***	***1.7***	***3.4***
IDEM RCG Com/Ind DC SL			***100000***	***980***	***NE***	***800***	***22000***	***100000***	***230***	***3.1***	***51***	***8.3***	***7.2***	***9.5***	***9.5***	***9.7***	***9.9***
IDEM RCG Excavation DC SL			***100000***	***1900***	***NE***	***1000***	***38000***	***100000***	***390***	***3.1***	***120***	***520***	***490***	***560***	***560***	***33***	***570***
DB-1 (0-2)	8/1/2019	0-2	145	1.1	16.1	192	21.1	373	1.4	0.52	ND	ND	ND	ND	ND	ND	ND
DB-1 (16-18)	8/1/2019	16-18	8.1	ND	4.1	3.4	6	20.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-1 (78-80)	8/2/2019	78-80	77.1	ND	10.8	6.8	5.3	10.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-2 (0-2)	7/31/2019	0-2	68.6	1.1	27.3	47.4	21.3	90.5	1.1	ND	ND	ND	ND	ND	ND	ND	ND
DB-2 (36-38)	7/31/2019	36-38	12.8	ND	5.6	3.2	5.6	18.1	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-2 (78-80)	8/1/2019	78-80	39	ND	9.5	6	13.5	36.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-3 (2-4)	7/29/2019	2-4	40.1	0.64	10.8	33.5	10.7	77.8	0.9	ND	ND	ND	ND	ND	ND	ND	ND
DB-3 (16-18)	7/29/2019	16-18	8.1	ND	5.1	3.1	5.4	16.2	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-3 (78-80)	7/29/2019	78-80	123	ND	22.6	12.7	39.1	87.2	NA	ND	NA	NA	NA	NA	NA	NA	NA
DUP-SL-1	7/29/2019	78-80	96.5	ND	23.9	10.2	37.4	83.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-4 (4-6)	7/30/2019	4-6	41	ND	9.9	7.2	15.2	38.7	1.3	ND	ND	ND	ND	ND	ND	ND	ND
DB-4 (34-36)	7/30/2019	34-36	10.4	ND	4.3	3.5	6.6	21.1	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-4 (78-80)	7/31/2019	78-80	14.8	ND	7.1	3.3	8.1	19.6	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-5 (0-2)	8/5/2019	0-2	51.1	ND	9.8	12.2	11.5	38.6	0.97	ND	ND	ND	ND	ND	ND	ND	ND
DB-5 (18-20)	8/5/2019	18-20	16.5	ND	4.6	4	5.6	19.8	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-5 (78-80)	8/5/2019	78-80	112	ND	22.7	12	48.1	69.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-6 (0-2)	8/8/2019	0-2	69.9	0.53	14.3	46	13.2	114	NA	ND	ND	ND	ND	ND	ND	ND	ND
DB-6 (26-28)	8/8/2019	26-28	11.8	ND	4.7	3.7	5.5	16.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-6 (78-80)	8/8/2019	78-80	407	**21.4**	22.1	15.2	34	70.8	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-8 (2-4)	8/13/2019	2-4	56.4	0.63	8.8	120	12	108	NA	ND	ND	ND	ND	ND	ND	ND	ND
DB-8 (32-34)	8/13/2019	32-34	23.7	ND	8.3	3.7	6.4	16.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-8 (78-80)	8/13/2019	78-80	70.8	ND	12.4	10.3	9.8	20.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-9 (4-6)	8/14/2019	4-6	47.2	ND	20.1	66.1	13.5	82.8	NA	ND	ND	ND	ND	ND	ND	ND	ND
DB-9 (16-18)	8/14/2019	16-18	10.3	ND	4.6	4.7	6.7	24.1	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-9 (78-80)	8/14/2019	78-80	58	ND	11.4	8.5	13.7	55.8	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-11(0-2)	8/9/2019	0-2	24.8	ND	8.1	16.3	10.3	33	NA	ND	ND	ND	ND	ND	ND	ND	ND
DB-11(22-24)	8/9/2019	22-24	8.2	ND	6.2	3.2	8.4	18.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
DUP-SL-3	8/9/2019	22-24	9.2	ND	7	4.1	9	21	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-11(78-80)	8/9/2019	78-80	96.8	ND	26.3	11.6	33.3	66.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-12-(2-4)	8/7/2019	2-4	30.3	ND	8.5	5.5	7.9	24.1	NA	ND	ND	ND	ND	ND	ND	ND	ND
DB-12-(30-32)	8/7/2019	30-32	93.5	ND	7.3	4.3	42.8	32.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
DUP-SL-2	8/7/2019	30-32	137	ND	7.3	4	52	37.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-12-(78-80)	8/7/2019	78-80	52.7	ND	9.1	5	12.3	28.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-13(2-4)	8/12/2019	2-4	54.1	ND	8.6	12.6	15.9	71	NA	0.23	ND	ND	ND	ND	ND	ND	ND
DB-13(18-20)	8/12/2019	18-20	33.4	ND	8	4.7	12.1	26.5	NA	ND	NA	NA	NA	NA	NA	NA	NA
DB-13(78-80)	8/12/2019	78-80	58.4	ND	13.4	18.3	17.2	53	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-1 (0-2)	8/14/2019	0-2	82.5	ND	13.8	65.8	14.8	66.9	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-1 (28-30)	8/14/2019	28-30	12.3	ND	5.2	2.7	6.3	17.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-1 (34-36)	8/14/2019	34-36	11.1	ND	5.2	2.8	5.9	14.2	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-3 (0-2)	8/13/2019	0-2	16.2	ND	6.2	4.7	8.9	32.1	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-3 (26-28)	8/13/2019	26-28	7.1	ND	4.5	2.6	5.3	15.8	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-3 (32-34)	8/13/2019	32-34	7.9	ND	4.8	2.5	4.7	15.6	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-4(2-4)	8/7/2019	2-4	86	ND	15.7	54.3	14.6	67.5	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-4(22-24)	8/7/2019	22-24	12.1	ND	5.4	5	7.3	30.5	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-4(32-34)	8/7/2019	32-34	8.4	ND	4.8	2.5	5	16.5	NA	ND	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Analytical Results - Metals and PCBs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Metals + Uranium								Polychlorinated Biphenyls (PCBs)						
			Barium	Cadmium	Chromium	Lead	Nickel	Zinc	Uranium	Mercury	PCB-1016 (Aroclor 1016)	PCB-1221 (Aroclor 1221)	PCB-1232 (Aroclor 1232)	PCB-1242 (Aroclor 1242)	PCB-1248 (Aroclor 1248)	PCB-1254 (Aroclor 1254)	PCB-1260 (Aroclor 1260)
IDEM RCG Res. Soil MTG SL			**1700**	**7.5**	**1000000**	**270**	**510**	**7500**	**270**	**2.1**	**2.7**	**0.016**	**0.016**	**0.24**	**0.24**	**0.41**	**1.1**
IDEM RCG Res. DC SL			***21000***	***99***	***NE***	***400***	***2100***	***32000***	***22***	***3.1***	***5.7***	***2.8***	***2.4***	***3.2***	***3.2***	***1.7***	***3.4***
IDEM RCG Com/Ind DC SL			***100000***	***980***	***NE***	***800***	***22000***	***100000***	***230***	***3.1***	***51***	***8.3***	***7.2***	***9.5***	***9.5***	***9.7***	***9.9***
IDEM RCG Excavation DC SL			***100000***	***1900***	***NE***	***1000***	***38000***	***100000***	***390***	***3.1***	***120***	***520***	***490***	***560***	***560***	***33***	***570***
GP-5-(2-4)	8/7/2019	2-4	15.3	ND	8	12.8	6.9	24.4	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-5-(6-8)	8/7/2019	6-8	14.3	ND	7	6.4	6.9	25.1	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-5-(28-30)	8/7/2019	28-30	14.4	ND	7.7	5.1	9.6	22.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-5-(32-34)	8/7/2019	32-34	8.2	ND	8.1	2	4.5	12.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-6 (0-2)	7/30/2019	0-2	65	ND	12.4	52.6	13	85.1	0.85	ND	ND	ND	ND	ND	ND	ND	ND
GP-6 (18-20)	7/30/2019	18-20	14.3	ND	8.2	3.1	6.2	17.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-6 (24-26)	7/30/2019	24-26	48.9	ND	10.8	6.4	16.4	37.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-7 (4-6)	8/2/2019	4-6	99.1	ND	19.5	13.3	22	66.5	1.3	ND	ND	ND	ND	ND	ND	ND	ND
GP-7 (18-20)	8/2/2019	18-20	10.3	ND	4.6	3.3	5.2	21.5	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-7 (24-26)	8/2/2019	24-26	51.4	ND	12.3	6	16.2	35.5	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-8(4-6)	8/6/2019	4-6	39.3	ND	12.8	24.7	14.8	49.1	1.3	ND	ND	ND	ND	ND	ND	ND	ND
GP-8(28-30)	8/6/2019	28-30	221	ND	17.7	12.4	23.8	61.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-8(34-36)	8/6/2019	34-36	25.3	ND	8.3	5.8	11.5	32.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-9 (2-4)	8/8/2019	2-4	126	ND	20.8	16.9	22.1	83.3	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-9 (6-8)	8/8/2019	6-8	129	ND	17.9	16.2	23.9	61.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-9 (14-16)	8/8/2019	14-16	16.3	ND	5.6	3.9	7.8	26.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-10 (0-2)	8/8/2019	0-2	114	0.71	17.8	117	17.2	122	NA	0.49	ND	ND	ND	ND	ND	0.122	ND
GP-10 (10-12)	8/8/2019	10-12	15.3	ND	6.1	4.7	6.7	18.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-10 (16-18)	8/8/2019	16-18	11.4	ND	7	3.9	8.9	19.6	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-11 (0-2)	8/13/2019	0-2	98.9	ND	16	94.4	16.3	83.3	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-11 (22-24)	8/13/2019	22-24	88.7	ND	14.4	8.7	14.4	39.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-11 (28-30)	8/13/2019	28-30	14.6	ND	4.4	3	5.7	12.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
DUP-SL-4	8/13/2019	28-30	12	ND	4.3	2.9	5.2	12.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-12 (2-4)	8/14/2019	2-4	125	0.81	16	233	15.9	217	NA	0.53	ND	ND	ND	ND	ND	ND	ND
GP-12 (24-26)	8/14/2019	24-26	86.5	ND	14.2	11	15.9	41.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-12 (28-30)	8/14/2019	28-30	8.8	ND	4.3	2.1	4.4	11.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-13 (0-2)	8/15/2019	0-2	34.5	ND	10.3	7.1	15.3	41.1	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-13 (24-26)	8/15/2019	24-26	59.4	ND	11.5	7.5	16.1	40.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-13 (30-32)	8/15/2019	30-32	71.1	ND	12	7.5	14.3	37.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-14 (8-10)	8/15/2019	8-10	16.1	ND	7.5	3.9	8.8	29.4	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-14 (38-40)	8/15/2019	38-40	18.1	ND	6.2	3.9	6.6	26.6	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-14 (42-44)	8/15/2019	42-44	64.1	ND	7.3	6.1	8.4	34.1	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-15 (2-4)	8/13/2019	2-4	50.9	ND	13.3	10.1	14.8	44.9	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-15 (14-16)	8/13/2019	14-16	10.3	ND	5.3	4	6.6	19.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-15 (22-24)	8/13/2019	22-24	14.5	ND	4.8	3.1	6.4	18.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-15 (26-28)	8/13/2019	26-28	25	ND	4.4	2.6	5.2	16.1	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-16(2-4)	8/9/2019	2-4	14.6	ND	6	3.5	7.2	17.2	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-16(22-24)	8/9/2019	22-24	10.9	ND	4.8	3.1	6.2	19.9	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-16(26-28)	8/9/2019	26-28	7.5	ND	4.2	3.1	5.5	14.4	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-17 (0-2)	8/15/2019	0-2	64.8	ND	10.3	8.9	15.1	48.2	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-17 (16-18)	8/15/2019	16-18	27.5	ND	11.5	21.9	10.7	40.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-17 (34-36)	8/15/2019	34-36	28.3	ND	4.4	3	5.1	17.2	NA	ND	NA	NA	NA	NA	NA	NA	NA
DUP-SL-5	8/15/2019	34-36	32.3	ND	5.8	3.6	6.7	24.4	NA	ND	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Soil Analytical Results - Metals and PCBs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Metals + Uranium								Polychlorinated Biphenyls (PCBs)						
			Barium	Cadmium	Chromium	Lead	Nickel	Zinc	Uranium	Mercury	PCB-1016 (Aroclor 1016)	PCB-1221 (Aroclor 1221)	PCB-1232 (Aroclor 1232)	PCB-1242 (Aroclor 1242)	PCB-1248 (Aroclor 1248)	PCB-1254 (Aroclor 1254)	PCB-1260 (Aroclor 1260)
IDEM RCG Res. Soil MTG SL			**1700**	**7.5**	**1000000**	**270**	**510**	**7500**	**270**	**2.1**	**2.7**	**0.016**	**0.016**	**0.24**	**0.24**	**0.41**	**1.1**
IDEM RCG Res. DC SL			***21000***	***99***	***NE***	***400***	***2100***	***32000***	***22***	***3.1***	***5.7***	***2.8***	***2.4***	***3.2***	***3.2***	***1.7***	***3.4***
IDEM RCG Com/Ind DC SL			***100000***	***980***	***NE***	***800***	***22000***	***100000***	***230***	***3.1***	***51***	***8.3***	***7.2***	***9.5***	***9.5***	***9.7***	***9.9***
IDEM RCG Excavation DC SL			***100000***	***1900***	***NE***	***1000***	***38000***	***100000***	***390***	***3.1***	***120***	***520***	***490***	***560***	***560***	***33***	***570***
GP-18 (2-4)	8/15/2019	2-4	69.4	ND	12.3	64.4	14.3	81.3	NA	ND	ND	ND	ND	ND	ND	ND	ND
GP-18 (26-28)	8/15/2019	26-28	80.3	ND	12	7.8	12	32.6	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-18 (30-32)	8/15/2019	30-32	19.1	ND	8.6	4.1	8.6	20.3	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-19(0-2)	8/5/2019	0-2	286	1.6	19.5	***690***	17.1	332	1.3	***3.5***	ND	ND	ND	ND	ND	ND	ND
GP-19(22-24)	8/6/2019	22-24	46	0.66	8.8	6.3	15	152	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-19(28-30)	8/6/2019	28-30	50.5	ND	12.1	5.6	14.3	32.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-20 (0-2)	8/14/2019	0-2	107	ND	20.8	113	20	122	NA	0.33	ND	ND	ND	ND	ND	ND	ND
GP-20 (34-36)	8/14/2019	34-36	14.5	ND	4.7	3.8	6.5	16.7	NA	ND	NA	NA	NA	NA	NA	NA	NA
GP-20 (38-40)	8/14/2019	38-40	7.9	ND	5.7	4.1	7.2	19.9	NA	ND	NA	NA	NA	NA	NA	NA	NA

Notes:
- Results reported in milligrams per kilogram, which is equivalent to parts per million (ppm).
- ft-bgs = feet below ground surface
- IDEM RCG SL = Indiana Department of Environmental Management Remediation Closure Guide Screening Levels (updated March 2019)
- NA = Not Analyzed
- NE = Screening Level not established for that constituent
- LUST = Leaking Underground Storage Tank
- LUST Metals analyzed using US EPA SW-846 Methods 6010/7471; PCBs analyzed using US EPA SW-846 Method 8082

Bold	= Concentration reported above IDEM RCG Residential Soil Migration to Groundwater Screening Level
Bold Italics	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Residential Screening Level
Bold Italics	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Commercial/Industrial Screening Level
Bold Italics	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Excavation Screening Level

Table 3
Summary of Soil Analytical Results - VOCs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Detected VOCs				
			1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Trichloroethene	n-Butylbenzene
IDEM RCG Res. Soil MTG SL			**1.6**	**1.7**	**57**	**0.036**	**64**
IDEM RCG Res. DC SL			***220***	***180***	***85000***	***5.7***	***110***
IDEM RCG Com/Ind DC SL			***220***	***180***	***100000***	***19***	***110***
IDEM RCG Excavation DC SL			***220***	***180***	***100000***	***95***	***110***
DB-1 (0-2)	8/1/2019	0-2	ND	ND	ND	ND	ND
DB-1 (16-18)	8/1/2019	16-18	ND	ND	ND	ND	ND
DB-1 (78-80)	8/2/2019	78-80	ND	ND	ND	ND	ND
DB-2 (0-2)	7/31/2019	0-2	ND	ND	ND	ND	ND
DB-2 (36-38)	7/31/2019	36-38	ND	ND	ND	ND	ND
DB-2 (78-80)	8/1/2019	78-80	ND	ND	ND	ND	ND
DB-3 (2-4)	7/29/2019	2-4	ND	ND	ND	ND	ND
DB-3 (16-18)	7/29/2019	16-18	ND	ND	ND	ND	ND
DB-3 (78-80)	7/29/2019	78-80	ND	ND	ND	ND	ND
DUP-SL-1	7/29/2019	78-80	ND	ND	ND	ND	ND
DB-4 (4-6)	7/30/2019	4-6	ND	ND	ND	ND	ND
DB-4 (34-36)	7/30/2019	34-36	ND	ND	ND	ND	ND
DB-4 (78-80)	7/31/2019	78-80	ND	ND	ND	ND	ND
DB-5(0-2)	8/5/2019	0-2	ND	ND	ND	ND	ND
DB-5(18-20)	8/5/2019	18-20	ND	ND	ND	ND	ND
DB-5(78-80)	8/5/2019	78-80	ND	ND	ND	ND	ND
DB-6 (0-2)	8/8/2019	0-2	ND	ND	ND	ND	ND
DB-6 (26-28)	8/8/2019	26-28	ND	ND	ND	ND	ND
DB-6 (78-80)	8/8/2019	78-80	ND	ND	ND	ND	ND
DB-8 (2-4)	8/13/2019	2-4	ND	ND	ND	ND	ND
DB-8 (32-34)	8/13/2019	32-34	ND	ND	ND	ND	ND
DB-8 (78-80)	8/13/2019	78-80	ND	ND	ND	ND	ND
DB-9 (4-6)	8/14/2019	4-6	ND	ND	ND	0.0055	ND
DB-9 (16-18)	8/14/2019	16-18	ND	ND	ND	0.0239	ND
DB-9 (78-80)	8/14/2019	78-80	ND	ND	ND	ND	ND
DB-11(0-2)	8/9/2019	0-2	ND	ND	ND	ND	ND
DB-11(22-24)	8/9/2019	22-24	ND	ND	ND	ND	ND
DUP-SL-3	8/9/2019	22-24	ND	ND	ND	ND	ND
DB-11(78-80)	8/9/2019	78-80	ND	ND	ND	ND	ND

Table 3
Summary of Soil Analytical Results - VOCs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Detected VOCs				
			1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Trichloroethene	n-Butylbenzene
IDEM RCG Res. Soil MTG SL			**1.6**	**1.7**	**57**	**0.036**	**64**
IDEM RCG Res. DC SL			***220***	***180***	***85000***	***5.7***	***110***
IDEM RCG Com/Ind DC SL			***220***	***180***	***100000***	***19***	***110***
IDEM RCG Excavation DC SL			***220***	***180***	***100000***	***95***	***110***
DB-12-(2-4)	8/7/2019	2-4	ND	ND	ND	ND	ND
DB-12-(30-32)	8/7/2019	30-32	ND	ND	ND	ND	ND
DUP-SL-2	8/7/2019	30-32	ND	ND	ND	ND	ND
DB-12-(78-80)	8/7/2019	78-80	ND	ND	ND	ND	ND
DB-13(2-4)	8/12/2019	2-4	ND	ND	ND	ND	ND
DB-13(18-20)	8/12/2019	18-20	ND	ND	ND	ND	ND
DB-13(78-80)	8/12/2019	78-80	ND	ND	ND	ND	ND
GP-1 (0-2)	8/14/2019	0-2	ND	ND	ND	ND	ND
GP-1 (28-30)	8/14/2019	28-30	ND	ND	ND	ND	ND
GP-1 (34-36)	8/14/2019	34-36	ND	ND	ND	ND	ND
GP-3 (0-2)	8/13/2019	0-2	ND	ND	ND	ND	ND
GP-3 (26-28)	8/13/2019	26-28	ND	ND	ND	ND	ND
GP-3 (32-34)	8/13/2019	32-34	ND	ND	ND	ND	ND
GP-4(2-4)	8/7/2019	2-4	ND	ND	ND	ND	ND
GP-4(22-24)	8/7/2019	22-24	ND	ND	ND	ND	ND
GP-4(32-34)	8/7/2019	32-34	ND	ND	ND	ND	ND
GP-5-(2-4)	8/7/2019	2-4	ND	ND	ND	ND	ND
GP-5-(6-8)	8/7/2019	6-8	ND	ND	ND	ND	ND
GP-5-(28-30)	8/7/2019	28-30	ND	ND	ND	ND	ND
GP-5-(32-34)	8/7/2019	32-34	ND	ND	ND	ND	ND
GP-6 (0-2)	7/30/2019	0-2	ND	ND	ND	ND	ND
GP-6 (18-20)	7/30/2019	18-20	ND	ND	ND	ND	ND
GP-6 (24-26)	7/30/2019	24-26	ND	ND	ND	ND	ND
GP-7 (4-6)	8/2/2019	4-6	ND	ND	ND	ND	ND
GP-7 (18-20)	8/2/2019	18-20	ND	ND	ND	ND	ND
GP-7 (24-26)	8/2/2019	24-26	ND	ND	ND	ND	ND
GP-8(4-6)	8/6/2019	4-6	ND	ND	0.0904	ND	ND
GP-8(28-30)	8/6/2019	28-30	ND	ND	ND	ND	ND
GP-8(34-36)	8/6/2019	34-36	ND	ND	ND	ND	ND
GP-9 (2-4)	8/8/2019	2-4	ND	ND	ND	ND	ND
GP-9 (6-8)	8/8/2019	6-8	ND	ND	ND	ND	ND
GP-9 (14-16)	8/8/2019	14-16	ND	ND	ND	ND	ND

Table 3
Summary of Soil Analytical Results - VOCs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Detected VOCs				
			1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Trichloroethene	n-Butylbenzene
IDEM RCG Res. Soil MTG SL			**1.6**	**1.7**	**57**	**0.036**	**64**
IDEM RCG Res. DC SL			***220***	***180***	***85000***	***5.7***	***110***
IDEM RCG Com/Ind DC SL			***220***	***180***	***100000***	***19***	***110***
IDEM RCG Excavation DC SL			***220***	***180***	***100000***	***95***	***110***
GP-10 (0-2)	8/8/2019	0-2	ND	ND	ND	ND	ND
GP-10 (10-12)	8/8/2019	10-12	ND	ND	ND	ND	ND
GP-10 (16-18)	8/8/2019	16-18	ND	ND	ND	ND	ND
GP-11 (0-2)	8/13/2019	0-2	ND	ND	ND	ND	ND
GP-11 (22-24)	8/13/2019	22-24	ND	ND	ND	ND	ND
GP-11 (28-30)	8/13/2019	28-30	ND	ND	ND	ND	ND
DUP-SL-4	8/13/2019	28-30	ND	ND	ND	ND	ND
GP-12 (2-4)	8/14/2019	2-4	ND	ND	ND	0.0162	ND
GP-12 (24-26)	8/14/2019	24-26	ND	ND	ND	ND	ND
GP-12 (28-30)	8/14/2019	28-30	ND	ND	ND	ND	ND
GP-13 (0-2)	8/15/2019	0-2	ND	ND	ND	ND	ND
GP-13 (24-26)	8/15/2019	24-26	ND	ND	ND	ND	ND
GP-13 (30-32)	8/15/2019	30-32	ND	ND	ND	ND	ND
GP-14 (8-10)	8/15/2019	8-10	ND	ND	ND	ND	ND
GP-14 (38-40)	8/15/2019	38-40	ND	ND	ND	ND	ND
GP-14 (42-44)	8/15/2019	42-44	ND	ND	ND	ND	ND
GP-15 (2-4)	8/13/2019	2-4	ND	ND	ND	ND	ND
GP-15 (14-16)	8/13/2019	14-16	ND	ND	ND	ND	ND
GP-15 (22-24)	8/13/2019	22-24	ND	ND	ND	ND	ND
GP-15 (26-28)	8/13/2019	26-28	0.0437	0.0131	ND	ND	0.0103
GP-16(2-4)	8/9/2019	2-4	ND	ND	ND	ND	ND
GP-16(22-24)	8/9/2019	22-24	ND	ND	ND	ND	ND
GP-16(26-28)	8/9/2019	26-28	ND	ND	ND	ND	ND
GP-17 (0-2)	8/15/2019	0-2	ND	ND	ND	ND	ND
GP-17 (16-18)	8/15/2019	16-18	ND	ND	ND	ND	ND
GP-17 (34-36)	8/15/2019	34-36	ND	ND	ND	ND	ND
DUP-SL-5	8/15/2019	34-36	ND	ND	ND	ND	ND
GP-18 (2-4)	8/15/2019	2-4	ND	ND	ND	ND	ND
GP-18 (26-28)	8/15/2019	26-28	ND	ND	ND	ND	ND
GP-18 (30-32)	8/15/2019	30-32	ND	ND	ND	ND	ND
GP-19(0-2)	8/5/2019	0-2	ND	ND	ND	ND	ND
GP-19(22-24)	8/6/2019	22-24	ND	ND	ND	ND	ND
GP-19(28-30)	8/6/2019	28-30	ND	ND	ND	ND	ND

Table 3
Summary of Soil Analytical Results - VOCs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Detected VOCs				
			1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Trichloroethene	n-Butylbenzene
IDEM RCG Res. Soil MTG SL			**1.6**	**1.7**	**57**	**0.036**	**64**
IDEM RCG Res. DC SL			***220***	***180***	***85000***	***5.7***	***110***
IDEM RCG Com/Ind DC SL			***220***	***180***	***100000***	***19***	***110***
IDEM RCG Excavation DC SL			***220***	***180***	***100000***	***95***	***110***
GP-20 (0-2)	8/14/2019	0-2	ND	ND	ND	ND	ND
GP-20 (34-36)	8/14/2019	34-36	ND	ND	ND	ND	ND
GP-20 (38-40)	8/14/2019	38-40	ND	ND	ND	ND	ND
Trip Blank	7/29/2019	--	ND	ND	ND	ND	ND
Trip Blank-2	7/30/2019	--	ND	ND	ND	ND	ND
Trip Blank-3	7/31/2019	--	ND	ND	ND	ND	ND
Trip Blank-4	8/1/2019	--	ND	ND	ND	ND	ND
Trip Blank-5	8/2/2019	--	ND	ND	ND	ND	ND
Trip Blank-6	8/5/2019	--	ND	ND	ND	ND	ND
Trip Blank-7	8/6/2019	--	ND	ND	ND	ND	ND
Trip Blank-8	8/7/2019	--	ND	ND	ND	ND	ND
Trip Blank-9	8/8/2019	--	ND	ND	ND	ND	ND
Trip Blank-10	8/9/2019	--	ND	ND	ND	ND	ND
Trip Blank-11	8/12/2019	--	ND	ND	ND	ND	ND
Trip Blank-12	8/13/2019	--	ND	ND	ND	ND	ND
Trip Blank-13	8/14/2019	--	ND	ND	ND	ND	ND
Trip Blank-14	8/15/2019	--	ND	ND	ND	ND	ND

Notes:
- Results reported in milligrams per kilogram, which is equivalent to parts per million (ppm).
- ft-bgs = feet below ground surface
- IDEM RCG = Indiana Department of Environmental Management Remediation Closure Guide
- SL = Screening Level (updated March 2019)
- NA = Not Analyzed
- NE = Screening Level not established for that constituent
- VOCs = Votile Organic Compounds
- VOCs analyzed using US EPA SW-846 Method 8260

Bold	= Concentration reported above IDEM RCG Residential Soil Migration to Groundwater SL
Bold Italics	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Residential SL
Bold Italics	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Commercial/Industrial SL
Bold Italics	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Excavation SL

- Only detected constituents have been included in this table.

Table 4
Summary of Soil Analytical Results - PAHs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Polycyclic Aromatic Hydrocarbons (PAHs)																	
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
IDEM RCG Res. Soil MTG SL			**1.2**	**3.7**	**110**	**NE**	**1200**	**2.1**	**4.7**	**60**	**NE**	**590**	**1800**	**19**	**1800**	**110**	**200**	**0.11**	**NE**	**260**
ID4M RCG Rvt. DC ca			***210***	***9N0***	***1000***	***E4***	***21000***	***31***	***3.1***	***31***	***E4***	***310***	***3100***	***3.1***	***9N00***	***9N00***	***31***	***19***	***E4***	***2100***
ID4M RCG CLi dxs DC ca			***950***	***9000***	***N1000***	***E4***	***300000***	***230***	***23***	***230***	***E4***	***2300***	***23000***	***23***	***90000***	***90000***	***230***	***370***	***E4***	***29000***
ID4M RCG 4om/n/d&x DC ca			***950***	***8600***	***300000***	***E4***	***300000***	***32000***	***100***	***32000***	***E4***	***300000***	***300000***	***3200***	***86000***	***86000***	***32000***	***9300***	***E4***	***13000***
DB-1 (0-2)	8/1/2019	0-2	0.443	0.453	ND	0.0984	0.367	0.941	0.614	0.853	0.376	0.511	1.15	0.174	1.81	0.122	0.397	**0.263**	2.38	1.43
DB-1 (16-18)	8/1/2019	16-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-1 (78-80)	8/2/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-2 (0-2)	7/31/2019	0-2	ND	ND	ND	0.0433	0.114	0.435	0.348	0.353	0.234	0.359	0.478	0.0954	0.964	0.037	0.24	ND	0.525	0.66
DB-2 (36-38)	7/31/2019	36-38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-2 (78-80)	8/1/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-3 (2-4)	7/29/2019	2-4	ND	ND	ND	ND	0.0289	0.114	0.11	0.158	0.099	0.0939	0.151	0.0325	263	ND	0.0867	ND	0.11	0.19
DB-3 (16-18)	7/29/2019	16-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-3 (78-80)	7/29/2019	78-80	0.435	0.744	0.204	0.182	0.178	0.0275	0.0083	0.0084	ND	0.0095	0.0277	ND	0.163	0.286	ND	**3.24**	0.525	0.105
DUP-SL-1	7/29/2019	78-80	0.0265	0.0398	0.0066	0.0334	0.0287	0.0108	ND	ND	0.0104	ND	0.0135	ND	0.0622	0.0494	ND	**0.15**	0.133	0.0393
DB-4 (4-6)	7/30/2019	4-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0076	ND	0.0095	ND	ND	ND	0.0084	0.0081
DB-4 (34-36)	7/30/2019	34-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-4 (78-80)	7/31/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-5(0-2)	8/5/2019	0-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0278	ND	ND	ND	ND	ND
DB-5(18-20)	8/5/2019	18-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-5(78-80)	8/5/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-6 (0-2)	8/8/2019	0-2	ND	ND	0.0321	ND	0.103	0.351	0.28	0.314	0.222	0.326	0.391	0.0843	0.797	0.0298	0.223	ND	0.429	0.535
DB-6 (26-28)	8/8/2019	26-28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-6 (78-80)	8/8/2019	78-80	0.0353	0.0986	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.194**	ND	ND
DB-8 (2-4)	8/13/2019	2-4	0.0282	0.0463	ND	0.0324	0.0966	0.268	0.245	0.237	0.213	0.247	0.307	0.0779	0.553	0.0333	0.209	0.0382	0.301	0.414
DB-8 (32-34)	8/13/2019	32-34	ND	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0163	0.009	ND
DB-8 (78-80)	8/13/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-9 (4-6)	8/14/2019	4-6	ND	ND	ND	ND	ND	0.664	0.648	0.824	0.552	0.733	0.936	0.179	1.24	ND	0.528	ND	0.279	0.898
DB-9 (16-18)	8/14/2019	16-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-9 (78-80)	8/14/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-11(0-2)	8/9/2019	0-2	0.0338	0.0462	ND	ND	ND	ND	0.0281	0.0374	0.0399	ND	0.0322	ND	0.0356	ND	ND	ND	0.0427	0.0333
DB-11(22-24)	8/9/2019	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUP-SL-3	8/9/2019	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-11(78-80)	8/9/2019	78-80	0.0086	0.0106	ND	ND	0.0072	ND	ND	ND	0.007	ND	0.0066	ND	0.0122	0.0106	ND	0.0095	0.0278	0.0098
DB-12-(2-4)	8/7/2019	2-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0057	ND	ND	ND	ND	ND
DB-12-(30-32)	8/7/2019	30-32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUP-SL-2	8/7/2019	30-32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-12-(78-80)	8/7/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-13(2-4)	8/12/2019	2-4	0.0167	0.0171	0.0412	0.0126	0.124	0.171	0.114	0.119	0.0545	0.0877	0.154	0.0365	0.402	0.0506	0.063	0.0122	0.422	0.265
DB-13(18-20)	8/12/2019	18-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-13(78-80)	8/12/2019	78-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 4
Summary of Soil Analytical Results - PAHs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Polycyclic Aromatic Hydrocarbons (PAHs)																	
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
IDEM RCG Res. Soil MTG SL			**1.2**	**3.7**	**110**	**NE**	**1200**	**2.1**	**4.7**	**60**	**NE**	**590**	**1800**	**19**	**1800**	**110**	**200**	**0.11**	**NE**	**260**
ID4M RCG Rvt. DC ca			***210***	***9N0***	***1000***	***E4***	***21000***	***31***	***3.1***	***31***	***E4***	***310***	***3100***	***3.1***	***9N00***	***9N00***	***31***	***19***	***E4***	***2100***
ID4M RCG CLi dxs DC ca			***950***	***9000***	***N1000***	***E4***	***300000***	***230***	***23***	***230***	***E4***	***2300***	***23000***	***23***	***90000***	***90000***	***230***	***370***	***E4***	***29000***
ID4M RCG 4om/n/d&x DC ca			***950***	***8600***	***300000***	***E4***	***300000***	***32000***	***100***	***32000***	***E4***	***300000***	***300000***	***3200***	***86000***	***86000***	***32000***	***9300***	***E4***	***13000***
GP-1 (0-2)	8/14/2019	0-2	ND	0.0443	ND	ND	0.0447	0.236	0.225	0.243	0.167	0.221	0.283	0.0643	0.476	ND	0.171	ND	0.171	0.33
GP-1 (28-30)	8/14/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-1 (34-36)	8/14/2019	34-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-3 (0-2)	8/13/2019	0-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-3 (26-28)	8/13/2019	26-28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-3 (32-34)	8/13/2019	32-34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-4(2-4)	8/7/2019	2-4	ND	ND	ND	ND	0.0107	0.0518	0.0504	0.0501	0.0416	0.0546	0.0622	0.0146	0.107	ND	0.0383	ND	0.0368	0.0778
GP-4(22-24)	8/7/2019	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-4(32-34)	8/7/2019	32-34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-5-(2-4)	8/7/2019	2-4	ND	ND	ND	ND	ND	0.0066	0.0057	0.0057	0.006	0.0057	0.0098	ND	0.0115	ND	ND	ND	0.0062	0.0096
GP-5-(6-8)	8/7/2019	6-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003	ND	0.0059	ND	ND	ND	ND	ND
GP-5-(28-30)	8/7/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-5-(32-34)	8/7/2019	32-34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-6 (0-2)	7/30/2019	0-2	ND	ND	ND	ND	ND	0.0742	0.0604	0.0719	0.0401	0.048	0.0745	ND	0.154	ND	0.0409	ND	0.0939	0.11
GP-6 (18-20)	7/30/2019	18-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-6 (24-26)	7/30/2019	24-26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-7 (4-6)	8/2/2019	4-6	ND	ND	ND	ND	0.0163	0.039	0.0369	0.0402	0.0318	0.0381	0.0475	0.0102	0.0934	ND	0.0302	ND	0.051	0.0676
GP-7 (18-20)	8/2/2019	18-20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-7 (24-26)	8/2/2019	24-26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-8(4-6)	8/6/2019	4-6	ND	ND	ND	ND	ND	0.102	0.103	0.107	0.0813	0.0972	0.119	0.0319	0.186	ND	0.0753	ND	0.0918	0.142
GP-8(28-30)	8/6/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-8(34-36)	8/6/2019	34-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-9 (2-4)	8/8/2019	2-4	ND	ND	ND	ND	ND	ND	ND	0.0088	ND	ND	0.0081	ND	0.0148	ND	ND	ND	ND	0.0101
GP-9 (6-8)	8/8/2019	6-8	ND	ND	ND	ND	ND	0.0125	0.012	0.0168	0.0094	0.0099	0.0166	ND	0.0342	ND	0.0096	ND	0.0148	0.023
GP-9 (14-16)	8/8/2019	14-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-10 (0-2)	8/8/2019	0-2	ND	ND	0.0337	ND	0.113	0.239	0.169	0.136	0.0974	0.168	0.224	0.0441	0.482	0.0356	0.101	ND	0.381	0.338
GP-10 (10-12)	8/8/2019	10-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-10 (16-18)	8/8/2019	16-18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-11 (0-2)	8/13/2019	0-2	ND	ND	ND	ND	ND	0.0217	0.0187	0.0163	0.0119	0.0163	0.0219	ND	0.0364	ND	0.0108	ND	0.0168	0.0269
GP-11 (22-24)	8/13/2019	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-11 (28-30)	8/13/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUP-SL-4	8/13/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-12 (2-4)	8/14/2019	2-4	0.181	0.209	0.838	0.0638	2.69	8.35	7.63	7.63	4.84	6.56	9.1	2.11	19.2	0.771	5.19	0.139	10.2	12.6
GP-12 (24-26)	8/14/2019	24-26	ND	ND	ND	ND	ND	0.0066	ND	ND	ND	ND	0.0083	ND	0.0104	ND	ND	ND	ND	0.0082
GP-12 (28-30)	8/14/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-13 (0-2)	8/15/2019	0-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-13 (24-26)	8/15/2019	24-26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-13 (30-32)	8/15/2019	30-32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0102	ND	ND

Table 4
Summary of Soil Analytical Results - PAHs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Depth (ft-bgs)	Polycyclic Aromatic Hydrocarbons (PAHs)																	
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
IDEM RCG Res. Soil MTG SL			**1.2**	**3.7**	**110**	**NE**	**1200**	**2.1**	**4.7**	**60**	**NE**	**590**	**1800**	**19**	**1800**	**110**	**200**	**0.11**	**NE**	**260**
ID4M RCG Rvt. DC ca			***210***	***9N0***	***1000***	***E4***	***21000***	***31***	***3.1***	***31***	***E4***	***310***	***3100***	***3.1***	***9N00***	***9N00***	***31***	***19***	***E4***	***2100***
ID4M RCG CLi dxs DC ca			***950***	***9000***	***N1000***	***E4***	***300000***	***230***	***23***	***230***	***E4***	***2300***	***23000***	***23***	***90000***	***90000***	***230***	***370***	***E4***	***29000***
ID4M RCG 4om/n/ d&x DC ca			***950***	***8600***	***300000***	***E4***	***300000***	***32000***	***100***	***32000***	***E4***	***300000***	***300000***	***3200***	***86000***	***86000***	***32000***	***9300***	***E4***	***13000***
GP-14 (8-10)	8/15/2019	8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-14 (38-40)	8/15/2019	38-40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-14 (42-44)	8/15/2019	42-44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-15 (2-4)	8/13/2019	2-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-15 (14-16)	8/13/2019	14-16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-15 (22-24)	8/13/2019	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-15 (26-28)	8/13/2019	26-28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-16(2-4)	8/9/2019	2-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-16(22-24)	8/9/2019	22-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-16(26-28)	8/9/2019	26-28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-17 (0-2)	8/15/2019	0-2	0.0275	0.0359	0.0582	0.023	0.161	0.421	0.357	0.297	0.214	0.365	0.408	0.097	0.869	0.0715	0.225	0.0688	0.56	0.606
GP-17 (16-18)	8/15/2019	16-18	0.0289	0.0558	0.0151	ND	0.0289	0.0514	0.0386	0.0458	0.024	0.031	0.0536	0.0103	0.111	0.0181	0.0245	0.0201	0.0942	0.0803
GP-17 (34-36)	8/15/2019	34-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUP-SL-5	8/15/2019	34-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-18 (2-4)	8/15/2019	2-4	ND	ND	ND	ND	ND	0.144	0.132	0.118	0.083	0.132	0.164	0.0345	0.268	ND	0.0839	ND	0.109	0.188
GP-18 (26-28)	8/15/2019	26-28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-18 (30-32)	8/15/2019	30-32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-19(0-2)	8/5/2019	0-2	0.0508	0.0631	ND	0.0294	0.0611	0.205	0.165	0.161	0.116	0.187	0.226	0.0471	0.404	ND	0.109	0.0506	0.221	0.296
GP-19(22-24)	8/6/2019	22-24	ND	ND	ND	ND	ND	0.0132	0.0095	0.0073	0.0064	0.0106	0.0142	ND	0.0169	ND	ND	ND	0.0077	0.0132
GP-19(28-30)	8/6/2019	28-30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-20 (0-2)	8/14/2019	0-2	ND	ND	ND	ND	ND	0.0067	0.0063	ND	ND	ND	0.0073	ND	0.0098	ND	ND	ND	ND	0.0075
GP-20 (34-36)	8/14/2019	34-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-20 (38-40)	8/14/2019	38-40	ND	ND	ND	ND	0.0062	0.0071	ND	ND	ND	ND	0.0084	ND	0.0071	ND	ND	ND	0.0077	0.0064

Notes:
- Results reported in milligrams per kilogram, which is equivalent to parts per million (ppm).
- ft-bgs = feet below ground surface
- IDEM RCG SL = Indiana Department of Environmental Management Remediation Closure Guide Screening Levels (updated March 2019)
- NA = Not Analyzed
- NE = Screening Level not established for that constituent
- PAHs analyzed using US EPA SW-846 Method 8270

Bold	= Concentration reported above IDEM RCG Residential Soil Migration to Groundwater Screening Level
BLls Id l3nt	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Residential Screening Level
BLls Id l3nt	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Commercial/Industrial Screening Level
BLls Id l3nt	= Concentration reported above IDEM RCG Soil Exposure Direct Contact Excavation Screening Level

Table 5
Summary of Groundwater Analytical Results - Metals
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Metals														
		Barium	Barium (Dissolved)	Cadmium	Cadmium (Dissolved)	Chromium	Chromium (Dissolved)	Lead	Lead (Dissolved)	Nickel	Nickel (Dissolved)	Zinc	Zinc (Dissolved)	Uranium	Mercury	Mercury (Dissolved)
IDEM RCG Res. Tap GWSL		**2000**		**5**		**100**		**15**		**390**		**6000**		**30**	**2**	
DB-1-WT-S	8/1/2019	**2170**	122	**19.7**	ND	**986**	ND	**905**	ND	**944**	ND	3770	ND	**63**	ND	ND
DB-1-WT-D	8/12/2019	168	169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-2-WT-S	7/31/2019	**22900**	93.3	**87.4**	ND	**2980**	ND	**2100**	ND	**5820**	18.5	**11700**	ND	**123**	ND	ND
DB-2-WT-D	8/12/2019	166	169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-3-WT-S	7/29/2019	1520	44.8	**9.3**	ND	**381**	ND	**314**	ND	**618**	ND	1640	ND	29.1	ND	ND
DB-3-WT-D	8/12/2019	145	146	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-4-WT-S	7/30/2019	**7040**	277	**12.5**	ND	**1390**	ND	**911**	ND	**892**	14.6	3140	ND	**66.3**	ND	ND
DB-4-WT-D	8/12/2019	133	134	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-5-WT-S	8/5/2019	**64800**	264	**24.2**	ND	**1560**	ND	**1190**	ND	**1400**	ND	3670	ND	3.6	ND	ND
DB-5-WT	8/21/2019	183	178	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-6-WT-S	8/8/2019	**4420**	128	**16.5**	ND	**934**	ND	**969**	ND	**1170**	19	3820	ND	NA	ND	ND
DB-8-WT-S	8/13/2019	**4820**	315	**22.9**	ND	**1630**	ND	**1000**	ND	**1150**	ND	4090	ND	NA	ND	ND
DUP-WT-2	8/13/2019	**6160**	303	**30.9**	ND	**2280**	ND	**1390**	ND	**1610**	ND	5680	ND	NA	ND	ND
DB-8-WT-D	8/21/2019	151	146	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-9-WT-S	8/14/2019	**2830**	464	**8.1**	ND	**687**	ND	**529**	ND	**394**	ND	2600	ND	NA	ND	ND
DB-9-WT-D	8/21/2019	265	278	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-11-WT-S	8/9/2019	**8200**	227	**35.7**	ND	**2580**	ND	**1850**	ND	**2590**	ND	**9320**	ND	NA	ND	ND
DB-11-WT-D	8/21/2019	195	195	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-12-WT-S	8/7/2019	**4710**	70.5	**14.3**	ND	**872**	ND	**652**	ND	**732**	ND	2710	ND	NA	ND	ND
DB-12-WT-D	8/21/2019	284	273	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
DB-13-WT-S	8/12/2019	**5780**	251	**30.9**	ND	**1880**	ND	**1220**	ND	**1790**	ND	**7740**	ND	NA	ND	ND
DB-13-WT-D	8/21/2019	185	196	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
GP-1-WT	8/14/2019	**4960**	91.3	**39.2**	ND	**613**	ND	**1100**	ND	**2480**	ND	5260	ND	NA	ND	ND
GP-3-WT	8/13/2019	1020	60	**6**	ND	**422**	ND	**275**	ND	371	ND	1220	ND	NA	ND	ND
GP-4-WT	8/7/2019	**2520**	76.9	**25**	ND	**2660**	ND	**1810**	ND	**2050**	ND	**7280**	ND	NA	ND	ND
GP-5-WT	8/7/2019	**2590**	76.8	**7.3**	ND	**1330**	ND	**695**	ND	**842**	ND	2400	ND	NA	ND	ND
GP-6-WT	7/31/2019	128	65.4	ND	ND	ND	ND	ND	ND	13.4	ND	30.9	ND	1.8	ND	ND
GP-7-WT	8/12/2019	**11600**	184	**63.3**	ND	**2760**	ND	**3460**	ND	**4200**	ND	**13100**	ND	ND	ND	ND
GP-8-WT	8/19/2019	292	202	ND	ND	16.8	ND	ND	ND	24.6	ND	86.5	ND	NA	ND	ND
GP-9-WT	8/8/2019	**7720**	104	**37.4**	ND	**1640**	ND	**1550**	ND	**2420**	ND	**7820**	ND	NA	ND	ND
GP-10-WT	8/8/2019	**10900**	166	**106**	ND	**1890**	ND	**6400**	ND	**2970**	ND	**17100**	ND	NA	ND	ND
DUP-WT-1	8/8/2019	**11800**	168	**117**	ND	**2070**	ND	**7520**	ND	**3070**	ND	**18900**	ND	NA	ND	ND
GP-11-WT	8/13/2019	**8700**	410	**39.8**	ND	**2270**	ND	**1770**	ND	**1400**	ND	5740	ND	NA	ND	ND
GP-12-WT	8/14/2019	**2800**	128	**7.4**	ND	**266**	ND	**222**	ND	241	ND	788	ND	NA	ND	ND
GP-13-WT	8/19/2019	420	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
GP-14-WT	8/19/2019	**10200**	195	**32.7**	ND	**1900**	ND	**1280**	ND	**2060**	ND	**7320**	ND	NA	ND	ND
GP-15-WT	8/13/2019	**5260**	103	**12.9**	ND	**180**	ND	**249**	ND	**399**	ND	1310	ND	NA	ND	ND
GP-16-WT	8/9/2019	**2690**	87.5	**14.1**	ND	**387**	ND	**632**	ND	**522**	ND	1940	ND	NA	ND	ND
GP-18-WT	8/15/2019	**5860**	632	**20.6**	ND	**1140**	ND	**954**	ND	**1080**	ND	3780	ND	NA	ND	ND
GP-19-WT	8/19/2019	99.2	77.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND
GP-20-WT	8/15/2019	**3610**	148	**37.3**	ND	**629**	ND	**1290**	ND	**2320**	12	5310	ND	NA	ND	ND

Notes:
- Results reported in micrograms per liter (µg/L) equivalent parts per billion (ppb).
- IDEM RCG = Indiana Department of Environmental Management Remediation Closure Guide
- GWSL = Groundwater Screening Level (updated March 2019)
- NA = Not analyzed for that constituent
- ND = Constituent not detected
- NE = Screening Level not established under RCG
- Metals analyzed using US EPA SW-846 Methods 6010/7470/Uranium Method 6020

Italics indicate concentration detected below laboratory report limit but above IDEM Screening Levels

Bold = Concentration reported above IDEM RCG Residential Tap GWSL

Table 6
Summary of Groundwater Analytical Results - VOCs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Detected VOCs				
		1,1,1-Trichloroethane	1,1-Dichloroethane	2-Butanone (MEK)	Chloroform	cis-1,2-Dichloroethene
IDEM RCG Res. Tap GWSL		**200**	**28**	**5600**	**80**	**70**
IDEM RCG Res. VE GWSL		**13000**	**130**	**NE**	**NE**	**NE**
IDEM RCG C/I VE GWSL		**54000**	**550**	**NE**	**NE**	**NE**
DB-1-WT-S	8/1/2019	ND	ND	ND	ND	ND
DB-1-WT-D	8/12/2019	ND	ND	ND	8.9	ND
DB-2-WT-S	7/31/2019	ND	ND	ND	ND	ND
DB-2-WT-D	8/12/2019	ND	ND	ND	ND	ND
DB-3-WT-S	7/29/2019	ND	ND	ND	ND	ND
DB-3-WT-D	8/12/2019	ND	ND	ND	11.8	ND
DB-4-WT-S	7/30/2019	5.1	ND	ND	ND	68.1
DB-4-WT-D	8/12/2019	ND	ND	ND	13.1	ND
DB-5-WT-S	8/5/2019	ND	ND	ND	ND	ND
DB-5-WT	8/21/2019	ND	ND	ND	ND	ND
DB-6-WT-S	8/8/2019	ND	8.8	ND	ND	6.4
DB-8-WT-S	8/13/2019	ND	ND	ND	ND	ND
DUP-WT-2	8/13/2019	ND	ND	ND	ND	ND
DB-8-WT-D	8/21/2019	ND	ND	ND	9.3	ND
DB-9-WT-S	8/14/2019	ND	ND	ND	ND	ND
DB-9-WT-D	8/21/2019	ND	ND	ND	9.2	ND
DB-11-WT-S	8/9/2019	ND	ND	ND	ND	ND
DB-11-WT-D	8/21/2019	ND	ND	ND	ND	ND
DB-12-WT-S	8/7/2019	ND	ND	ND	ND	ND
DB-12-WT-D	8/21/2019	ND	ND	ND	6.1	ND
DB-13-WT-S	8/12/2019	ND	ND	ND	ND	ND
DB-13-WT-D	8/21/2019	ND	ND	ND	10.2	ND
GP-1-WT	8/14/2019	ND	ND	ND	8.4	ND
GP-3-WT	8/13/2019	ND	ND	ND	ND	ND
GP-4-WT	8/7/2019	ND	ND	ND	ND	ND
GP-5-WT	8/7/2019	ND	ND	ND	ND	ND
GP-6-WT	7/31/2019	ND	ND	ND	ND	ND
GP-7-WT	8/12/2019	ND	ND	ND	ND	ND
GP-8-WT	8/19/2019	ND	ND	ND	ND	ND
GP-9-WT	8/8/2019	ND	ND	ND	ND	ND

Table 6
Summary of Groundwater Analytical Results - VOCs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Detected VOCs				
		1,1,1-Trichloroethane	1,1-Dichloroethane	2-Butanone (MEK)	Chloroform	cis-1,2-Dichloroethene
IDEM RCG Res. Tap GWSL		**200**	**28**	**5600**	**80**	**70**
IDEM RCG Res. VE GWSL		**13000**	**130**	**NE**	**NE**	**NE**
IDEM RCG C/I VE GWSL		**54000**	**550**	**NE**	**NE**	**NE**
GP-10-WT	8/8/2019	ND	ND	ND	ND	ND
DUP-WT-1	8/8/2019	ND	ND	ND	ND	ND
GP-11-WT	8/13/2019	ND	ND	ND	ND	ND
GP-12-WT	8/14/2019	ND	ND	ND	ND	ND
GP-13-WT	8/19/2019	ND	ND	ND	ND	ND
GP-14-WT	8/19/2019	ND	ND	48.6	ND	ND
GP-15-WT	8/13/2019	ND	ND	ND	ND	ND
GP-16-WT	8/9/2019	ND	ND	ND	ND	ND
GP-18-WT	8/15/2019	ND	ND	ND	ND	ND
GP-19-WT	8/19/2019	ND	ND	ND	ND	ND
GP-20-WT	8/15/2019	ND	ND	ND	ND	ND
Trip Blank-16	8/21/2019	ND	ND	ND	ND	ND

Notes:
- Results reported in micrograms per liter (µg/L) equivalent parts per billion (ppb).
- IDEM RCG = Indiana Department of Environmental Management Remediation Closure Guide
- GWSL = Groundwater Screening Level (updated March 2019)
- VOCs = Volatile Organic Compounds
- NA = Not analyzed for that constituent
- ND = Constituent not detected
- NE = Screening Level not established under RCG
- VOCs analyzed using US EPA SW-846 Method 8260

Italics indicate concentration detected below laboratory report limit but above IDEM Screening Levels

Bold	= Concentration reported above IDEM RCG Residential Tap GWSL
Bold	= Concentartion reported above the IDEM RCG Residential Vapor Exposure GWSL
Bold	= Concentartion reported above the IDEM RCG Commercial/Industrial Vapor Exposure GWSL

- Only detected VOCs have been included in this table.

Table 7
Summary of Groundwater Analytical Results - PAHs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

Sample I.D.	Sample Date	Polycyclic Aromatic Hydrocarbons (PAHs)																	
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
IDEM RCG Res. Tap GWSL		**11**	**36**	**530**	**NE**	**1800**	**0.3**	**0.2**	**2.5**	**NE**	**25**	**250**	**0.25**	**800**	**290**	**2.5**	**1.7**	**NE**	**120**
IDEM RCG Res. VE GWSL		**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**11**	**NE**	**NE**
IDEM RCG C/I VE GWSL		**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**460**	**NE**	**NE**
DB-1-WT-S	8/1/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-1-WT-D	8/12/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-2-WT-S	7/31/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-2-WT-D	8/12/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-3-WT-S	7/29/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-3-WT-D	8/12/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-4-WT-S	7/30/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-4-WT-D	8/12/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-5-WT-S	8/5/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-5-WT	8/21/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-6-WT-S	8/8/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-8-WT-S	8/13/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUP-WT-2	8/13/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-8-WT-D	8/21/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-9-WT-S	8/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-9-WT-D	8/21/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-11-WT-S	8/9/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-11-WT-D	8/21/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-12-WT-S	8/7/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-12-WT-D	8/21/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-13-WT-S	8/12/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DB-13-WT-D	8/21/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-1-WT	8/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-3-WT	8/13/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-4-WT	8/7/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-5-WT	8/7/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-6-WT	7/31/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-7-WT	8/12/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-8-WT	8/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-9-WT	8/8/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-10-WT	8/8/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUP-WT-1	8/8/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 7
Summary of Groundwater Analytical Results - PAHs
I-65/I-70 North Split
Indianapolis, Indiana
INDOT DES #1600808
ATC Project #170DOT0054

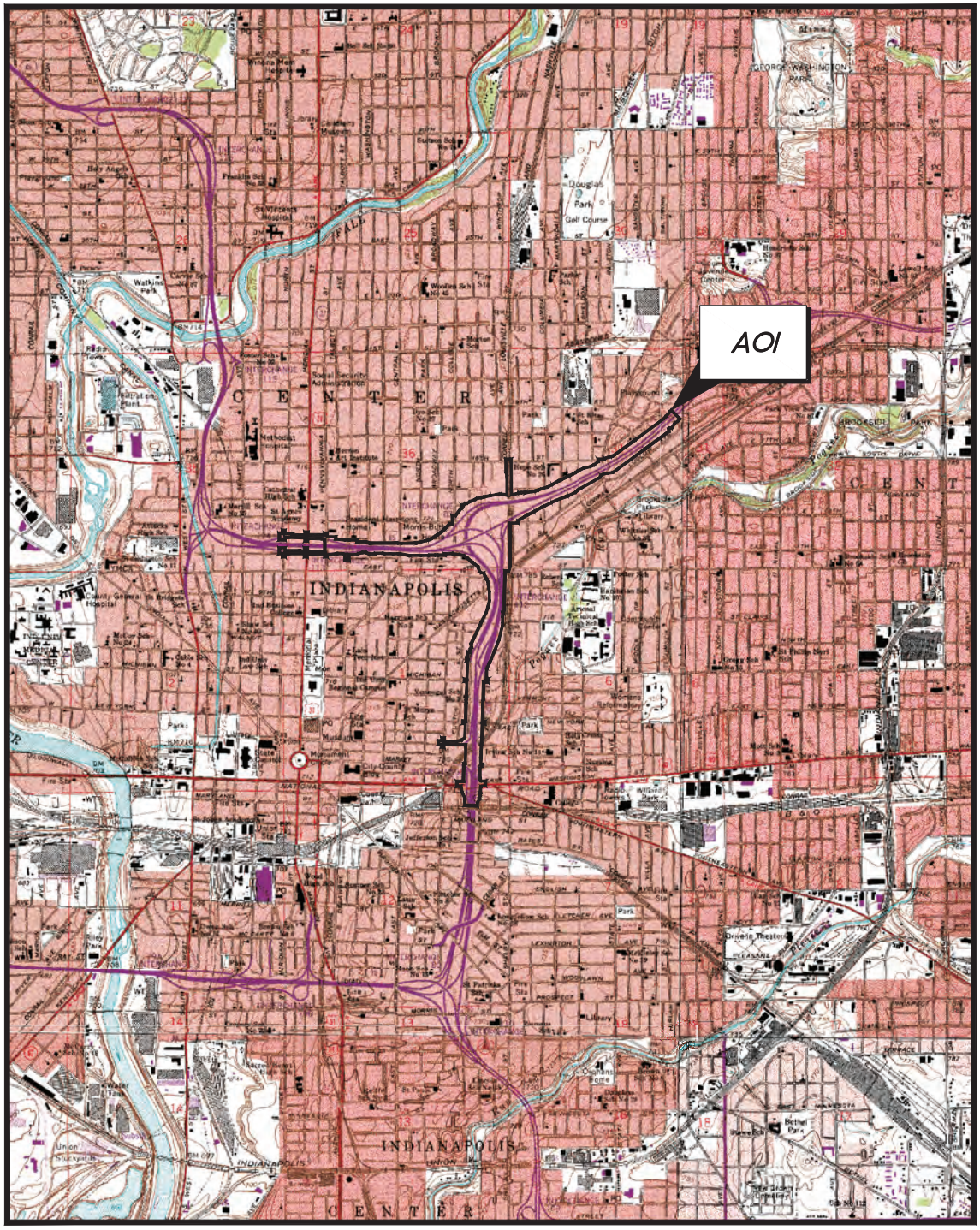
Sample I.D.	Sample Date	Polycyclic Aromatic Hydrocarbons (PAHs)																	
		1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
IDEM RCG Res. Tap GWSL		**11**	**36**	**530**	**NE**	**1800**	**0.3**	**0.2**	**2.5**	**NE**	**25**	**250**	**0.25**	**800**	**290**	**2.5**	**1.7**	**NE**	**120**
IDEM RCG Res. VE GWSL		**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**11**	**NE**	**NE**
IDEM RCG C/I VE GWSL		**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**460**	**NE**	**NE**
GP-11-WT	8/13/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-12-WT	8/14/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-13-WT	8/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-14-WT	8/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-15-WT	8/13/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-16-WT	8/9/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-18-WT	8/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-19-WT	8/19/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP-20-WT	8/15/2019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- Results reported in micrograms per liter (µg/L) equivalent parts per billion (ppb).
- IDEM RCG = Indiana Department of Environmental Management Remediation Closure Guide
- GWSL = Groundwater Screening Level (updated March 2019)
- NA = Not analyzed for that constituent
- ND = Constituent not detected
- NE = Screening Level not established under RCG
- PAHs analyzed using US EPA SW-846 Method 8270SIM

Italics indicate concentration detected below laboratory report limit but above IDEM Screening Levels

Bold	= Concentration reported above IDEM RCG Residential Tap GWSL
Bold	= Concentartion reported above the IDEM RCG Residential Vapor Exposure GWSL
Bold	= Concentartion reported above the IDEM RCG Commercial/Industrial Vapor Exposure GWSL

Figures



AOI = AREA OF INTEREST

VICINITY MAP

INTERSTATE 65 AND INTERSTATE 70 NORTH SPLIT
DES. NO.1600808
INDIANAPOLIS, MARION COUNTY, INDIANA

Project Number: 170DOT0054		Drn. By: JG
Drawing File: SEE LOWER LEFT		Ckd. By: JS
Date: 8/19	Scale: 1"=2,000'	App'd By:
ATC		Figure: 1

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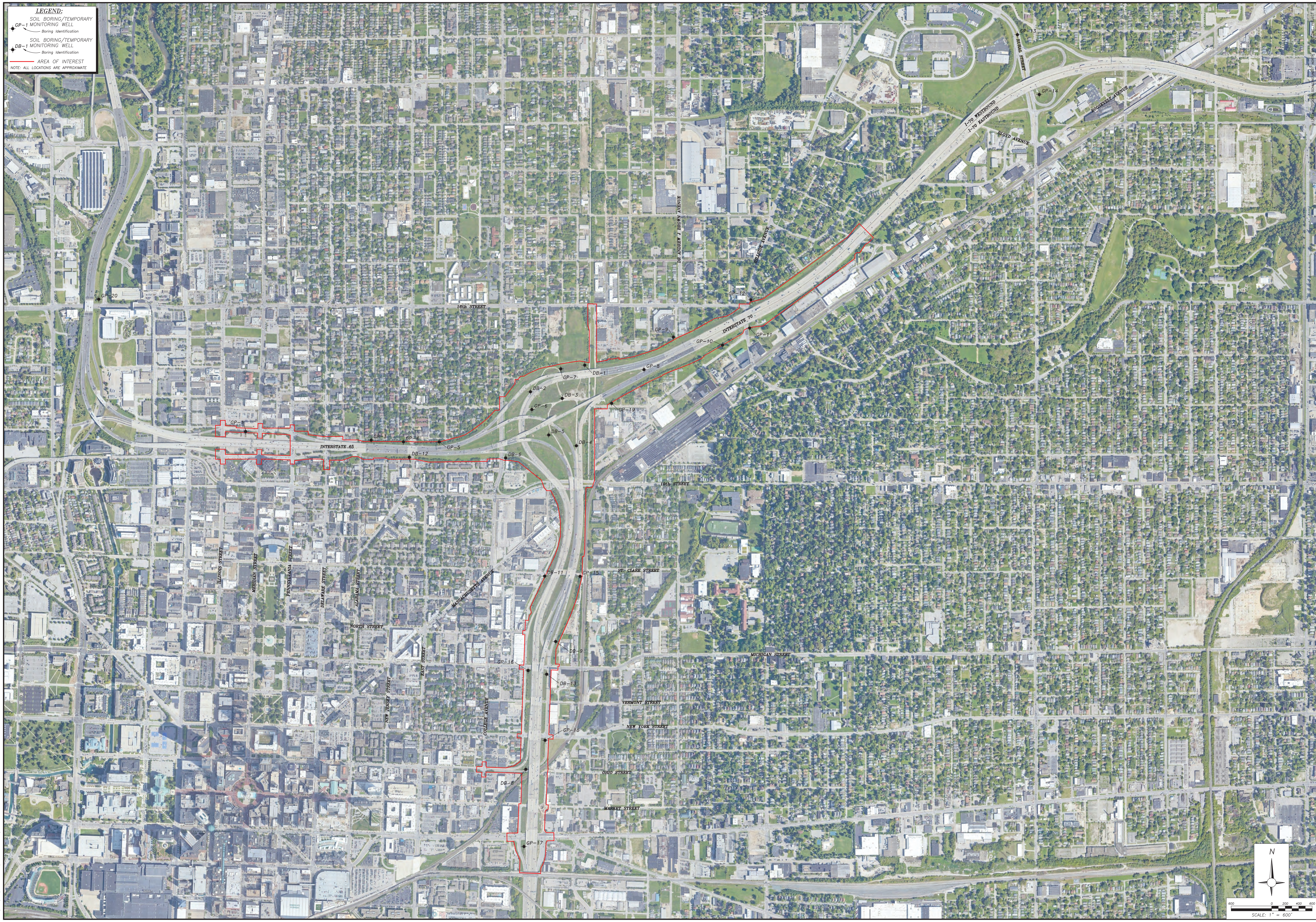
LEGEND:
GP-1 SOIL BORING/TEMPORARY MONITORING WELL
Boring Identification
DB-1 SOIL BORING/TEMPORARY MONITORING WELL
Boring Identification
AREA OF INTEREST
NOTE: ALL LOCATIONS ARE APPROXIMATE
INTERSTATE 65
INTERSTATE 70
I-70 WESTBOUND
I-70 EASTBOUND
16th STREET
10th STREET
DR ANDREW J BROWN AVENUE
HILLSIDE AVENUE
RURAL STREET
ROOSEVELT AVENUE
BLOYD AVENUE
ILLINOIS STREET
MERIDIAN STREET
PENNSYLVANIA STREET
DELAWARE STREET
ALABAMA STREET
NEW JERSEY STREET
EAST STREET
COLLEGE AVENUE
MASSACHUSETTS AVENUE
NORTH STREET
ST. CLARE STREET
MICHIGAN STREET
VERMONT STREET
NEW YORK STREET
OHIO STREET
MARKET STREET
GP-1
GP-3
GP-4
GP-5
GP-6
GP-7
GP-8
GP-9
GP-10
GP-11
GP-12
GP-13
GP-14
GP-15
GP-16
GP-17
GP-18
GP-19
GP-20
DB-1
DB-2
DB-3
DB-4
DB-5
DB-6
DB-8
DB-9
DB-11
DB-12
DB-13
N
600 0 200 400 600
SCALE: 1" = 600'
H:\2019\PITS\JOHN SCHILLING\INDOT NORTH SPLIT\SITE.DWG, PROJECT SITE

Revision:

Project Number: 170DOT0054
Drawing File: SEE LOWER LEFT
Date: 6/19
Scale: AS SHOWN
App'd By: JS | Ckd. By: JS | Drn. By: JG

Company Name:
INDOT
DES. NO. 1592385 AND 1600808

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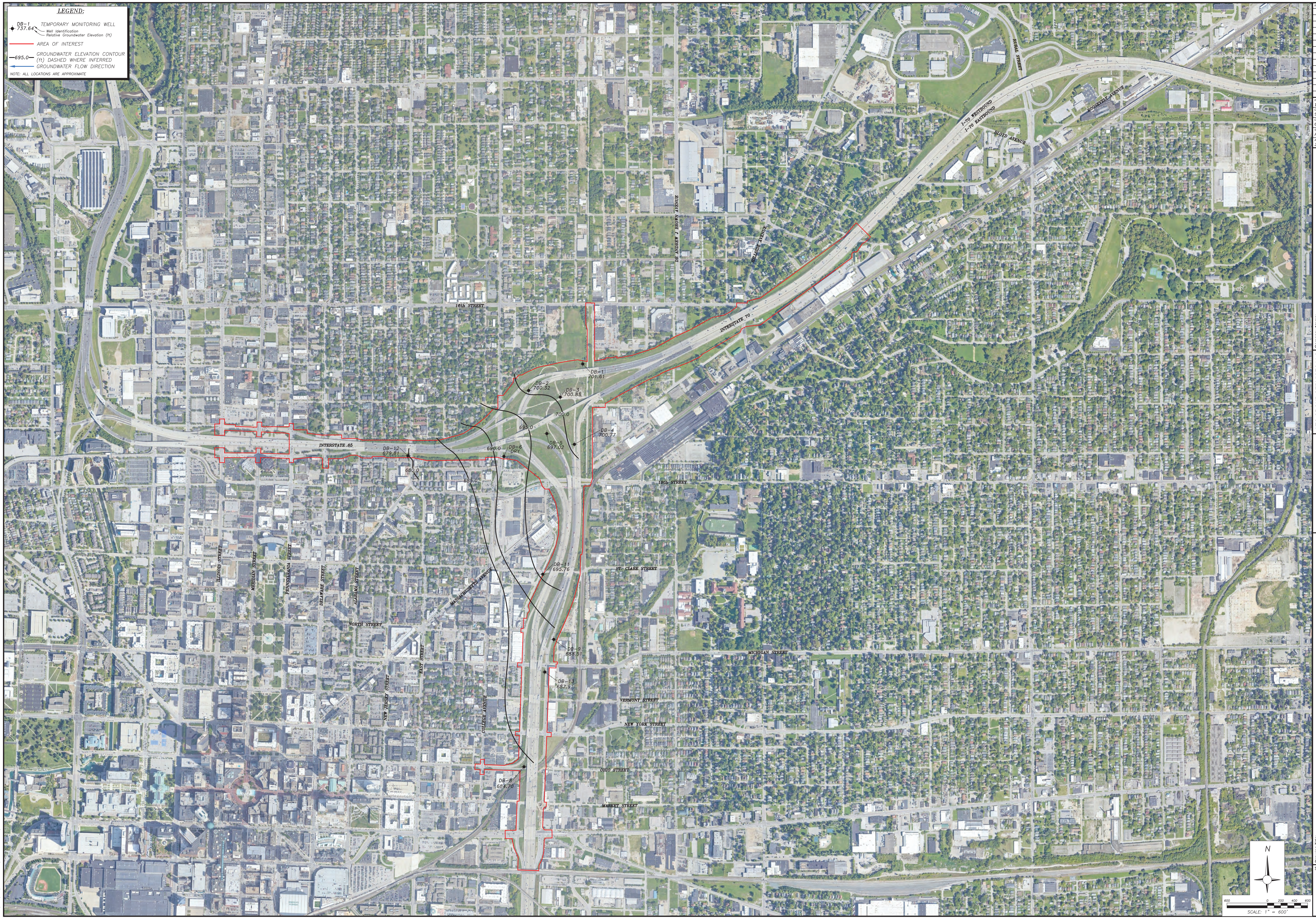
ATC

Drawing Title:
PROJECT SITE
INTERSTATE 65 AND INTERSTATE 70 NORTH SPLIT
INDIANAPOLIS, MARION COUNTY, INDIANA

Sheet: 2


LEGEND:
DB-1 737.64 TEMPORARY MONITORING WELL
Well Identification
Relative Groundwater Elevation (ft)
AREA OF INTEREST
695.0 GROUNDWATER ELEVATION CONTOUR (ft) DASHED WHERE INFERRED
GROUNDWATER FLOW DIRECTION
NOTE: ALL LOCATIONS ARE APPROXIMATE
INTERSTATE 65
INTERSTATE 70
I-70 WESTBOUND
I-70 EASTBOUND
RURAL STREET
ROOSEVELT AVENUE
BLOYD AVENUE
DR ANDREW J BROWN AVENUE
HILLSIDE AVENUE
16th STREET
10th STREET
ST. CLARE STREET
MICHIGAN STREET
VERMONT STREET
NEW YORK STREET
OHIO STREET
MARKET STREET
NORTH STREET
MASSACHUSETTS AVENUE
COLLEGE AVENUE
EAST STREET
NEW JERSEY STREET
ALABAMA STREET
DELAWARE STREET
PENNSYLVANIA STREET
MERIDIAN STREET
ILLINOIS STREET
DB-1 701.61
DB-2 700.32
DB-3 700.83
DB-4 700.77
DB-5 697.02
DB-6 DRY
DB-8 684.70
DB-9 688.51
DB-11 695.76
DB-12 679.81
DB-13 687.91
700.0
695.0
690.0
685.0
680.0
N
600 0 200 400 600
SCALE: 1" = 600'
H:\2019\PITS\JOHN SCHILLING\INDOT NORTH SPLIT\POT MAP.DWG, POTENTIOMETRIC

Revision:

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Drawing Title:
POTENTIOMETRIC SURFACE MAP
INTERSTATE 65 AND INTERSTATE 70 NORTH SPLIT
INDIANAPOLIS, MARION COUNTY, INDIANA

Sheet:
3

LEGEND:

GP-1 — SOIL BORING/TEMPORARY MONITORING WELL — Boring Identification

DB-1 — SOIL BORING/TEMPORARY MONITORING WELL — Boring Identification

AREA OF INTEREST

6/20/2004	2-4	Date
Cd	<1.0	Depth (ft)
NAP	<1.0	Cadmium (ppm)
Pb	<1.0	Naphthalene (ppm)
Hg	<1.0	Lead (ppm)
BTEX	<1.0	Mercury (ppm)
VOCs	<1.0	BTEX Compounds of Concern
		VOCs Compounds of Concern

ppm = PARTS PER MILLION

CONCENTRATIONS EXCEEDING THE IDEM ROS RESIDENTIAL SOIL MIGRATION TO GROUNDWATER SCREENING LEVEL

CONCENTRATIONS EXCEEDING THE IDEM ROS SOIL RESIDENTIAL DIRECT CONTACT SCREENING LEVEL

CONCENTRATIONS EXCEEDING THE IDEM ROS SOIL EXPOSURE DIRECT CONTACT EXCAVATION SCREENING LEVEL

NOTE: ALL LOCATIONS ARE APPROXIMATE

Revision:	
Project Number:	170DOT0054
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Date:	6/19
Scale:	AS SHOWN
Appr'd By: JS / Cad. By: JS / Drn. By: JG	
Company Name:	INDOT DES. NO.: 1592385 AND 1600808

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Drawing Title:

SOIL ANALYTICAL MAP
INTERSTATE 65 AND INTERSTATE 70 NORTH SPLIT
INDIANAPOLIS, MARION COUNTY, INDIANA

Sheet: 4

SCALE: 1" = 600'

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Revision:

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Date: 6/19
Scale: AS SHOWN
App'd By: JS | Ckd. By: JS | Drn. By: JG

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Drawing Title:
GROUNDWATER ANALYTICAL MAP
INTERSTATE 65 AND INTERSTATE 70 NORTH SPLIT
INDIANAPOLIS, MARION COUNTY, INDIANA

Sheet: 5


LEGEND:
GP-1 SOIL BORING/TEMPORARY MONITORING WELL
Boring Identification
DB-1 SOIL BORING/TEMPORARY MONITORING WELL
Boring Identification
AREA OF INTEREST
PROPERTY BOUNDARY
NOTE: ALL LOCATIONS ARE APPROXIMATE
16th STREET
10th STREET
INTERSTATE 65
INTERSTATE 70
I-70 WESTBOUND
I-70 EASTBOUND
RURAL STREET
ROOSEVELT AVENUE
BLOYD AVENUE
DR ANDREW J BROWN AVENUE
HILLSIDE AVENUE
ILLINOIS STREET
MERIDIAN STREET
PENNSYLVANIA STREET
DELAWARE STREET
ALABAMA STREET
NORTH STREET
EAST STREET
NEW JERSEY STREET
MASSACHUSETTS AVENUE
COLLEGE AVENUE
ST. CLARE STREET
MICHIGAN STREET
VERMONT STREET
NEW YORK STREET
OHIO STREET
MARKET STREET
1251/1254 ROOSEVELT AVENUE
1125 BROADSIDE AVENUE
1125 BROOKSIDE AVENUE
901 CARROLLTON AVENUE
711 EAST VERMONT STREET
GP-1
GP-3
GP-4
GP-5
GP-6
GP-7
GP-8
GP-9
GP-10
GP-11
GP-12
GP-13
GP-14
GP-15
GP-16
GP-17
GP-18
GP-19
GP-20
DB-1
DB-2
DB-3
DB-4
DB-5
DB-6
DB-8
DB-9
DB-11
DB-12
DB-13
N
600 0 200 400 600
SCALE: 1" = 600'

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Revision:

Project Number: 170DOT0054

Drawing File: SEE LOWER LEFT

Date: 8/19

Scale: AS SHOWN

App'd By:	Ckd. By:	Drn. By:
JS	JS	JG

Company Name:

INDOT
DES. NO. 1592385 AND 1600808

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Drawing Title:

OFF-SITE AREAS OF CONCERN
INTERSTATE 65 AND INTERSTATE 70 NORTH SPLIT
INDIANAPOLIS, MARION COUNTY, INDIANA

Sheet:

6