

CONSTRUCTION NOTICE

For

Z-50E 24” Oak Lawn Replacement Project

Greene County

Ohio Power Siting Board

Case No. 15-1416-GA-BNR

Submitted By:

Vectren Energy Delivery of Ohio

August 12, 2015

**BEFORE THE OHIO POWER SITING BOARD
CONSTRUCTION NOTICE**

Table of Contents

	<u>Page No.</u>
LIST OF TABLES	ii
LIST OF ATTACHMENTS	iii
GLOSSARY.....	iv
4906-11-02(B) GENERAL INFORMATION	1
(1) Name of the project.....	1
(2) Brief project description, including map depicting the facility's location and the reason why the project meets the requirements of a construction notice.....	1
(3) Explanation of the need for the proposed facility	1
(4) Anticipated Construction Schedule and Proposed In-Service Date.....	2
(5) Estimated capital costs of the project.....	2
(6) Operating Characteristics, Required Structures, and Right-of-Way and/or Land Requirements	2
(7) Area map and written instructions to the facility.....	3
(8) Property Owner List.....	3
4906-11-02(C) DOCUMENTATION OF CONSTRUCTION NOTICE.....	4
ADDITIONAL INFORMATION.....	6
(1) Cultural Resources	6
(2) Environmental Data	6
(3) Species of Concern	7

LIST OF TABLES

Table 1: Property Owner List	4
Table 2: Public Officials	5

LIST OF ATTACHMENTS or APPENDICES

Attachment A:	Facility Location Map
Attachment B:	Project Vicinity Map
Attachment C:	Property Owner Notification Letters
Attachment D:	Public Official's Transmittal Letter
Attachment E:	Cultural Resource Section 106 Review
Attachment F:	Wetland and Other Waters Delineation Report
Attachment G:	Correspondence Letter with the U.S. Fish and Wildlife Service
Attachment H:	Rare, Threatened, and/or Endangered Species Habitat Report
Attachment I:	Correspondence Letter with the Ohio Department of Natural Resources

GLOSSARY

MAOP: Maximum Allowable Operating Pressure

ODNR: Ohio Division of Natural Resources

OHPO: Ohio Historic Preservation Office

PSI: Pounds per Square Inch

ROW: Right-of-Way

USFWS: U.S. Fish and Wildlife Service

VEDO: Vectren Energy Delivery of Ohio

4906-11-02 Construction Notice Requirements

4906-11-02(B) GENERAL INFORMATION

(1) Name of the project

Vectren Energy Delivery of Ohio (“VEDO”) is applying for a Construction Notice for a replacement pipeline project located in Fairborn, Ohio, Greene County. The name of the project is the Z-50E 24-inch Oak Lawn Replacement Project.

(2) Brief project description, including map depicting the facility’s location and the reason why the project meets the requirements of a construction notice.

VEDO is proposing to replace approximately 2,740 feet of an existing 18-inch natural gas transmission pipeline with 24-inch diameter pipe. The 24-inch steel pipe will be coated with 14-16 mils of fusion bonded epoxy coating and cathodically protected. Approximately 1,140 feet of the pipe will be installed using open-trenching methods. The existing 18-inch pipe will be removed as the new 24-inch pipe is installed. 1,600 feet will be installed utilizing directional drilling due to the surrounding conditions and the 18-inch pipe will be filled with inert gas, capped, and abandoned in-place. A map of the proposed facility’s location is included as Attachment A.

The project meets the criteria listed in Appendix B of the Ohio Administrative Code Rule 4906-1-01 for a construction notice because it is less than one mile in length.

(3) Explanation of the need for the proposed facility

The Z-50E 24-inch Oak Lawn Replacement Project is necessary because of an encroachment on the pipeline by the Red Oak Trailer Park. The proximity of the pipeline to the mobile homes (as little as 4-inches off of the centerline of the pipe) does not allow for access and

excavation of the pipeline in the event of an emergency. VEDO has been monitoring the encroachment for several years and after multiple studies, changes in operation, and discussions with the park owners, VEDO has determined that the best solution to the encroachment is to relocate three mobile homes and to shift the transmission line into the center of Oak Lawn Drive (located in the park). Moving the pipeline to the center of the road will allow safe excavation of the pipeline for maintenance, assessment, and in the event of any emergency. Upgrading the diameter of the pipe to 24-inches will align with VEDO's future plans for in-line inspection capability and future load growth because portions of the transmission line are already 24-inch diameter. The entire line needs to be 24-inch to allow for this type of integrity inspection. Further, the increased diameter will allow the pipeline to operate at a much lower stress level thus reducing the overall risk score of the pipeline and will allow for future inline inspections on the Z-50E transmission line.

(4) Anticipated Construction Schedule and Proposed In-Service Date

The construction of the project has been tentatively scheduled to start October 1, 2015 and is expected to be in service by December 1, 2016.

(5) Estimated capital costs of the project

The estimated capital costs for the Z-50E 24-inch Oak Lawn Replacement is \$3,398,000.

(6) Operating Characteristics, Required Structures, and Right-of-Way and/or Land Requirements

- ***Pipeline MAOP:*** The proposed 24-inch high-pressure line will operate at a pressure range of 350 to 500 pounds per square inch gage ("psig"). The maximum allowable operating pressure will be 500 psig.

- **Pipe Material:** A proposed 24-inch steel pipeline will have a wall thickness of 0.375 inches and a minimum yield strength of 52,000 PSI. The pipeline will be externally coated with 14-16 Mils of Fusion Bonded Epoxy coating and cathodically protected by a rectifier(s).
- **Structures:** No structures will be constructed as part of the replacement project.
- **Right-of-Way (ROW) and/or Land Requirement:** Construction of the Z-50E 24-inch Oak Lawn Replacement will occur within VEDO's 50-foot wide permanent easement. Stock piles, staging, pipe pullback areas, and temporary access roads will all utilize VEDO's existing easement on the Z-50E transmission line. No temporary easements are required.

(7) Area map and written instructions to the facility.

Attachment B is an area vicinity map of the proposed project. Driving directions from Columbus, Ohio to the facility site in Fairborn, Ohio: Beginning in Columbus, start by taking I-70 west toward Dayton, take the I-675 south exit toward Cincinnati, take exit 20 for Dayton Yellow Springs Road, turn left onto E Dayton Yellow Springs Rd, continue for 0.9 mile, turn left on Beaver Valley Road, the project site will be on the left after 0.4 mile.

(8) Property Owner List

The project is entirely within VEDO's existing right-of-way (ROW). The property owners adjacent to the existing ROW are listed in Table 1. Notices to ROW occupants of the proposed project were sent out by VEDO on several occasions earlier this year. Samples of these letters have been included with this application in Attachment C. Additionally, VEDO has had several meetings with the City of Fairborn and the owners of the Red Oak Trailer Park regarding the project. A fact sheet on the project has been included with Attachment C.

TABLE 1: PROPERTY OWNER LIST

Parcel #	Name	Address
A020000200270011000	AOK LLC	301 Red Oak Dr Fairborn, OH 45324
A020000200270010400	Echo Woods LLC	2242 Beaver Valley Rd Fairborn, OH 45324
A020000200270010500	Echo Woods LLC	2242 Beaver Valley Rd Fairborn, OH 45324
A020000200270010600	Echo Woods LLC	2242 Beaver Valley Rd Fairborn, OH 45324
A020000200270010700	Echo Woods LLC	2242 Beaver Valley Rd Fairborn, OH 45324
A020000200270010800	Echo Woods LLC	2242 Beaver Valley Rd Fairborn, OH 45324
A020000200270005800	Luther Neeley	442 White Ash Ct Fairborn, OH 45324
A0200002002270005900	Riyad Tayim	426 White Ash Ct Fairborn, OH 45324
A020000200270006000	Sarah L Cho	436 White Ash Ct Fairborn, OH 45324
A020000200270006100	Luther Neeley Trustee	442 White Ash Ct Fairborn, OH 45324
A020000200270000500	Diaz Construction Inc.	535 Seif Rd Piketon, OH 45661
A02000020026200300	Valle Greene Owners Association	6540 Centerville Business Pkwy Dayton, OH 45459
A020000200261000100	Valle Green Owners Association	6540 Centerville Business Pkwy Dayton, OH 45459

4906-11-02(C) DOCUMENTATION OF CONSTRUCTION NOTICE

A copy of this Construction Notice is being provided concurrently to the following public officials of Greene County listed in Table 2 below:

TABLE 2: PUBLIC OFFICIALS

Alan Anderson Tom Koogler Bob Glaser c/o Brandon Huddleson County Administrator Greene County Board of Commissioners 35 Greene Street Xenia, OH 45385	Robert N. Geyer, P.E., P.S. Greene County Engineer 615 Dayton-Xenia Road Xenia, OH 45385
Ken LeBlanc Executive Director Regional & Coordinating Commission 651 Dayton-Xenia Road Xenia, OH 45385	Don Leeds District Administrator Green County Soil & Water Conservation 1363 Burnett Drive Xenia, OH 45385
Mayor Dan Kirkpatrick 44 W Hebble Ave Fairborn, OH 45324	Don O'Connor, PE City Engineer 44 W Hebble Ave Fairborn, OH 45324
Keith Brane, AICP Planning Division 44 W Hebble Ave Fairborn, OH 45324	

A copy of a transmittal letter submitting this Construction Notice included with this application as Attachment D.

The following additional information is being provided to assist the Ohio Power Siting Board Staff with the review of the Construction Notice Application.

ADDITIONAL INFORMATION

(1) Cultural Resources

Weller and Associates was contracted to conduct a literature review for the project. The area of potential effects for the project, which consists of land directly impacted by construction activities, equipment access and storage within the project limits, was evaluated by Weller. It was the opinion of Weller that Phase I level work is not necessary for the project because it is contained within severely disturbed contexts and will not impact any significant historic resources. The results of the literature review and the project summary form for the project were submitted to the Ohio Historic Preservation Office ("OHPO") for review on July 10, 2015. Correspondence with the OHPO will be provided to the staff once received. Documents submitted for review the OHPO have been provided in Attachment E.

(2) Environmental Data

Environmental field surveys were conducted on the project on June 18, and August 5, 2015. Two streams were identified within the project area. No wetlands were delineated within the project area. Both of streams will be temporarily impacted with the replacement of this pipeline and are covered under the U.S. Army Corps of Engineers Nation Wide Permit with Ohio Environmental Protection Agency 401 Water Quality Certification without submitting a pre-construction notification. The Delineation Report and addendum to the report for the project has been provided in Attachment F. Please refer to the data noted in the "Oak Lawn Project Study Area" of the Report. The project is exempt from coverage under the Ohio Environmental Protection Agency's General Permit #OHC000004, for storm water discharges associated with construction activities, because the Z-50E is a natural gas transmission line.

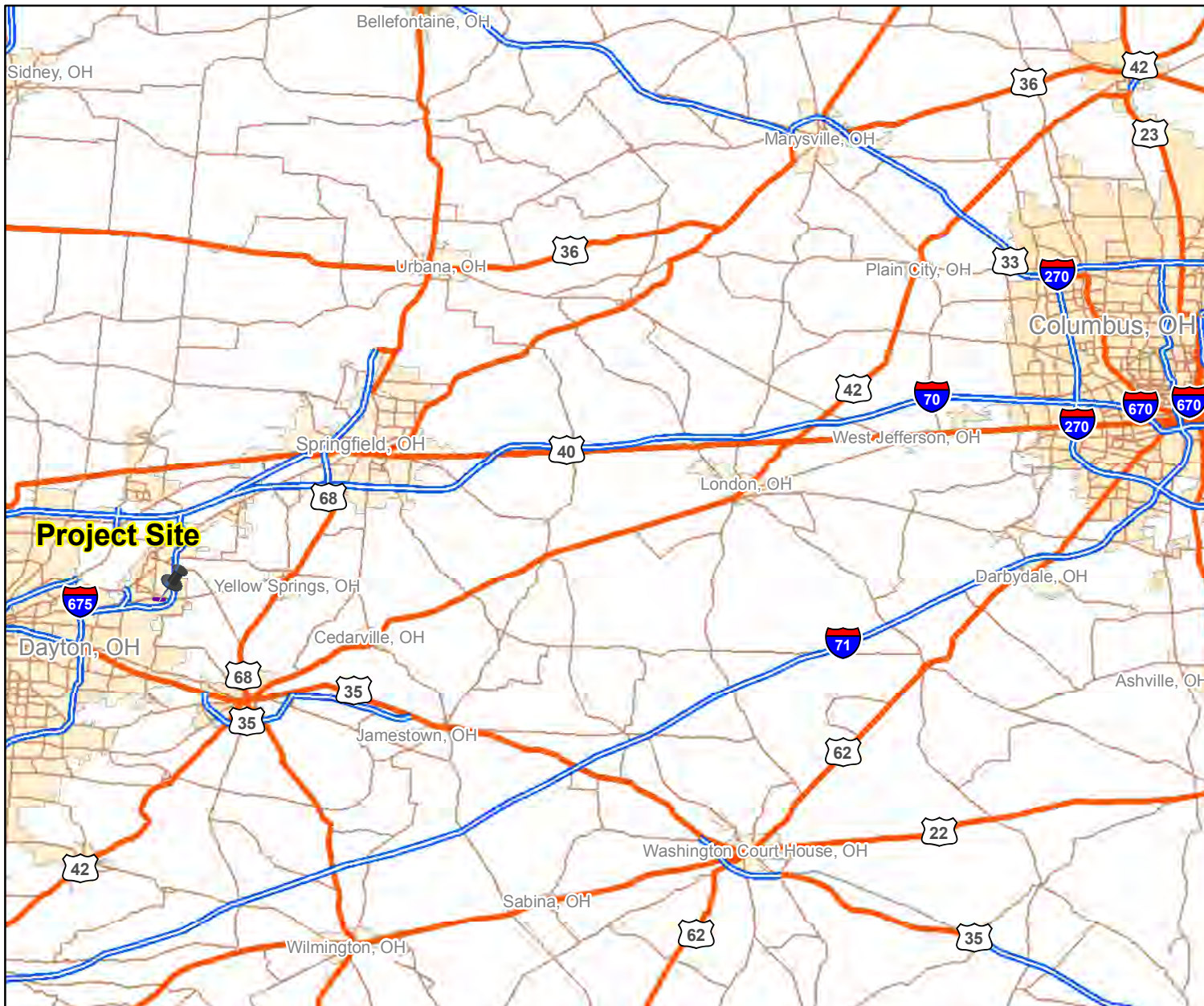
(3) Species of Concern

The project area was entered into the U.S. Fish and Wildlife Service's ("USFWS") Information for Planning and Conservation ("IPaC") tool for information regarding federal wilderness areas, wildlife refuges or designated critical habitat, and federally listed species within the vicinity of the project area on July 10, 2015. The results from this inquiry resulted in four endangered species, Indiana bat (*Myotis sodalist*), Clubshell (*Villosa fabalis*), Rayed Bean (*Pleurobema clava*), and the Snuffbox Mussel (*Epioblasma triquetra*) and one threatened species, northern long-eared bat (*Myotis setentrionalis*), identified within the project area. No federal wilderness areas, refuges or critical habitats were identified within the project area. The IPaC Report and correspondence letter received from the USFWS on the project have been included with this Construction Notice as Attachment G.

Potential habitat for the species identified through IPaC and the ODNR Division of Wildlife's listed species for Greene County were surveyed by Cardno during the surface water delineations. One tree was identified as potential habitat within the project corridor for the Indiana bat (*Myotis sodalis*) and the Northern long-eared bat (*Myotis septentrionalis*). The removal of this tree will follow the seasonal tree clearing guidelines, October 1 through March 31. No other suitable habitat was identified by Cardno along the project route. Results of the potential habitat identified within the project area have been provided as Attachment H. Correspondence with the ODNR regarding this project has been included as Attachment I.

ATTACHMENT A

FACILITY LOCATION MAP



OPSB # 15-1416-GA-BNR
**Z-50E 24" Oak Lawn
 Replacement**

Greene County, Ohio

**Attachment A:
 Project Vicinity Map**



Utility Technologies International
 4700 Homer Ohio Lane
 Groveport, Ohio 43125

(614) 482-8080
Total Capabilities in the Pipeline Industry

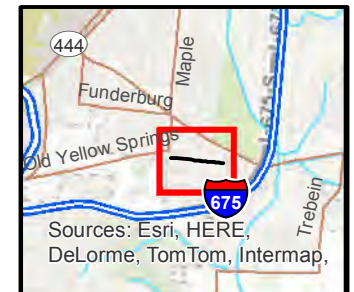
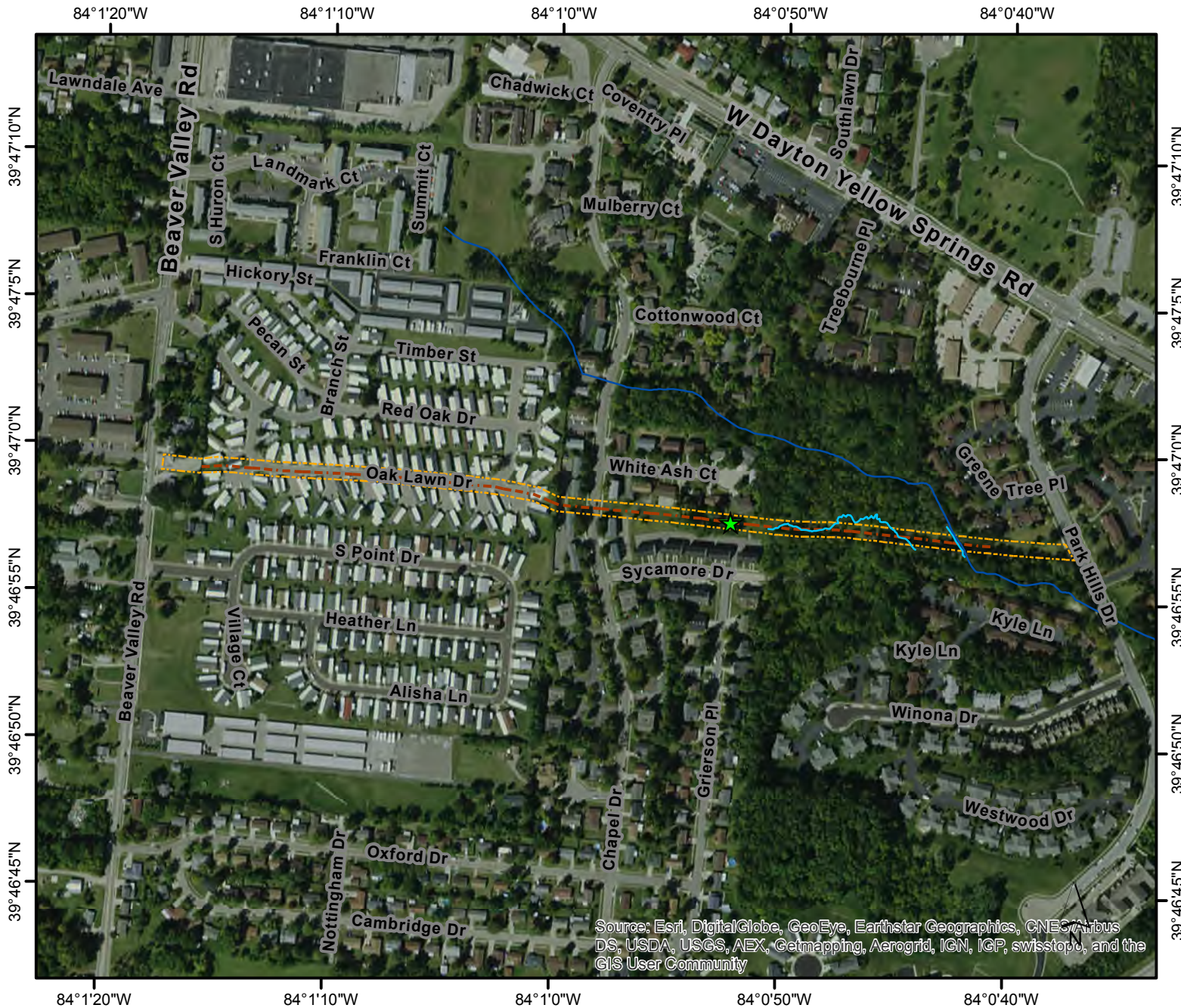
UTI Project #: 15-166
 Date: 8/3/2015

Page 1 of 1

Document Path: \\p201515166 Vectren Z-50E OakLawn\\0001\\0001_VicinityMap.mxd

ATTACHMENT B

PROJECT VICINITY MAP



OPSB # 15-1416-GA-BNR

Z-50E 24" Oak Lawn Replacement

Greene County, Ohio

Attachment B:
Project Site Map

Legend

- ★ Bat Roost
- Stream
- Intermittent Stream
- - - Oaklawn 24" Replacement
- Right of Way

1 inch = 500 feet
Absolute Scale: 1:6,000



Utility Technologies International
4700 Homer Ohio Lane
Groveport, Ohio 43125

(614) 482-8080
Total Capabilities in the Pipeline Industry

UTI Project #: 15-165
Date: 8/3/2015

Page 1 of 1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Document Path: h:\2015\15165 VECTREN Z-50E Oaklawn\WORK\PROJECT Map.mxd

ATTACHMENT C

PROPERTY OWNER NOTIFICATION LETTERS



Vectren Corporation

P.O. Box 209

Evansville, IN 47702-0209

February ____, 2015

Dear Oak Lawn Drive Homeowner,

Vectren Energy Delivery of Ohio (Vectren) operates an 18-inch diameter underground natural gas pipeline that is currently located on the south side of Oak Lawn Drive in close proximity to many of the homes. This pipeline has been in place since the 1950's. Due to enhanced Federal pipeline safety regulations and practices; Vectren must access and inspect this critical gas pipeline more frequently, however, accessibility to the pipeline in its current location is limited due to the close proximity to the homes.

After careful consideration, a new corridor which runs near the center of Oak Lawn Drive has been identified by Vectren for the relocation of this existing pipeline with a newly-constructed 24-inch diameter pipeline. This new pipeline will be located approximately 25 feet from all homes, allowing Vectren to more easily access, maintain and operate this pipeline in compliance with safety regulations and using the most technologically-advanced inspection procedures. We are targeting to install the pipeline in a way that prevents us from having to dig a large trench through the roadway. While there may be some areas with digging and surface construction, traffic access along Oak Lawn Drive is expected to be maintained at all times during construction.

Construction of this replacement pipeline is anticipated to begin sometime between mid-summer and early fall of 2015 and will last approximately 60 days. Vectren will host a public informational meeting prior to construction to answer any questions and discuss the project. Once the meeting has been scheduled, you will receive a notice with information as to the date, time and location. Please be assured that all personnel representing Vectren will be respectful of your property during the construction process. In the interim, if you have any questions or concerns, please contact Alissa Rudolph, Vectren Right of Way Agent, at 937-312-2540, or via email at arudolph@vectren.com.

Sincerely,

Colleen Ryan
President
Vectren Energy Delivery of Ohio



March 19, 2015

Diaz Construction, Inc
535 Seif Rd
Piketon, OH 45661

Re: Vectren Natural Gas Pipeline Work

Vectren Energy Delivery of Ohio, Inc. (Vectren) owns and operates a high pressure natural gas pipeline (Z50) which crosses your property at E Dayton Yellow Springs Rd. Z50 was installed several decades ago in an easement which was acquired on your property. Vectren is planning to replace the pipeline.

The purpose of this letter is to communicate to you basic information as to what to expect as a result of this project. The existing easement held by Vectren allows for maintenance and inspection of this line.

Actual pipeline work is scheduled to begin in September 2015 and complete in October 2015. The pipeline work will be completed by a Vectren contractor and the project will be supervised by Vectren. The replacement will require the contractor to excavate the pipeline on your property. Vectren will restore the property upon completion. Vectren and its contractors are committed to addressing any reasonable concerns you may have.

If you have any questions or would like to discuss any concerns you have specific to the work on your property, please contact me at 937-440-1880.

Sincerely,

Thomas F. Jones
Project Engineer
Vectren Energy Delivery

Vectren's Pipeline Integrity Management Program



Pipeline operators, such as Vectren Energy Delivery of Ohio (Vectren), have a responsibility to maintain the integrity of their pipelines to ensure safety and reliability for neighboring property owners and customers. The Pipeline Safety Improvement Act of 2002 requires natural gas pipeline owners to implement integrity management programs through various pipeline maintenance and inspection practices.

Why must Vectren modify the pipeline route?

The pipeline running along Oaklawn Drive in the Red Oaks Mobile Home Park was installed in the 1950s and last inspected during a two-year period from 2009 to 2011. Federal law requires Vectren to inspect its pipeline every seven years with the next inspection scheduled for 2018. However, access to the current pipeline is limited due to its proximity to several mobile homes. As a result, the pipeline will be replaced, the right-of-way will be relocated and three houses will be removed to improve Vectren's ability to inspect the line. Vectren is working with the displaced homeowners to determine the appropriate level of compensation needed for relocation according to federal regulations adhering to relocation assistance and real property acquisition. Additionally, all homeowners in the mobile home park will be notified of the project details. The proposed route was determined to have the least amount of impact on the residents of the mobile home park.

What is a Right-of-Way (ROW)?

A strip of land, usually about 50 to 150 feet wide, containing the pipeline is known as the pipeline ROW. A permanent ROW will be acquired from the property owner for the pipeline prior to its construction. The ROW, also called an easement, stays with the title of the real estate as it is transferred from owner to owner.

Among other features, the ROW:

- enables workers to gain access for inspection, maintenance, testing or emergencies;
- maintains an unobstructed view for surveillance; and
- identifies an area that restricts certain activities to protect the landowner, the community through which the pipeline passes and the pipeline.

Vectren is working with the displaced homeowners to determine the appropriate level of compensation needed for relocation according to federal regulations adhering to relocation assistance and real property acquisition. Additionally, all homeowners in the mobile home park will be notified of the project details

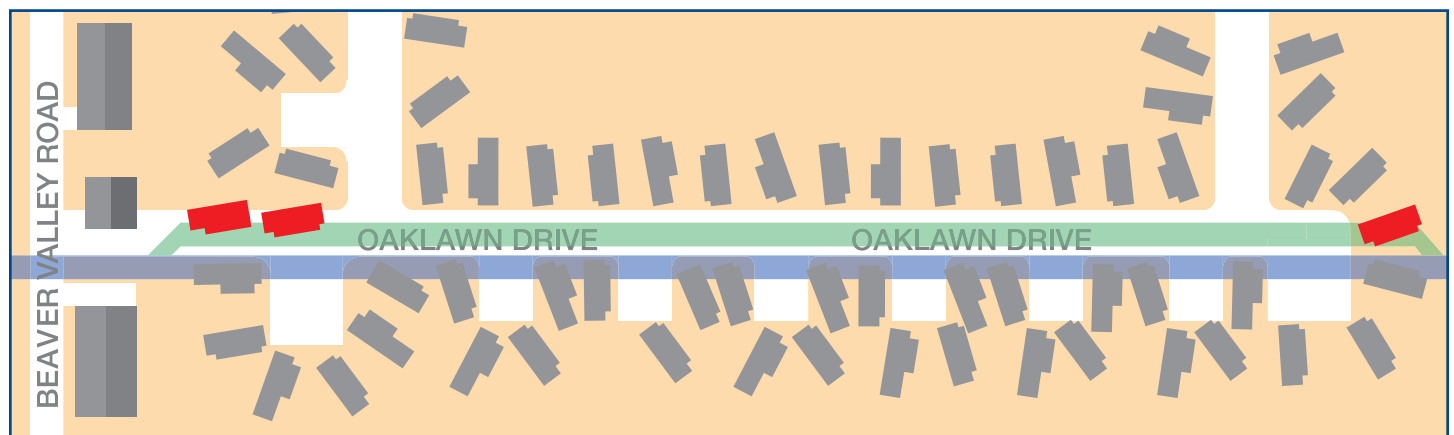


Keeping the ROW clear of obstructions allows better access to the pipeline for inspection and maintenance.

Project Timeline

2009-2011	Last Pipeline Inspection
February 2015	Notify Affected Customers
Summer 2015	Begin Construction of Pipeline Relocation
2018	Meet Compliance Deadline According to Federal Requirements

Proposed Right-of-Way



■ = Current pipeline right-of-way ■ = Proposed pipeline right-of-way ■ = Mobile homes that must be removed

ATTACHMENT D

PUBLIC OFFICIAL TRANSMITTAL LETTER



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August 13, 2015

<ADDRESS>
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Re: Vectren Energy Delivery of Ohio, Inc., Replacement of the Z-50E Oak Lawn Project, City of Fairborn, Greene County, Ohio OPSB Case No. 15-1416-GA-BNR

<SALUTATION>:

Vectren Energy Delivery of Ohio (“Vectren”) is planning a replacement pipeline project, entitled the Z-50E 24-inch Oak Lawn Replacement Project, which is approximately 2,740 feet long and would replace an existing 18-inch pipeline with a 24-inch steel pipeline externally coated with 14-16 mils of fusion bonded epoxy coating and cathodically protected. The Z-50E Oak Lawn Replacement Project is located in the City of Fairborn, Green County, Ohio.

The pipeline project will be constructed in the right-of-way where the existing pipeline will be removed and the 24-inch pipeline will be shifted into the center of Oak Lawn Drive. Construction of the replacement pipeline will begin October 1, 2015 and the estimated completion date is December 1, 2015.

In accordance with the provisions of Ohio Administrative Code (OAC) Rule 4906-1-01, Appendix B, this project falls within the Board’s requirements for a Construction Notice. Therefore, in compliance with OAC Rule 4906-11-02 of the Board’s rules and regulations, we have prepared and filed the attached Construction Notice with the Board for its review and approval. These materials contain a description of the replacement pipeline.

If you have any questions concerning this pipeline installation project, please contact Kevin Preece (812) 491-5922.

Sincerely,

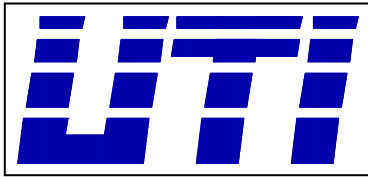
Sally W. Bloomfield

Enclosure

cc: Kevin Preece, Project Manager

ATTACHMENT E

CULTURAL RESOURCE SECTION 106 REVIEW



Utility Technologies International
4700 Homer Ohio Lane
Groveport, OH 43125
P: 614-482-8080
www.uti-corp.com

July 10, 2015

Mark J. Epstein
Ohio Historic Preservation Office
Resource Protection and Review
800 E 17th Avenue
Columbus, OH 43211-2497

**RE: Section 106 Review – Project Summary Form
Proposed Natural Gas Pipeline Replacement Project
Bath Township, Greene County, Ohio**

Dear Mr. Epstein,

Utility Technologies International (UTI), on behalf of Vectren Energy, is working on a Construction Notice for the Ohio Power Siting Board (OPSB) for the replacement of an 18-inch natural gas transmission pipeline located in Bath Township, Green County, Ohio. The existing 18-inch pipeline will be replaced with a 24-inch diameter pipe. The work will be limited to a disturbed and existing project corridor. There are no alternatives for this project; it is being maintained on the existing and previously disturbed pipeline easement.

Weller and Associates was contracted by UTI to conduct a literature review for the project. The work for the replacement of the pipeline will occur within the same easement and it was the opinion of Weller and Associates that Phase I level work would not be necessary for the project as it is contained within severely disturbed contexts and will not impact any significant historic resources. UTI is requesting the Ohio Historic Preservation Office's concurrence with their opinion.

Enclosed for your review are the Project Summary Form and the Cultural Resource Management Literature Review for the project. Should you have any questions or need additional information, please contact me at (614) 482-8080 or mstahl@uti-corp.com.

Sincerely,

Melinda Stahl
Environmental Coordinator
Utility Technologies International

Enclosures (2):

- OHPO Section 106 Review Project Summary Form
- Cultural Resource Management Literature Review for the Z50E Oaklawn 24" Pipeline Replacement in Bath Township, Greene County, Ohio

CC: Thomas Jones, Vectren
Mark Wannemueller, Vectren



OHIO HISTORIC PRESERVATION OFFICE: RESOURCE PROTECTION AND REVIEW

Section 106 Review - Project Summary Form

For projects requiring a license from the Federal Communications Commission, please use FCC Forms 620 or 621. **DO NOT USE THIS FORM.**

SECTION 1: GENERAL PROJECT INFORMATION

All contact information provided must include the name, address and phone number of the person listed. Email addresses should also be included, if available. Please refer to the Instructions or contact an OHPO reviewer (mailto:Section106@ohiohistory.org) if you need help completing this Form. Unless otherwise requested, we will contact the person submitting this Form with questions or comments about this project.

Date: July 1, 2015

Name/Affiliation of person submitting form: Ryan Weller/Principal Investigator

Mailing Address: 1395 West Fifth Avenue, Columbus, OH 43212

Phone/Fax/Email: 614-485-9435

A. Project Info:

1. This Form provides information about:

New Project Submittal:

YES ☒ NO ☐

Additional information relating to previously submitted project:

YES ☐ NO ☒

OHPO/RPR Serial Number from previous submission:

2. Project Name (if applicable):

Z-50E 24" Oaklawn Pipeline Replacement in Bath Township, Greene County, Ohio

3. Internal tracking or reference number used by Federal Agency, consultant, and/or applicant to identify this project (if applicable):

- B. Project Address or vicinity:
Section 24 of Bath Township along the NW 1/4 and SW 1/4 section line.
- C. City/Township:
Bath
- D. County:
Greene
- E. Federal Agency and Agency Contact. *If you do not know the federal agency involved in your project, please contact the party asking you to apply for Section 106 Review, not OHPO, for this information. HUD Entitlement Communities acting under delegated environmental review authority should list their own contact information.*
USACE
- F. Type of Federal Assistance. *List all known federal sources of federal funding, approvals, and permits to avoid repeated reviews.*
This project is covered under the USACE Nation Wide Permit #12
- G. State Agency and Contact Person (if applicable):
Ohio Power Siting Board - Ed Steele (614) 466-7990
ed.steele@puc.state.oh.us
- H. Type of State Assistance:
Construction Notice with Ohio Power Siting Board
- I. Is this project being submitted at the direction of a state agency **solely** under Ohio Revised Code 149.53 or at the direction of a State Agency? *Answering yes to this question means that you are sure that no federal funding, permits or approvals will be used for any part of your project, and that you are seeking comments only under ORC 149.53.*

YES ☐ NO ☒
- J. Public Involvement- Describe how the public has been/will be informed about this project and its potential to affect historic properties. Please summarize how they will have an opportunity to provide comments about any effects to historic properties. (This step is required for all projects under 36 CFR § 800.2):
OPSB - Construction Notification process
- K. Please list other consulting parties that you have contacted/will contact about this project, such as Indian Tribes, Certified Local Governments, local officials, property owners, or preservation groups. (See 36 CFR § 800.2 for more information about involving other consulting parties). Please summarize how they will have an opportunity to provide comments:

SECTION 2: PROJECT DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)

Provide a description of your project, its site, and geographical information. You will also describe your project's Area of Potential Effects (APE). Please refer to the Instructions or contact an OHPO reviewer if you need help with developing the APE or completing this form.

For challenging projects, provide as much information as possible in all sections, and then check the box in Section 5.A. to ask OHPO to offer preliminary comments or make recommendations about how to proceed with your project consultation. This is recommended if your project involves effects to significant historic properties or if there may be challenging procedural issues related to your project. Please note that providing information to complete all Sections will still be required and that asking OHPO for preliminary comments may tend to delay completion of the review process for some projects.

A. Does this project involve any Ground-Disturbing activity: YES ☒ NO ☐
(If **Yes**, you must complete all of Section 2.A. If **No**, proceed directly to Section 2. B.)

1. General description of width, length and depth of proposed ground disturbing activity:

The pipeline will be installed using open-trench methods. The dimensions of the trench will be approximately 4-foot wide by 5-foot deep.

2. Narrative description of previous land use and past ground disturbances, if known:
Please refer to the attached report for details.

3. Narrative description of current land use and conditions:
Please refer to the attached report for details

4. Does the landowner know of any archaeological resources found on the property?
YES ☐ NO ☒ If yes, please describe:

B. Submit the exact project site location on a USGS 7.5-minute topographic quadrangle map for all projects. Map sections, photocopies of map sections, and online versions of USGS maps are acceptable as long as the location is clearly marked. Show the project's Area of Potential Effects (APE). It should be clearly distinguished from other features shown on the map:

1. USGS Quad Map Name:

Fairborn, 1965

2. Township/City/Village Name:

C. Provide a street-level map indicating the location of the project site; road names must be identified and legible. Your map must show the exact location of the boundaries for the project site. Show the project's Area of Potential Effects (APE). It should be clearly distinguished from other features shown on the map:

D. Provide a verbal description of the APE, including a discussion of how the APE will include areas with the potential for direct and indirect effects from the project. Explain the steps taken to identify the project's APE, and your justification for the specific boundaries chosen:

The project involves the replacement of an existing pipeline. The work will be limited to the existing easement. The APE is regarded as being the footprint of construction.

E. Provide a detailed description of the project. This is a critical part of your submission. Your description should be prepared for a cold reader who may not be an expert in this type of project. The information provided must help support your analysis of effects to historic properties, not other types of project impacts. Do not simply include copies of environmental documents or other types of specialized project reports. If there are multiple project alternatives, you should include information about all alternatives that are still under active consideration:

The project involves the removal of an 18" pipeline and its replacement with a 24"

pipeline. The work will be limited to a disturbed and existing project corridor. There are no alternatives known for this project, it is being maintained on existing and previously disturbed pipeline easement.

SECTION 3: IDENTIFICATION OF HISTORIC PROPERTIES

Describe whether there are historic properties located within your project APE. To make that determination, use information generated from your own Background Research and Field Survey. Then choose one of the following options to report your findings. Please refer to the Instructions and/or contact an OHPO reviewer if you are unsure about how to identify historic properties for your project.

If you read the Instructions and you're still confused as to which reporting option best fits your project, or you are not sure if your project needs a survey, you may choose to skip this section, but provide as much supporting documentation as possible in all other Sections, then check the box in Section 5.A. to request preliminary comments from OHPO. After reviewing the information provided, OHPO will then offer comments as to which reporting option is best suited to document historic properties for your project. Please note that providing information to complete this Section will still be required and that asking OHPO for preliminary comments may tend to delay completion of the review process for some projects.

Recording the Results of Background Research and Field Survey:

- A. Summary of discussions and/or consultation with OHPO** about this project that demonstrates how the Agency Official and OHPO have agreed that no Field Survey was necessary for this project (typically due to extreme ground disturbance or other special circumstances). Please **attach copies** of emails/correspondence that document this agreement. You must explain how the project's potential to affect both archaeological and historic resources were considered.
- B. A table that includes the minimum information** listed in the OHPO Section 106 Documentation Table (which is generally equivalent to the information found on an inventory form). This information must be printed and mailed with the Project Summary Form. To provide sufficient information to complete this Section, you must also include summary observations from your field survey, background research and eligibility determinations for each property that was evaluated in the project APE.
- C. OHI (Ohio Historic Inventory) or OAI (Ohio Archaeological Inventory) forms-** New or updated inventory forms may be prepared using the OHI pdf form with data population capabilities, the Internet IForm, or typed on archival quality inventory forms. To provide sufficient information to complete this Section, you must include summary observations from your field survey and background research. You must also include eligibility determinations for each property that was evaluated in the project APE
- D. A historic or archaeological survey report** prepared by a qualified consultant that meets professional standards. The survey report should meet the Secretary of the Interior's Standards and Guidelines for Identification and OHPO Archaeological Guidelines. You may also include new inventory forms with your survey, or update previous inventory forms. To complete this section, your survey report must include summary observations from your field survey, background research and eligibility determinations for each property that was evaluated within the APE.
- E. Project Findings.** Based on the conclusions you reached in completing Section 3, please choose one finding for your project. There are (mark one):
 - ☐ Historic Properties Present in the APE:
 - ☒ No Historic Properties Present in the APE:

SECTION 4: SUPPORTING DOCUMENTATION

This information must be provided for all projects.

- A. Photographs must be keyed to a street-level map, and should be included as attachments to this application. Please label all forms, tables and CDs with the date of your submission and project name, as identified in Section 1. You must present enough documentation to clearly show existing conditions at your project site and convey details about the buildings, structures or sites that are described in your submission. Faxed or photocopied photographs are not acceptable. See Instructions for more info about photo submissions or 36 CFR § 800.11 for federal documentation standards.
 - 1. Provide photos of the entire project site and take photos to/from historic properties from/towards your project site to support your determination of effect in Section 5.
 - 2. Provide current photos of all buildings/structures/sites described.
- B. Project plan, specifications, site drawings and any other media presentation that conveys detailed information about your project and its potential to affect historic properties.
- C. Copies or summaries of any comments provided by consulting parties or the public.

SECTION 5: DETERMINATION OF EFFECT

- A. **Request Preliminary Comments.** For challenging projects, provide as much information as possible in previous sections and ask OHPO to offer preliminary comments or make recommendations about how to proceed with your project consultation. This is recommended if your project involves effects to significant historic properties, if the public has concerns about your project's potential to affect historic properties, or if there may be challenging procedural issues related to your project. Please be aware that providing information in all Sections will still be required and that asking OHPO for preliminary comments may tend to delay completion of the review process for some projects.
 - 1. We request preliminary comments from OHPO about this project:
YES ☐ NO ☐
 - 2. Please specify as clearly as possible the particular issues that you would like OHPO to examine for your project (for example- help with developing an APE, addressing the concerns of consulting parties, survey methodology, etc.):
We are requesting that the SHPO review the information provided, consider the fact that these pipelines are within disturbed areas, and concur with the findings of the literature review; no further CRM work is necessary.
- B. **Determination of Effect.** If you believe that you have gathered enough information to conclude the Section 106 process, you may be ready to make a determination of effect and ask OHPO for concurrence, while considering public comments. Please select and mark one of the following determinations, then explain the basis for your decision on an attached sheet of paper:
 - ☒ **No historic properties will be affected** based on 36 CFR § 800.4(d) (1).
Please explain how you made this determination:

☐ **No Adverse Effect** [36 CFR § 800.5(b)] on historic properties. This finding cannot be used if there are no historic properties present in your project APE. Please explain why the Criteria of Adverse Effect, [36 CFR Part 800.5(a) (1)], were found not to be applicable for your project:

☐ **Adverse Effect** [36 CFR § 800.5(d) (2)] on historic properties. Please explain why the criteria of adverse effect, [36 CFR Part 800.5(a) (1)], were found to be applicable to your project. You may also include an explanation of how these adverse effects might be avoided, reduced or mitigated:

Please print and mail completed form and supporting documentation to:

*Ohio Historic Preservation Office
Attn: Mark J. Epstein, Department Head
Resource Protection and Review
800 E. 17th Avenue
Columbus, OH 43211-2497*



Cultural Resource Management Literature Review for the Z-50E Oaklawn 24" Pipeline Replacement in Bath Township, Greene County, Ohio

Ryan J. Weller

July1, 2015

1395 West Fifth Ave.
Columbus, OH 43212
Phone: 614.485.9435
Fax: 614.485.9439
Website: www.wellercrm.com

**Cultural Resource Management Literature Review for the Z-
50E Oaklawn 24" Pipeline Replacement
in Bath Township, Greene County, Ohio**

By

Ryan J. Weller

Submitted By:

**Ryan J. Weller, P.I
Weller & Associates, Inc.
1395 West Fifth Ave.
Columbus, OH 43212
Phone: 614.485.9435 Fax: 614.485.9439**

Prepared For:

**Utility Technologies International Corporation
4700 Homer Ohio Lane
Groveport, OH 43125**

Lead Agency:

Ohio Power Siting Board

A handwritten signature in black ink, appearing to read "Ryan J. Weller", is positioned above a horizontal line.

Ryan J. Weller, P.I.

July 1, 2015

Introduction

In May of 2015, Weller & Associates, Inc. conducted a cultural resource management literature Review for the Z-50E Oaklawn 24" Pipeline Replacement in Bath Township, Greene County, Ohio (Figures 1-4). The report was prepared for Utility Technologies International Corporation as a preliminary review to identify any possible 'red flags' regarding cultural resources. This document is to provide background information regarding previously recorded cultural resources in the vicinity of the project area. This report summarizes the result of the literature review and inspection of cartographic resources. The project involves an approximately 832.5 m (2,730.47 ft) long existing underground pipeline corridor; plans are to remove the old pipeline and replace it within the same easement/location.

Basic Environment

The majority of Greene County, including the project area, is located within the Southern Ohio Loamy Till Plain physiographic region. The project is located in end moraine conditions, which are rolling and has more relief than the surrounding terrain (Brockman 1998). The soil association is the Miamian-Celina. There are two soil series types indicated for the project area, Miamiam silt loam (MhC2; 6-12 percent slopes) and Miamian silt loam, (MhB; 2-6 percent slopes) (USDA, SCS) 2015]. Beaver Creek, a tributary of the Little Miami River drains the project area.

Literature Review

The literature review study area is defined as a 1.6 km (1 mi) study area from the center of the project (Figure 3). In conducting the literature review, the following resources were consulted at the Ohio Historic Preservation Office (OHPO) and the State Library of Ohio:

- 1) *Archeological Atlas of Ohio* (Mills 1914);
- 2) OHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- 3) Ohio Archaeological Inventory (OAI) files;
- 4) Ohio Historic Inventory (OHI) files;
- 5) National Register of Historic Places (NRHP) files;
- 6) Determinations of Eligibility (DOE) files;
- 7) OHPO CRM/contract archaeology files; and
- 8) Greene County atlases, histories, historic USGS 15' series topographic map(s), and current USGS 7.5' series topographic map(s).

The *Archeological Atlas of Ohio* (Mills 1914) does not indicate any resources within the project area or its immediate vicinity.

Inspection of the Ohio Archaeological Inventory (OAI) files did not indicate any sites recorded in the project area, but there are seven sites recorded in the study area (Table 1; Figure 3). None of these sites are within, adjacent, or near the project area.

Table 1. Archaeological sites recorded in the study area.							
OAI #	Affiliation	UN PRE	LA RC H	Unk Arch	MW OOD	TYP UNK	Area
GR0831	Prehistoric	Yes	No	No	No	Yes	700
GR0832	Prehistoric	Yes	No	No	No	Yes	1600
GR0833	Prehistoric	No	Yes	No	No	Yes	7500
GR0834	Prehistoric	Yes	No	No	No	Yes	125
GR1038	Prehistoric	Yes	No	No	No	Yes	20
GR1039	Prehistoric	Yes	No	No	No	Yes	20
GR0673	Prehistoric	No	No	Yes	No	Yes	0

The Ohio Historic Inventory (OHI) files were reviewed (Figure 3). There are eight OHIs located in the study area of this project (Table 2). None of these resources are recorded within, abutting, or near the project area.

Table 2. Ohio Historic Inventory resources identified in the study area.							
OHI #	Present Name	Other Name	Address	Place name	ArchStyle1	Activity	Date
GRE0041210	Martha Mantle House		2949 Dayton-Yellow Springs Rd	Fair born	Vernacular	Original Construction	1830
GRE0118310	2004 Redstone Dr		2004 Redstone Dr	Fair born	No academic style - Vernacular		1963
GRE0118410	107 E Bonomo Dr		107 E Bonomo Dr	Fair born	No academic style - Vernacular		1957
GRE0118510	33 E Bonomo Dr		33 E Bonomo Dr	Fair born	No academic style - Vernacular		1956
GRE0118610	1881 Bordeaux Dr		1881 Bordeaux Dr	Fair born	No academic style - Vernacular		1960
GRE0118710	1863 Ironwood Dr		1863 Ironwood Dr	Fair born	No academic style - Vernacular		1960
GRE0118810	20 E Bonomo Dr		20 E Bonomo Dr	Fair born	No academic style - Vernacular		1957
GRE0120210	Fairborn Primary School-Wright Campus	Wright Elementary School	480 W Funderburg Rd	Fair born	Modern Movements	Original/Most significant construct	1966-67

There are no NRHP or DOE properties located in the study area of this project.

A review of the OHPO online contract files indicated that there have been two surveys completed in the study area (Scheurer 1984; Tolonen 1996). Scheurer (1984) surveyed for the same pipeline, which also involved the eastern approximately half of the project area. This survey did not identify any sites and encountered severe disturbance associated with previous pipeline installation.

Cartographic/atlas resources were reviewed for the project area. The *Illustrated Atlas of Greene County Ohio* (Everts 1874) does not indicate any residences within the project area. The USGS *1904 Dayton, Ohio 15 Minute Series (Topographic)* map does not indicate any buildings within the project, but there is one near the western terminus of the area. This area has more recently been developed for housing (Figure 2). The USGS *1965 Fairborn, Ohio 7.5 Minute Series (Topographic)* map does not indicate any buildings within the project (Figure 1).

Summary

The literature review determined that the project area was at least partially surveyed in the past in addition to it being within an existing pipeline corridor. The project plans involve the extraction of an existing pipeline and its replacement with new pipe. This work will be maintained within the existing and severely disturbed corridor as it was established when the pipeline was first installed. The literature review does not depict any significant resources within, abutting, or near the project area. It is the opinion of Weller that Phase I level work is not necessary for this project as it is contained within severely disturbed contexts and will not impact any significant historic resources.

References Cited

Brockman, C. S.

1998 *Physiographic Regions of Ohio*. Ohio Department of Natural Resources, Division of Geological Survey, Columbus, Ohio.

Mills, W. C.

1914 *Archeological Atlas of Ohio*. Ohio State Archaeological and Historical Society, Columbus.

Scheurer, E. A.

1984 *CULTURAL RESOURCE SURVEY OF A PROPOSED 1.2 MILE NATURAL GAS PIPELINE REPLACEMENT IN BATH TOWNSHIP, GREENE COUNTY, OHIO*. Wapora, Inc. Copy available for review from the Ohio History Central.

Tolonen, A.

1996 *Phase I Cultural Resource Report for the Proposed Fawn Ridge Development in Beaver Creek and Bath Township, Greene County, Ohio*. Kemron Environmental Services. Copy available for review from the Ohio History Central.

United States Department of Agriculture, Soil Conservation Service

2015 *Soil Survey of Greene County, Ohio*. Soil Conservation Service, U. S. Department of Agriculture, Washington, D. C. in cooperation with the Ohio Department of Natural Resources, Division of Lands and Soils, and the Ohio Agricultural Research and Development Center, Columbus.

Figures

(TIPP CITY)

(DONNELSVILLE)

(NEW CARLISLE)

(YELLOW SPRINGS)

(DAYTON NORTH)

(YELLOW SPRINGS)

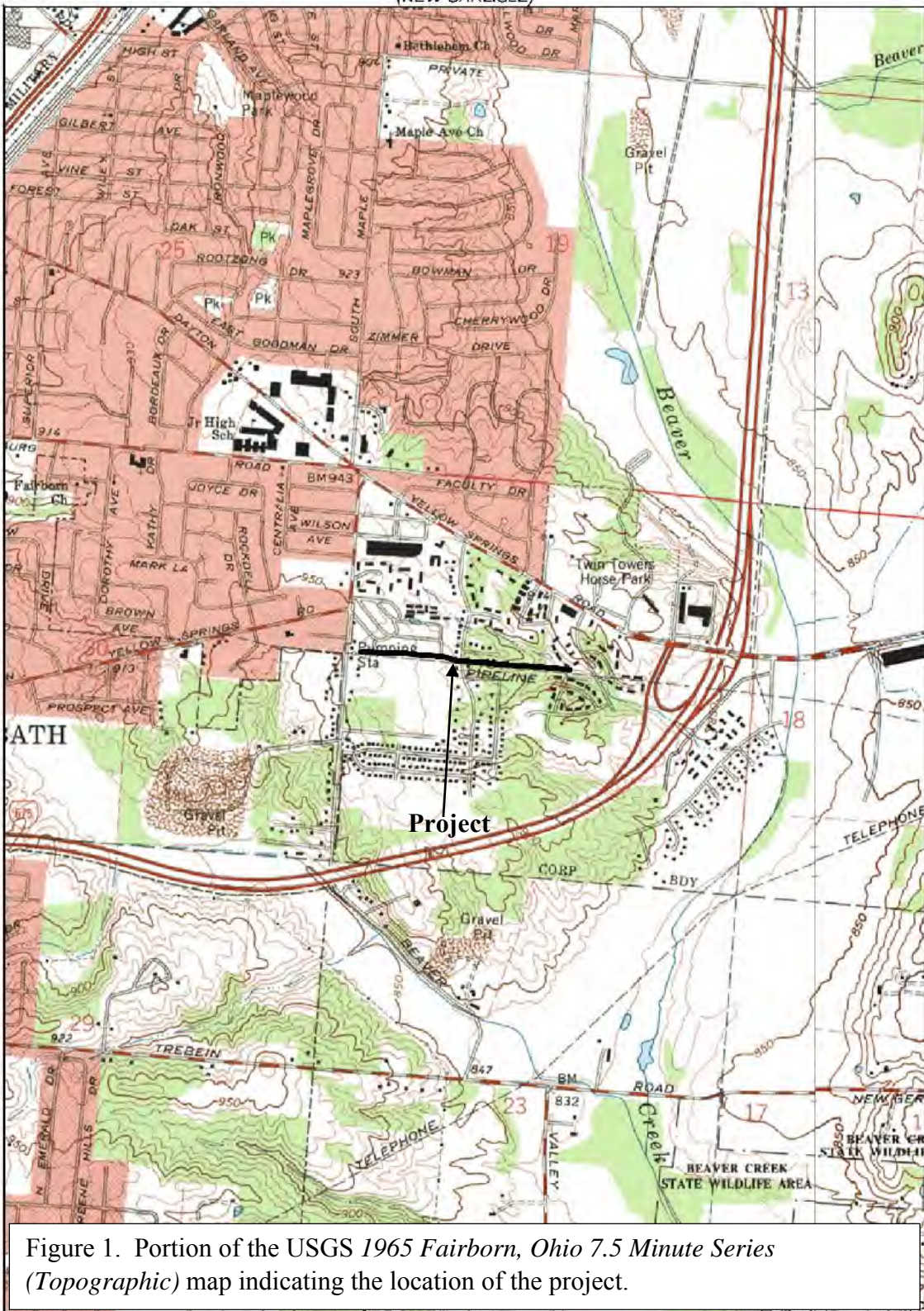


Figure 1. Portion of the USGS 1965 Fairborn, Ohio 7.5 Minute Series (Topographic) map indicating the location of the project.

(DAYTON SOUTH)

(BELLBROOK)

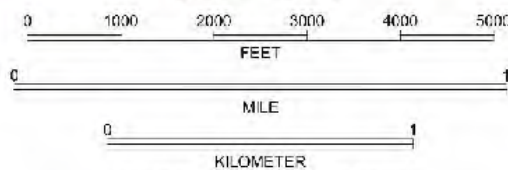
(XENIA)

Declination



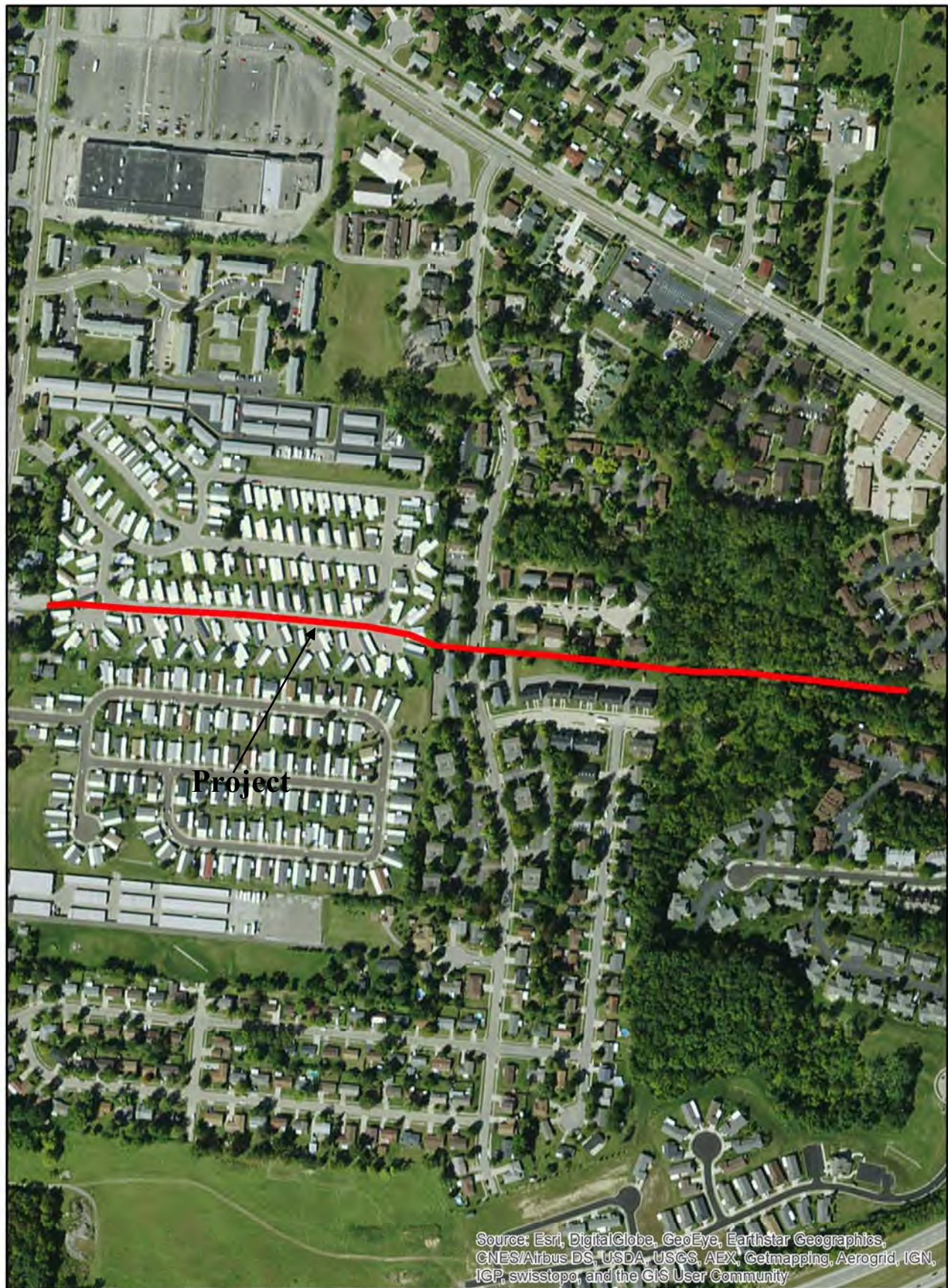
GN 1.90° E
MN 5.90° W

SCALE 1:24000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM 1929

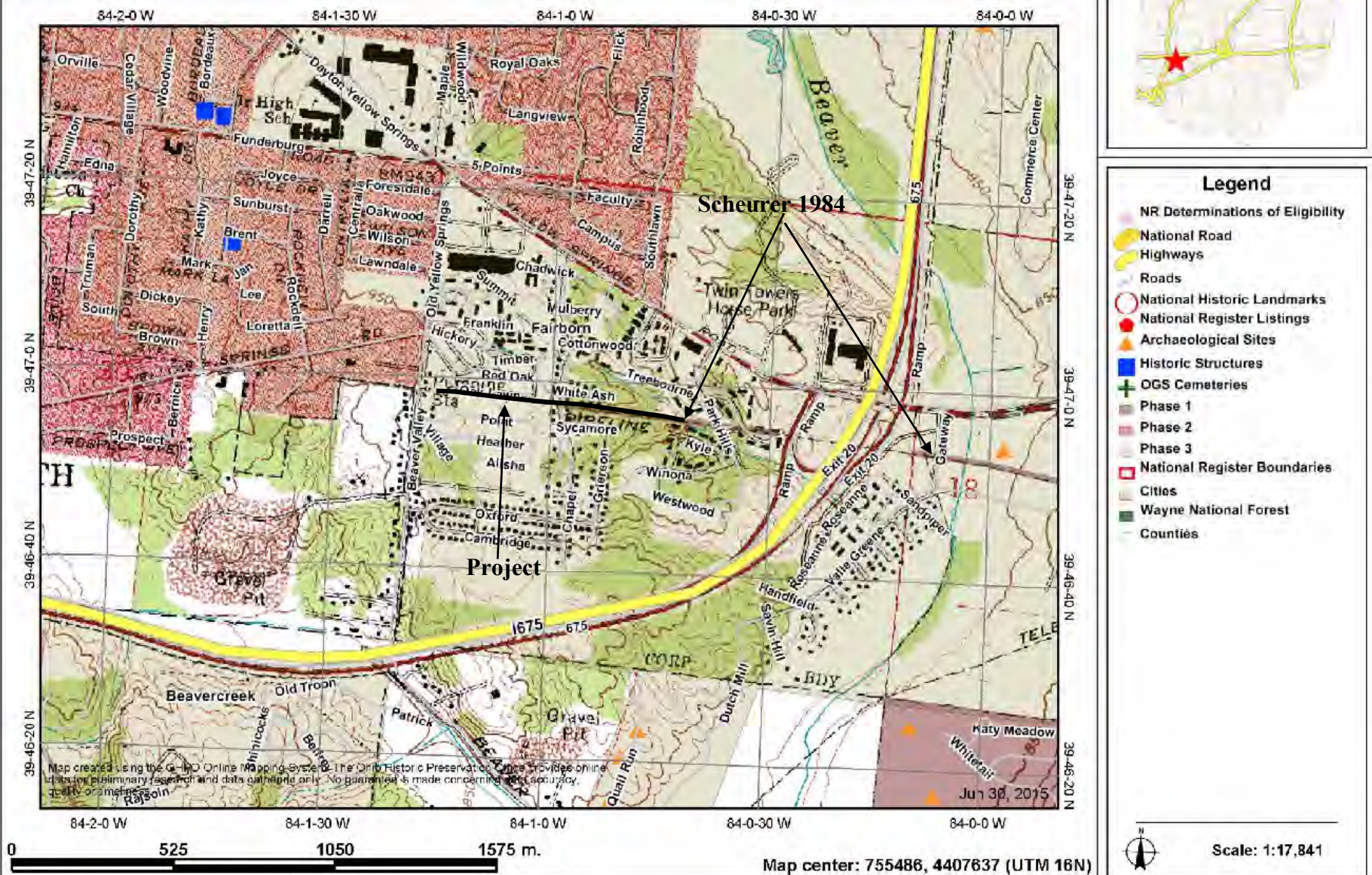
FAIRBORN, OH
1965



0 250 500 1,000 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 2. Aerial view of the project.



This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Figure 3. OHC online GIS map indicating the location of the project.

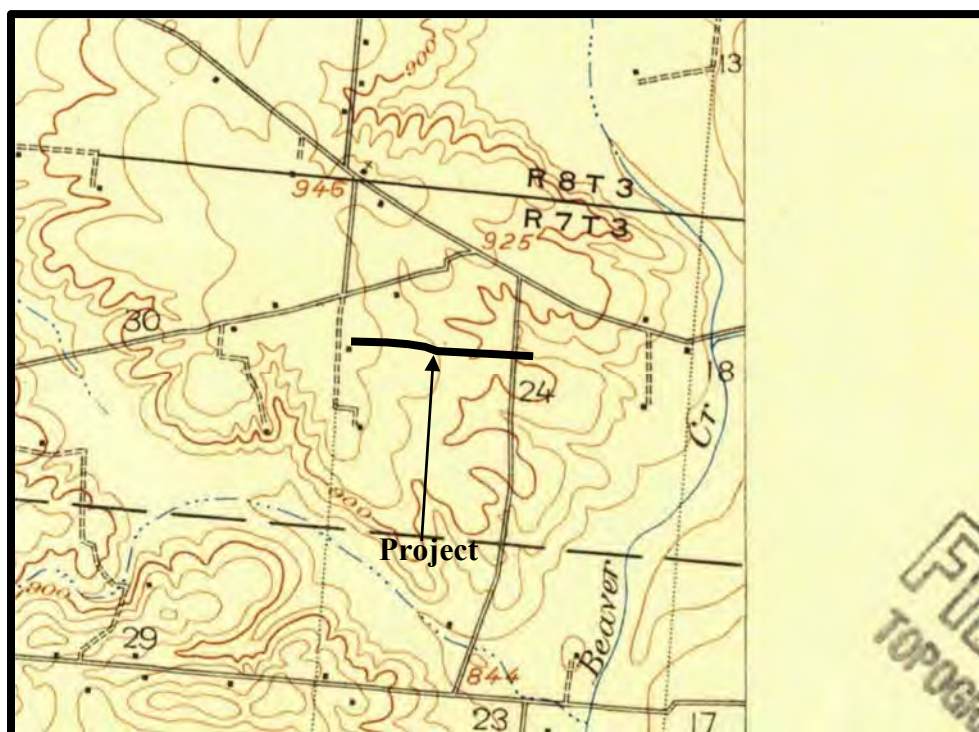


Figure 4. Portion of the USGS 1904 Dayton, Ohio 15 Minute Series (Topographic) map indicating the approximate location of the project.

Melinda Stahl

From: Jenny Bellville-Marrion <jbellvillemarrion@ohiohistory.org>
Sent: Tuesday, August 11, 2015 8:34 AM
To: Melinda Stahl
Subject: RE: OHPO Section 106 Review: 2015-GRE-32102

Thank you. I will begin reviewing this project soon.

Jenny Bellville-Marrion | Project Reviews Coordinator, State Historic Preservation Office
Ohio History Connection | 800 E. 17th Ave. Columbus, Ohio 43211
p. 614.298.2000 | jbellvillemarrion@ohiohistory.org

Planning a road trip? Check out our more than 50 historic sites at the new mobile-friendly ohiohistory.org.

From: Melinda Stahl [<mailto:mstahl@uti-corp.com>]
Sent: Tuesday, August 11, 2015 8:19 AM
To: Jenny Bellville-Marrion
Subject: OHPO Section 106 Review: 2015-GRE-32102

Good Morning Jenny,

Attached is a map and a few photos for the Z50E Oaklawn 24" Pipeline Replacement Project. As like the other Z50E project submitted, the construction/replacement of this pipeline will occur within the same previously disturbed right-of-way and trench as the original pipeline. Construction is scheduled to begin October 1, 2015. Please let me know if you need any additional information to complete your review.

Thank you,

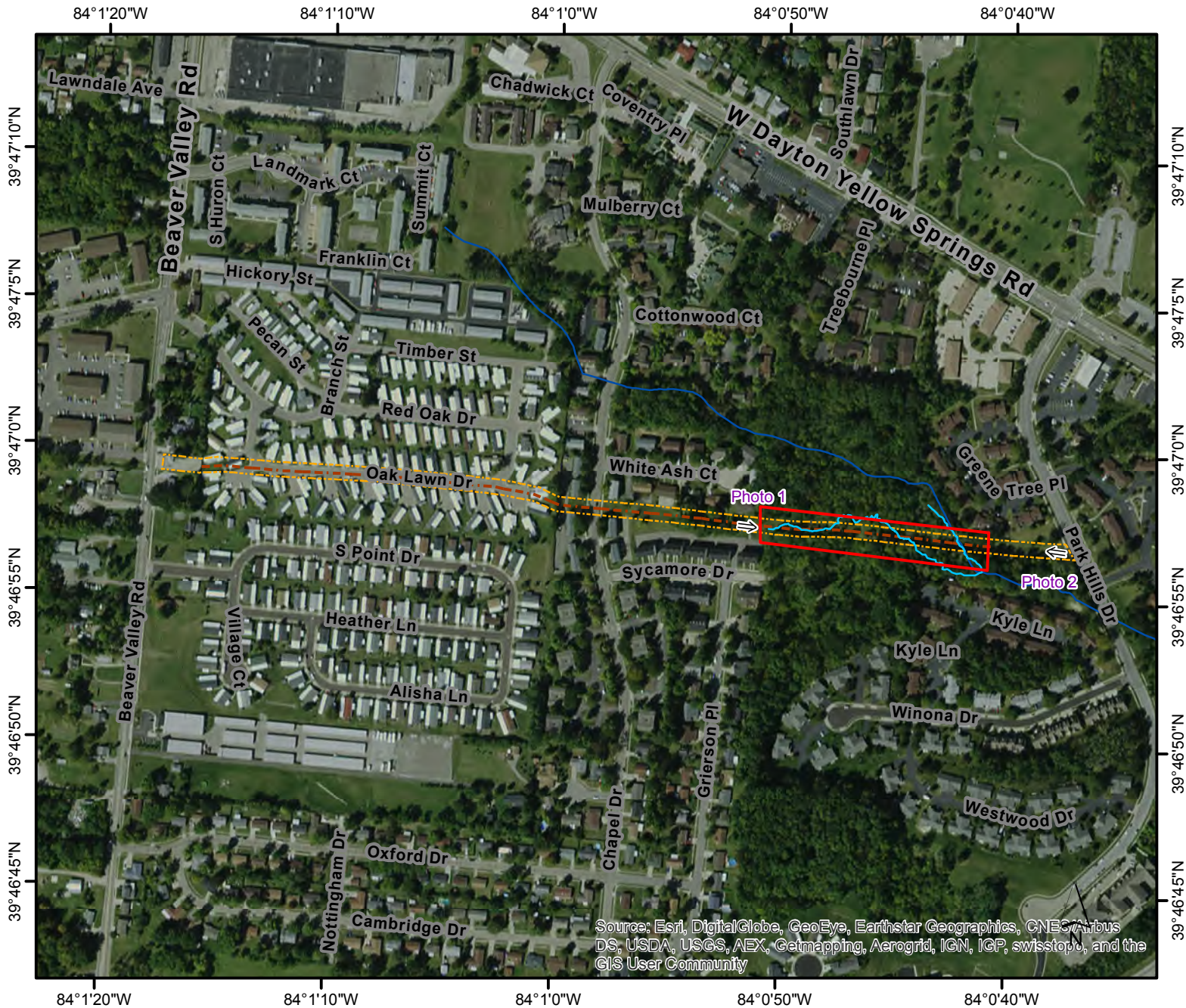
Sincerely,

Melinda Stahl

Environmental Coordinator

Utility Technologies International Corporation
4700 Homer Ohio Lane
Groveport, OH 43125
Office: (614) 482-8080 Ext 314
Fax: (614) 482-8070
www.uti-corp.com

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Huber Heights

Clark County

4

675

675

68

Kettering

Greene County

Z-50E 24" Oaklawn Replacement

Greene County, Ohio

Project Overview

Legend

Delineated Stream

Stream

Oaklawn 24" Replacement

Right of Way

Photo Location and Direction

Area subject to review that falls under the lead federal agency, U.S. Army Corps of Engineers

1 inch = 500 feet

Absolute Scale: 1:6,000

Utility Technologies International

4700 Homer Ohio Lane

Groveport, Ohio 43125

(614) 482-8080

Total Capabilities in the Pipeline Industry

UTI Project #: 15-165

Date: 8/7/2015

Page 1 of 1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Document Path: P:\2015\15165 UTI Project 15-165 Z-50E Oaklawn\W000\Z-50E Oaklawn Overview.mxd



Photo 1



Photo 2

ATTACHMENT F

WETLAND AND OTHER WATERS DELINEATION REPORT

9

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Stream 2– Intermittent (320 LF within the Expanded Study Area)

[illegible]

dr d r

Feature Name	USGS/ NWI Identified	Feature Class	Regulatory Status¹	Riffles/ Pools	Dimensions (ft)		Substrate	HHEI/ ORAM Score/ Class	Linear Footage (LF)	Acreage (AC)
					Width	Depth				
Oaklawn 24" Pipeline Replacement										
Stream 1	Yes	Intermittent	Jurisdictional	Yes	2	0.3	Sa-Si	29 Class I PHWH	970	0.04
Stream 2	Yes	Ephemeral	Jurisdictional	Yes	4	1.5	Ga-Si	29 Class I PHWH	320	0.03
Subtotal			Streams		Intermittent		1290			0.07

[illegible]

			r				
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Dave A. VanH

[illegible]



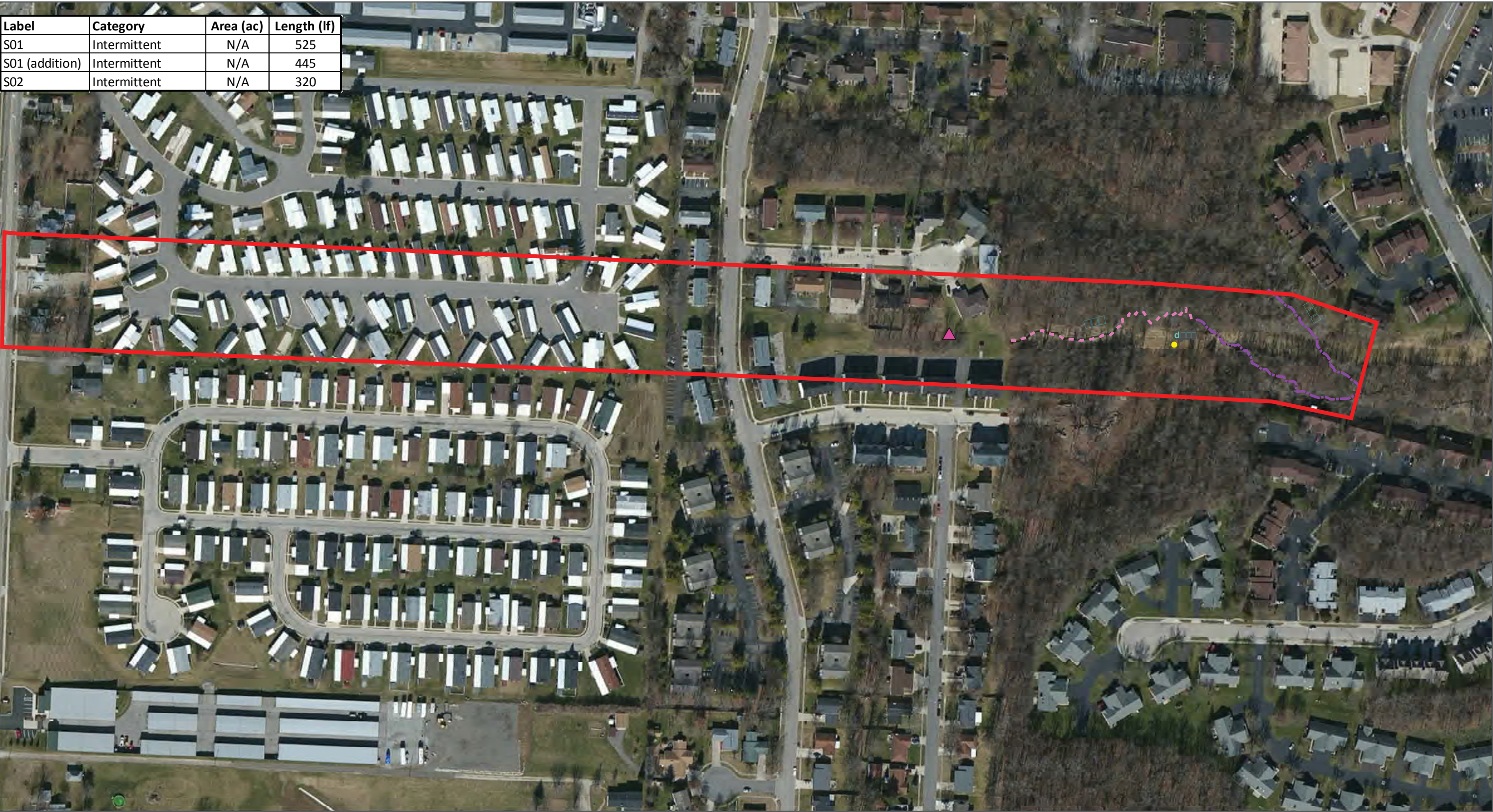














Label	Category	Area (ac)	Length (lf)
S01	Intermittent	N/A	525
S01 (addition)	Intermittent	N/A	445
S02	Intermittent	N/A	320






Legend:

-    

1

1 4



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Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) :

29

SITE NAME/LOCATION Oaklawn 24" Pipeline Replacement

SITE NUMBER s01 RIVER BASIN Little Miami River DRAINAGE AREA (mi²) <1
LENGTH OF STREAM REACH (ft) 200 LAT. 39.782623 LONG. RIVER CODE RIVER MILE
DATE 6/18/2015 SCORER BRH COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS ☐ None / Natural Channel ☒ Recovered ☐ Recovering ☐ Recent or No Recovery

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 PTS]		<input type="checkbox"/> SILT [3 PTS]	
<input type="checkbox"/> BOULDER (>256 mm) [16 PTS]		<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 PTS]	
<input type="checkbox"/> BEDROCK [16 PTS]		<input type="checkbox"/> FINE DETRITUS [3 PTS]	
<input type="checkbox"/> COBBLE (65-256 mm) [12 PTS]		<input checked="" type="checkbox"/> CLAY or HARDPAN [0 PTS]	50
<input type="checkbox"/> GRAVEL (2-64 mm) [9 PTS]	20	<input type="checkbox"/> MUCK [0 PTS]	
<input checked="" type="checkbox"/> SAND (<2 mm) [6 PTS]	30	<input type="checkbox"/> ARTIFICIAL [3 PTS]	

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock 0 (A)

SCORE OF TWO MOST PREDOMINANT SUBSTRATE TYPES:

6

TOTAL NUMBER OF SUBSTRATE TYPES:

3

HHEI
Metric
Points

Substrate
Max = 40

9

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> >30 centimeters [20 PTS]	<input checked="" type="checkbox"/> >5 cm - 10 cm [15 PTS]
<input type="checkbox"/> >22.5 - 30 cm [30 PTS]	<input type="checkbox"/> ≤5 cm [5 PTS]
<input type="checkbox"/> >10 - 22.5 cm [25 PTS]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 PTS]

COMMENTS

MAXIMUM POOL DEPTH (centimeters):

8

Pool Depth
Max = 30

15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> >4.0 meters (>13') [30 PTS]	<input type="checkbox"/> >1.0 m - 1.5 m (>3' 3" - 4' 8") [15 PTS]
<input type="checkbox"/> >3.0 m - 4.0 m (>9' 7" - 13') [25 PTS]	<input checked="" type="checkbox"/> ≤1.0 m (≤3' 3") [5 PTS]
<input type="checkbox"/> >1.5 m - 3.0 m (>4' 8" - 9' 7") [20 PTS]	

COMMENTS

AVERAGE BANKFULL WIDTH (meters)

0.6

Bankfull
Width
Max = 30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments		Comments		Comments	

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)
Comments	

SINUOSITY (Number of bends per 61m (200ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input checked="" type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5ft/100ft) ☒ Flat to Moderate ☐ Moderate (2ft/100ft) ☐ Moderate to Severe ☐ Severe (10ft/100ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):**s01**QHEI PERFORMED? ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)**DOWNSTREAM DESIGNATED USE(S)**

☒ WWH Name: Little Miami River Distance from Evaluated Stream ~ 7.7 miles
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Fairborn NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____
County: Greene Township/City: Fairborn

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/17/2015 Quantity: 1.19"
Photographer Information: _____
Elevated Turbidity? (Y/N): Y Canopy (% open): _____
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. And attach results) Lab Number: _____
Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____
Is the sampling reach representative of the stream? (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Hedwater Habitat Assessment Manual)

Fish observed? (Y/N) N Voucher(Y/N) N Salamander Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher(Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N
Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of Interest for site evaluation and a narrative description of the stream's location

FLOW →



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) :

29

SITE NAME/LOCATION UTI - Green County Addition
SITE NUMBER 562 RIVER BASIN Great Miami DRAINAGE AREA (mi²) 450.2
LENGTH OF STREAM REACH (ft) 1504 LAT. 39.7857 LONG. 84.0197 RIVER CODE --- RIVER MILE ---
DATE 8/5/15 SCORER DVT COMMENTS INTERMITTENT

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☒ RECOVERING ☐ RECENT OR NO RECOVERY

MODIFICATIONS: MODIFIED IN R.O.W. WHEN PIPE WAS INSTALLED ORIGINALLY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 40). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]		<input checked="" type="checkbox"/> SILT [3 pt]	<u>20</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]		<input type="checkbox"/> LEAF PACKWOODY DEBRIS [3 pts]	
<input type="checkbox"/> BEDROCK [16 pt]		<input type="checkbox"/> FINE DETRITUS [3 pts]	
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]		<input type="checkbox"/> CLAY or HARDPAN [0 pt]	
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>80</u>	<input type="checkbox"/> MUCK [0 pts]	
<input type="checkbox"/> SAND (<2 mm) [6 pts]		<input type="checkbox"/> ARTIFICIAL [3 pts]	

Total of Percentages of
Bldr Slabs, Boulder, Cobble, Bedrock

0%

(A)

12

(B)

2

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI
Metric
Points

Substrate
Max = 40

14

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input checked="" type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS

No water when observed

MAXIMUM POOL DEPTH (centimeters):

0

Pool Depth
Max = 30

0

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	

COMMENTS

4' wide

AVERAGE BANKFULL WIDTH (meters)

1.4

Bankfull
Width
Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY

☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH

FLOODPLAIN QUALITY

L	R	(Per Bank)	L	R	(Most Predominant per Bank)	L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m	<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/>	Open Pasture, Row Crop
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None	<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

COMMENTS

In Common ROW is maintained as old field - 2nd growth forest out of ROW

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS

No water - moist channel

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☒ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☒ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____
☐ CWH Name: _____ Distance from Evaluated Stream _____
☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: FAIRBORN NRCS Soil Map Page: N/A NRCS Soil Map Stream Order: N/A
County: GREENE CO. Township / City: FAIRBORN

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 8/3/15 Quantity: 1.0"
Photograph Information: Photos up + down stream in ROW + in woods
Elevated Turbidity? (Y/N): N Canopy (% open): 100% in R.O.W.
Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____
Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____
Is the sampling reach representative of the stream (Y/N): N If not, please explain: SAMPLE AREA IS AT THE R.O.W. STREAM OVER AN IS NOT LIKE THIS BUT THE IMPACT AREA IS DESCRIBED HERE
Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) _____ Voucher? (Y/N) _____ Salamanders Observed? (Y/N) _____ Voucher? (Y/N) _____
Frogs or Tadpoles Observed? (Y/N) _____ Voucher? (Y/N) _____ Aquatic Macroinvertebrates Observed? (Y/N) _____ Voucher? (Y/N) _____

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

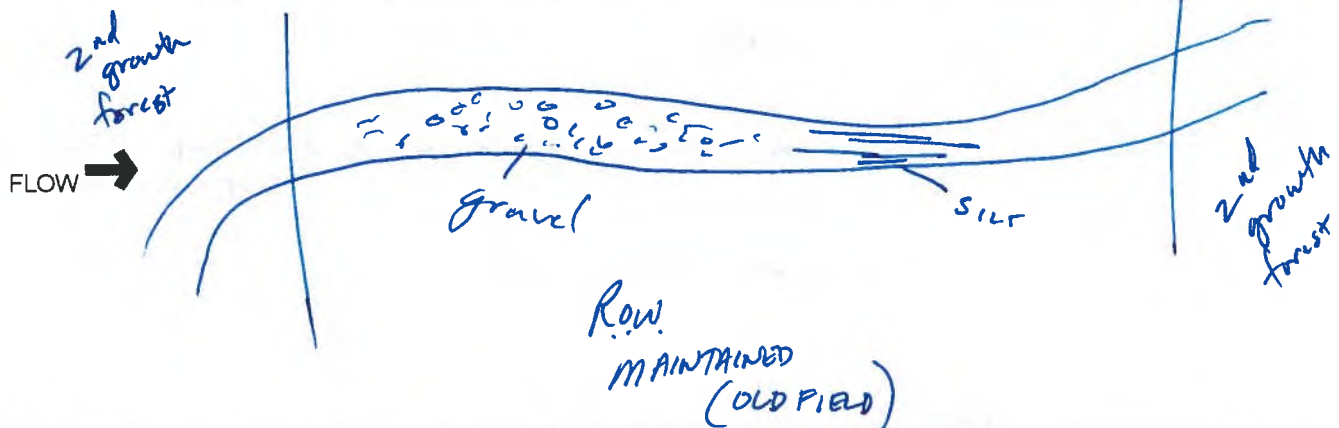




Photo 1: View of Stream 1 (S01), facing downstream within maintained ROW.



Photo 2: View of Stream 1 (S01), facing upstream within maintained ROW.



Photo 3: View of stream 2 (S02), downstream within the maintained ROW.



Photo 4: View of stream 2 (S02), downstream outside of maintained ROW.

Utility Technologies International Corporation – Oaklawn and Vectren 24” Pipeline Replacement Project

Cardno Project Number: J156735300

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Greene County Species List	Federal Status	Habitat	Probability of Occurrence UTI – Greene County
Indiana bat (<i>Myotis sodalis</i>)	Endangered	Hibernacula = Caves and mines; Maternity and foraging habitat = small stream corridors with well-developed riparian woods; upland forests	Moderate – However, the potential roost trees are not impacted.
Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. During late spring and summer roosts and forages in upland forests.	Moderate – However, the potential roost trees are not impacted.
Eastern massasauga (<i>Sistrurus catenatus</i>)	Candidate	Wetlands and adjacent uplands	Low – Potential habitat, however due to continued ATV and farming disturbance unlikely to be found w/in the maintained ROW of the pipeline.
Clubshell (<i>Pleurobema clava</i>)	Endangered	Found in coarse sand and gravel areas of runs and riffles within streams and small rivers	Low – Conner Branch has experienced heavy siltation due to ATV erosion within the ROW, reducing the probability of occurrence.
Rayed bean (<i>Villosa fabalis</i>)	Endangered	Smaller, headwater creeks, but they are sometimes found in large rivers	Low – Conner Branch has experienced heavy siltation due to ATV erosion within the ROW, reducing the probability of occurrence.
Snuffbox (<i>Epioblasma triquetra</i>)	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current	Low – Conner Branch has experienced heavy siltation due to ATV erosion within the ROW, reducing the probability of occurrence.

[illegible]

Species	State Status	Habitat	Probability of Occurrence UTI – Greene County
Seepage Dancer (<i>Argia bipunctulata</i>)	Endangered	Sunny sphagnum seeps, small lakes, ponds, and streams	Low – Preferred habitat not found within the ROW.
Upland Sandpiper (<i>Bartramia longicauda</i>)	Endangered	Extensive, open tracts of short grassland, native prairie, dry meadows, pastures, domestic hayfields, short-grass savanna, plowed fields, highway rights-of-way and airfields.	None – Habitat not found within the ROW.
Snuffbox mussel (<i>Epioblasma triquetra</i>)	Endangered	High quality streams with little disturbance to the substrate or riparian zone. Riffles with stony or sandy bottoms, in swift currents and usually deeply buried.	None – Habitat not found within the ROW.
Beer's Noctuid (<i>Papaipema beeriana</i>)	Endangered	Dependent on Blazing Star (<i>Liatris spp.</i>) as a larval host; found in prairies, prairie fens, sand prairies, and barrens.	None – Habitat not found within the ROW.
Clubshell (<i>Pleurobema clava</i>)	Endangered	Found in coarse sand and gravel areas of runs and riffles within streams and small rivers	Low – Conner Branch has experienced heavy siltation due to ATV erosion within the ROW, reducing the probability of occurrence.
Eastern Massasauga (<i>Sistrurus catenatus</i>)	Endangered	Wetlands and adjacent uplands	Low – Potential habitat, however due to continued ATV and farming disturbance unlikely to be found w/in the maintained ROW of the pipeline.
Indiana bat (<i>Myotis sodalis</i>)	Endangered	Hibernacula = Caves and mines; Maternity and foraging habitat = small stream corridors with well-developed riparian woods; upland forests	Moderate – However, the potential roost trees are not impacted.
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Endangered	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. During late spring and summer roosts and forages in upland forests.	Moderate – However, the potential roost trees are not impacted.
Ear-leaved-foxglove (<i>Agalinis auriculata</i>)	Endangered	Wet prairies and barrens	None – Habitat not found within the ROW.
Sharp's Green-cushioned Moss (<i>Weissia sharpie</i>)	Endangered	Open dry bare soil in limestone and dolomite rock flats in cedar glades	None – Habitat not found within the ROW.

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U.S. Corps of Engineers
401 CFR 4.41

U.S. Corps of Engineers

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U.S. Corps of Engineers
401 CFR 4.41

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401 CFR 4.41

Ohio Environmental Protection Agency

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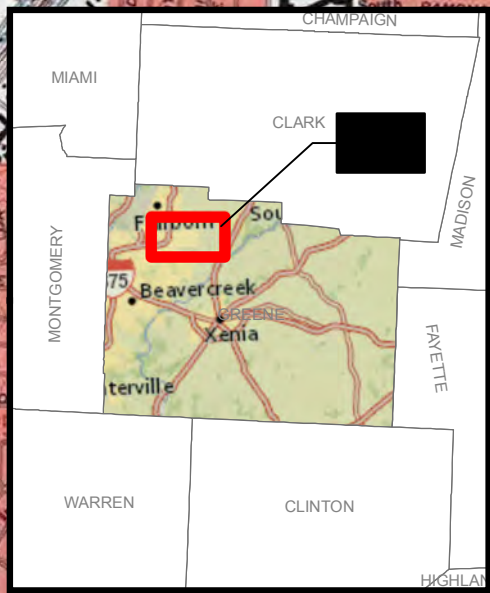
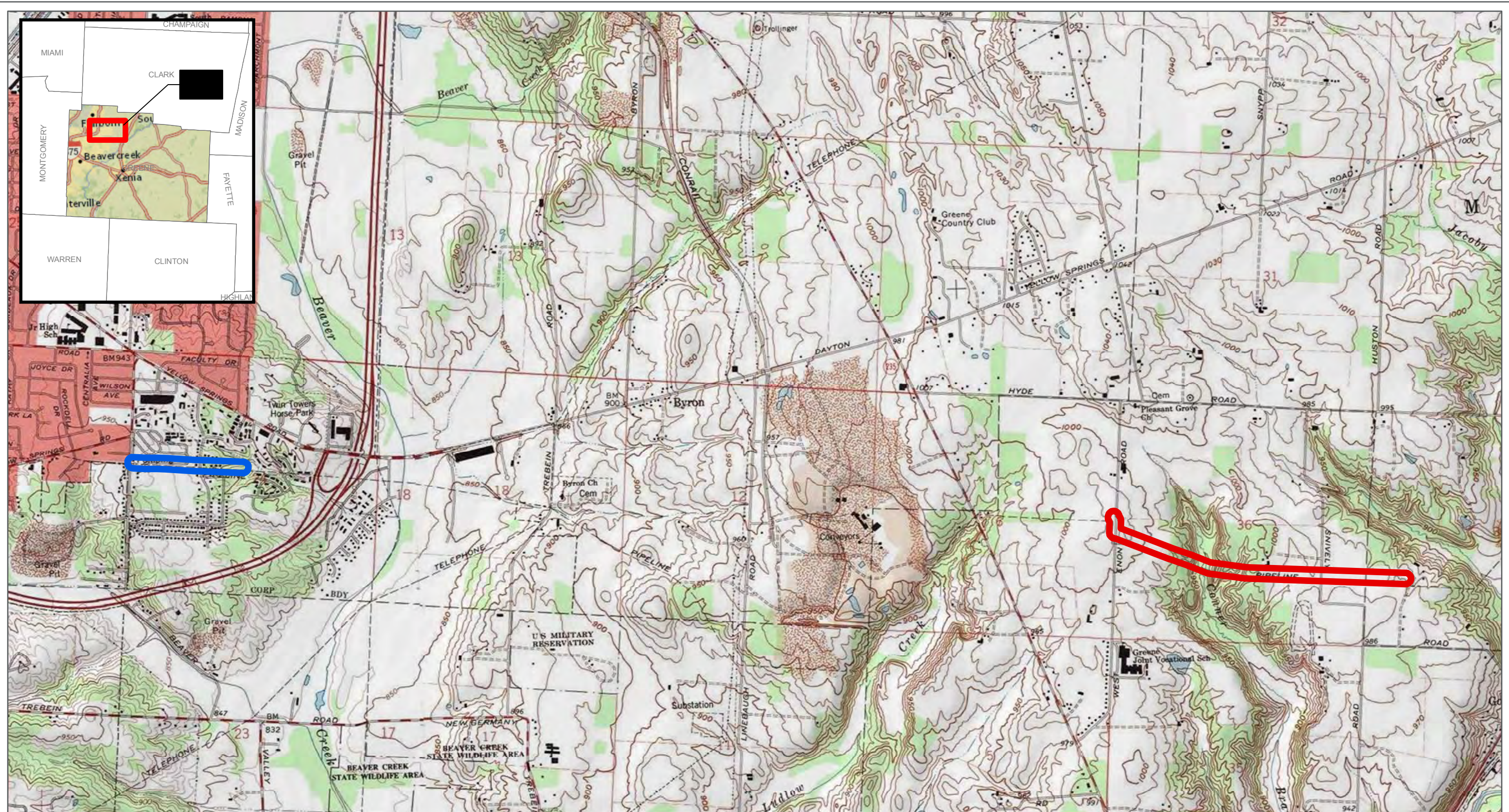
Ohio Environmental Protection Agency
401 CFR 4.41


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Oaklawn and Vectren 24" Pipeline
Replacement Project

FIGURES







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1 inch = 2,000 feet


0 1,000 2,000 4,000 Feet



Oaklawn 24" Pipeline Study Area



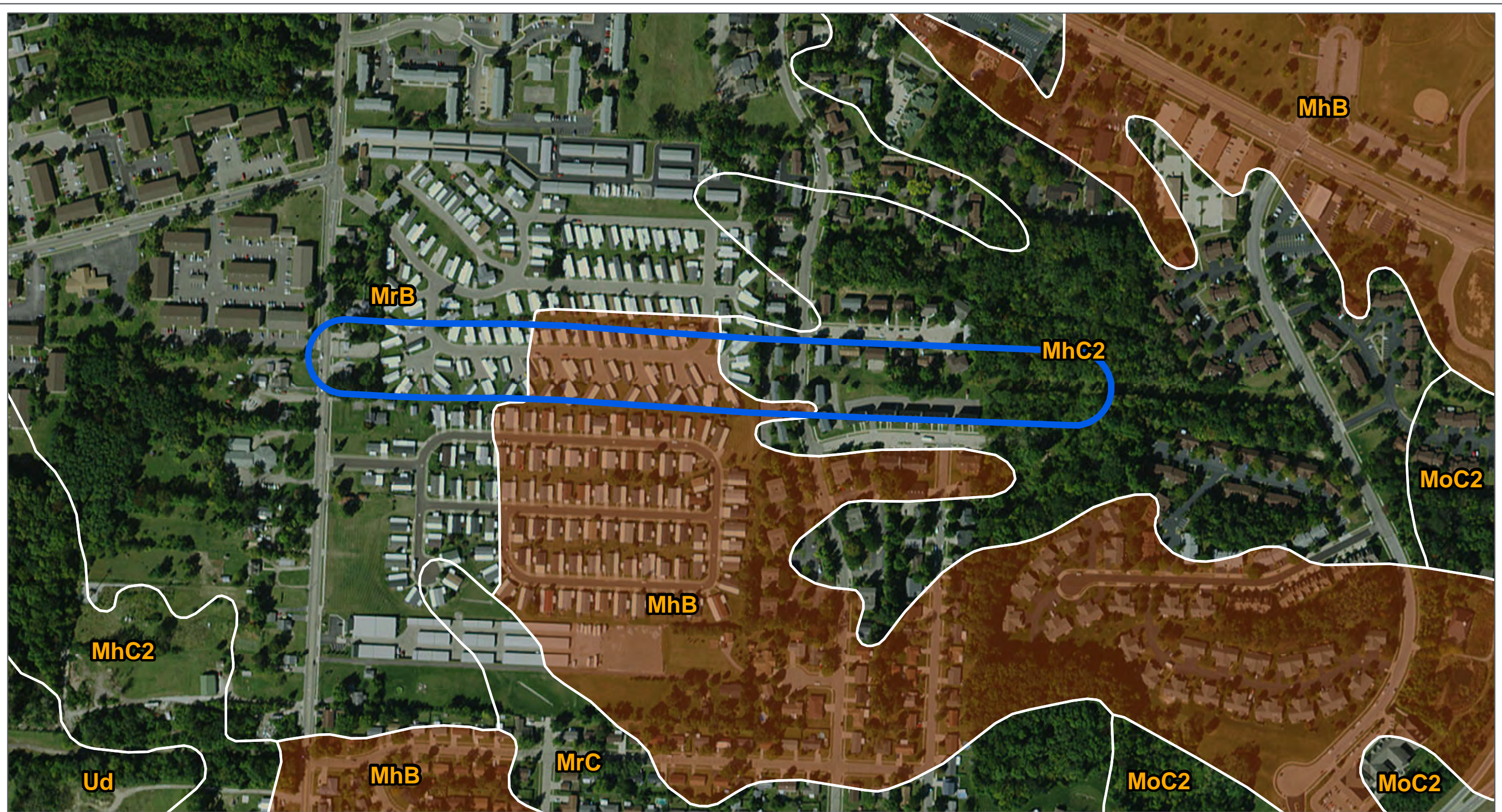
Vectren 24" Pipeline Study Area



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Date Created: 6/26/2015 Date Revised: 6/26/2015 File Path: \\fnew.com\Projects\Projects\151156\156735300_UTI\Corp_GreenCountyVectren\GIS\MXD\Delineation\20150623_WD_F1_location.mxd
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1 inch = 300 feet

Figure 2a: Soil Survey
Oaklawn 24" Pipeline Replacement Project
Utility Technologies International Corporation
Greene County, Ohio

0 155 310 620 Feet

- Oaklawn 24" Pipeline Study Area
- Vectren 24" Pipeline Study Area
- Hydric Soil
- Soil Survey



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 Basemap: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 2b: Soil Survey

Vectren 24" Pipeline Replacement Project

Utility Technologies International Corporation

Greene County, Ohio

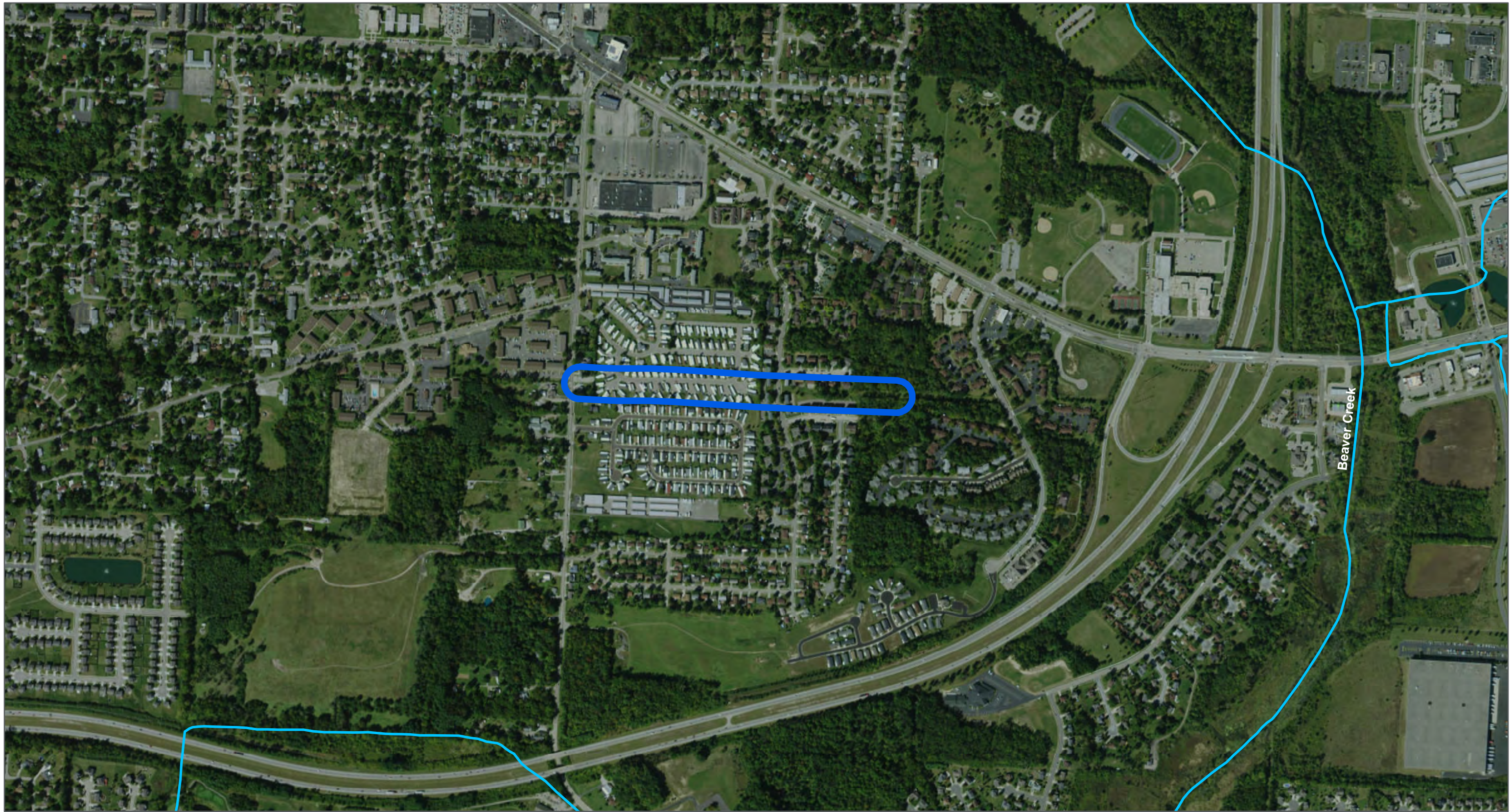
0 215 430 860 Feet

- Oaklawn 24" Pipeline Study Area
- Vectren 24" Pipeline Study Area
- Hydric Soil
- Soil Survey

1 inch = 416.67 feet

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Basemap: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 3a: National Wetland Inventory and National Hydrography Data Set

Oaklawn 24" Pipeline Replacement Project
Utility Technologies International Corporation
Greene County, Ohio

1 inch = 700 feet

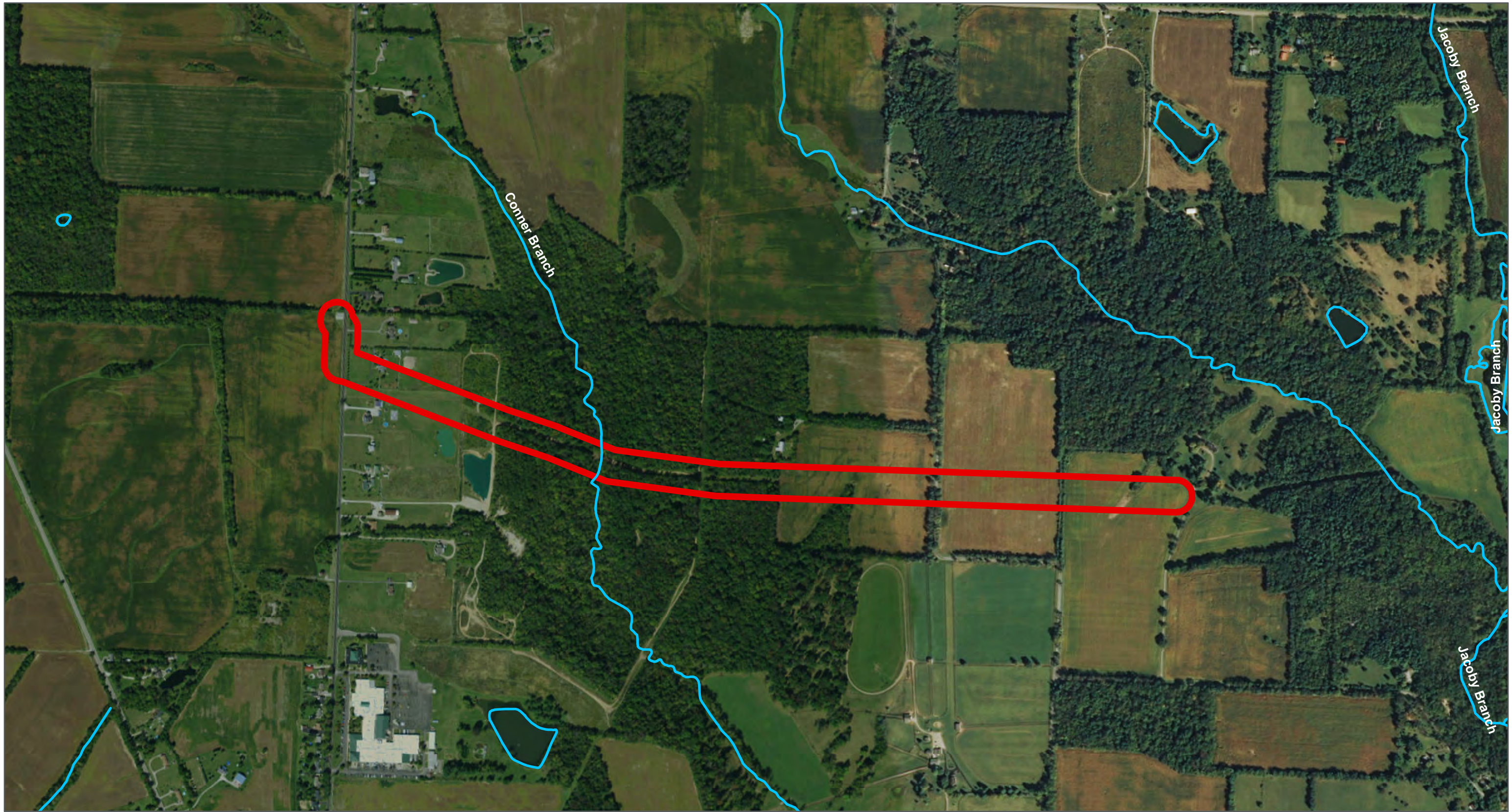
0 350 700 1,400 Feet

- Oaklawn 24" Pipeline Study Area
- Vectren 24" Pipeline Study Area
- NHD Waterbody
- NHD Waterway
- NWI Wetland

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 Basemap: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 3b: National Wetland Inventory and National Hydrography Data Set

Vectren 24" Pipeline Replacement Project
Utility Technologies International Corporation
Greene County, Ohio

1 inch = 700 feet

0
1,400 Feet

- Oaklawn 24" Pipeline Study Area
- Vectren 24" Pipeline Study Area
- NHD Waterbody
- NHD Waterway
- NWI Wetland

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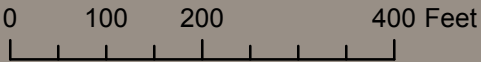
Label	Category	Area (Ac)	Length (LF)
s01	intermittent stream	NA	525



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1 inch = 200 feet

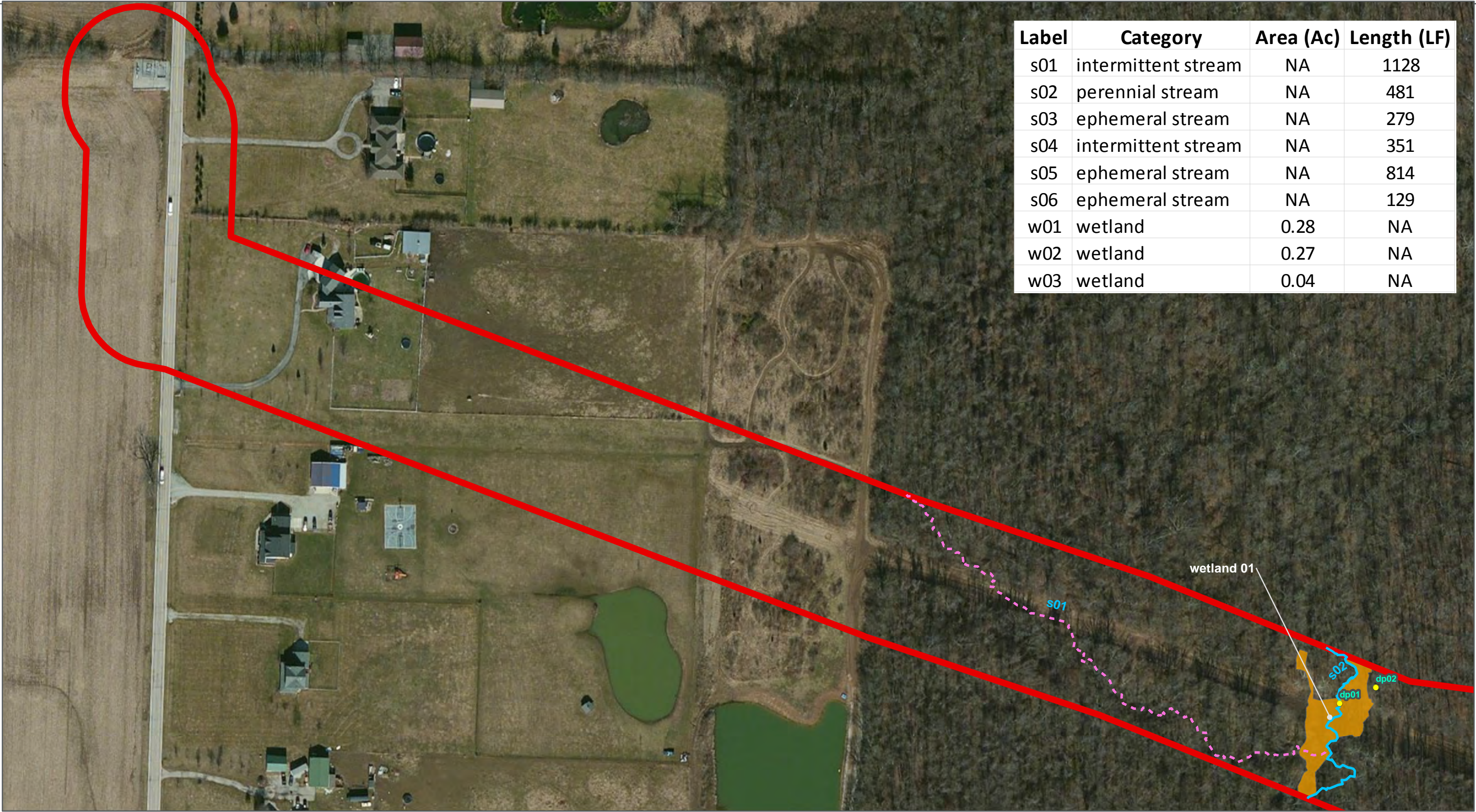
Figure 4a:Wetland Delineation
Oaklawn 24" Pipeline Replacement Project
Utility Technologies International Corporation
Greene County, Ohio



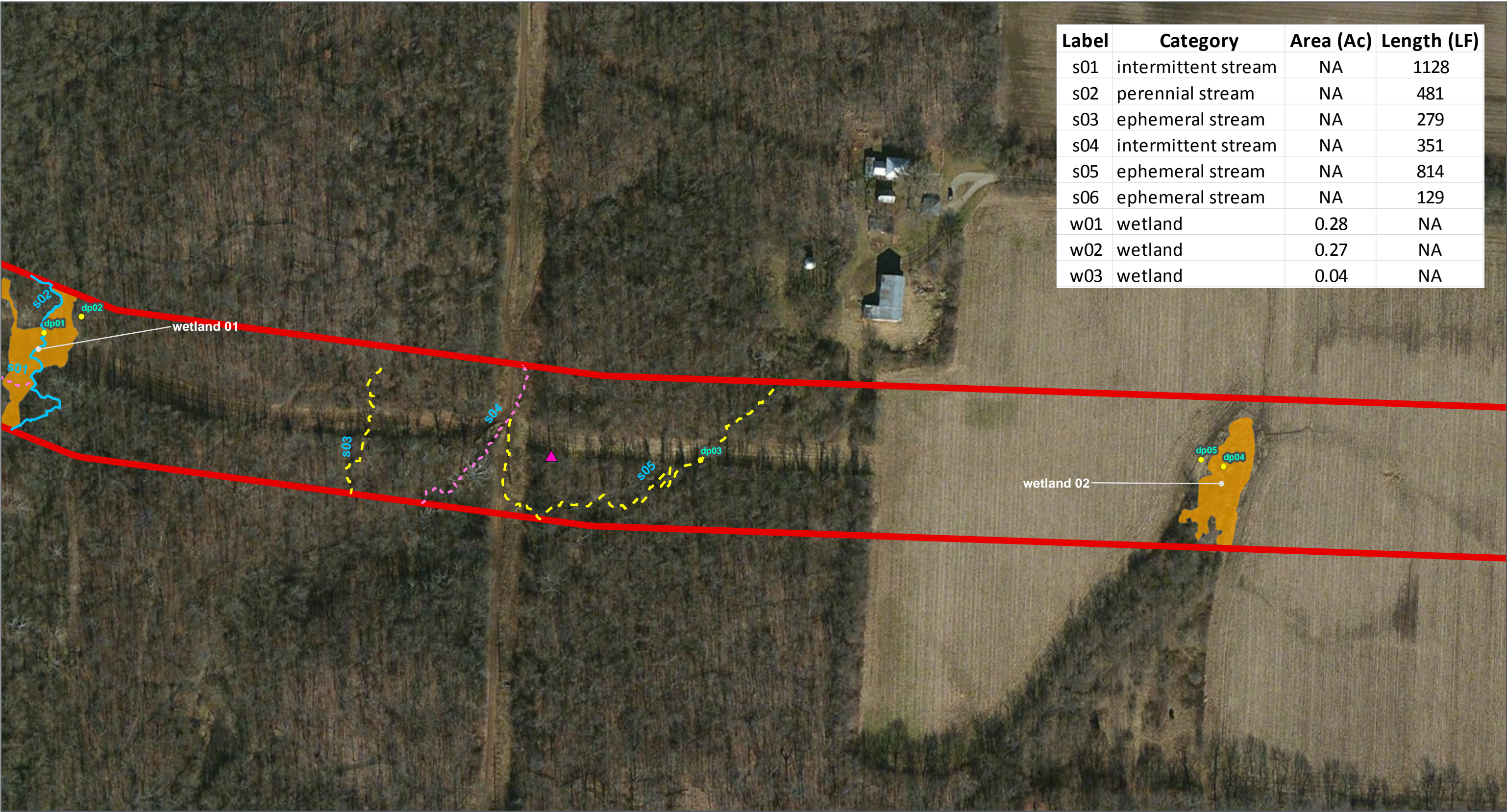
- Data Point
- ▲ Bat Roost Tree
- - - ephemeral
- - - intermittent
- - - perennial
- ▭ Oaklawn 24" Pipeline Study Area
- ▭ Vectren 24" Pipeline Study Area
- ▭ Existing Wetland



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Label	Category	Area (Ac)	Length (LF)
s01	intermittent stream	NA	1128
s02	perennial stream	NA	481
s03	ephemeral stream	NA	279
s04	intermittent stream	NA	351
s05	ephemeral stream	NA	814
s06	ephemeral stream	NA	129
w01	wetland	0.28	NA
w02	wetland	0.27	NA
w03	wetland	0.04	NA



Label	Category	Area (Ac)	Length (LF)
s01	intermittent stream	NA	1128
s02	perennial stream	NA	481
s03	ephemeral stream	NA	279
s04	intermittent stream	NA	351
s05	ephemeral stream	NA	814
s06	ephemeral stream	NA	129
w01	wetland	0.28	NA
w02	wetland	0.27	NA
w03	wetland	0.04	NA

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1 inch = 150 feet

Figure 4c:Wetland Delineation
Vectren 24" Pipeline Replacement Project
Utility Technologies International Corporation
Greene County, Ohio

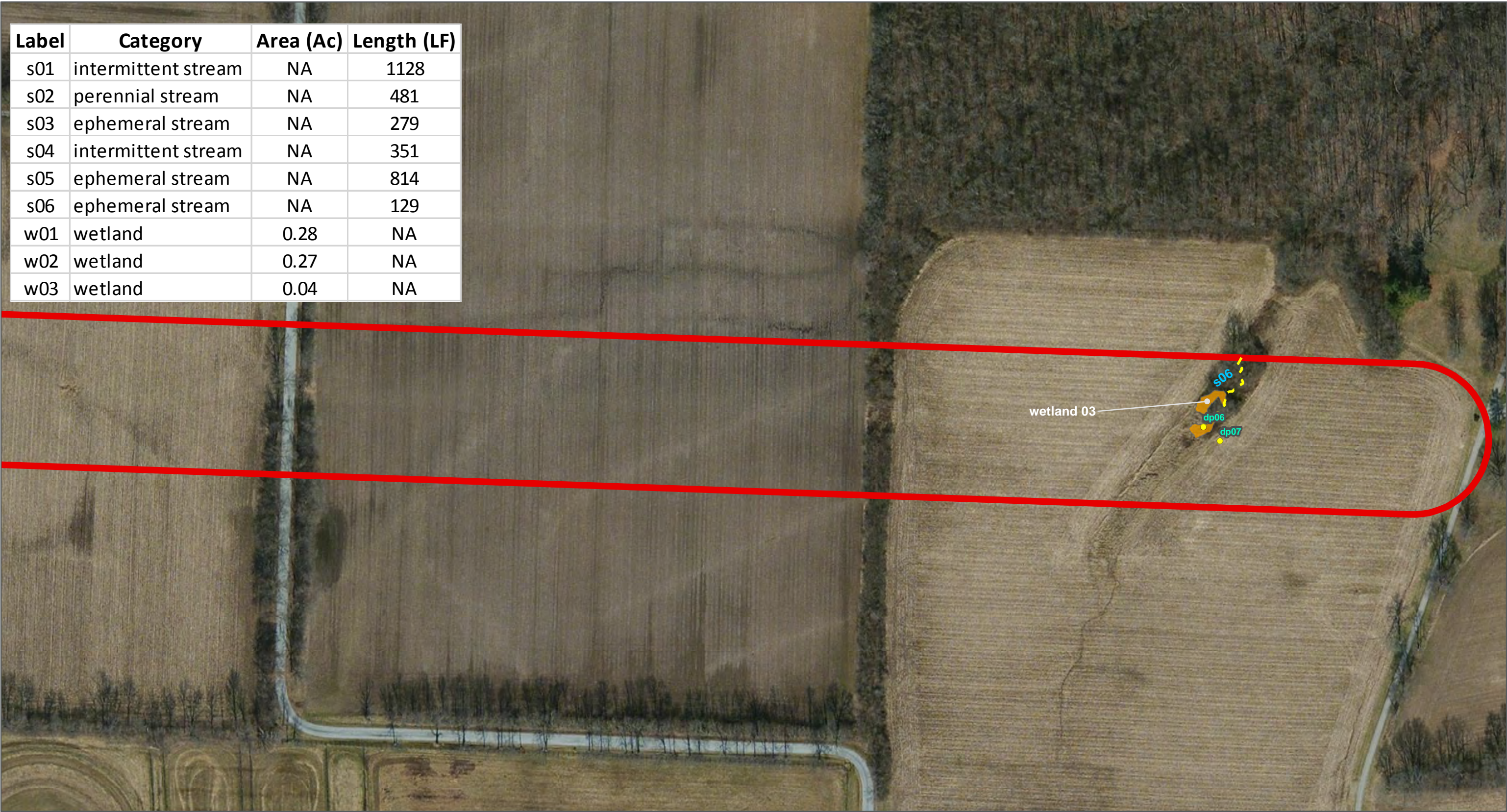
0 75 150 300 Feet

- Data Point
- Bat Roost Tree
- ephemeral

- intermittent
- perennial
- Oaklawn 24" Pipeline Study Area
- Vectren 24" Pipeline Study Area
- Existing Wetland

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Label	Category	Area (Ac)	Length (LF)
s01	intermittent stream	NA	1128
s02	perennial stream	NA	481
s03	ephemeral stream	NA	279
s04	intermittent stream	NA	351
s05	ephemeral stream	NA	814
s06	ephemeral stream	NA	129
w01	wetland	0.28	NA
w02	wetland	0.27	NA
w03	wetland	0.04	NA



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Figure 4d:Wetland Delineation
Vectren 24" Pipeline Replacement Project
Utility Technologies International Corporation
Greene County, Ohio

1 inch = 150 feet

075150300 Feet

● Data Point

▲ Bat Roost Tree

--- ephemeral

--- intermittent

— perennial

Oaklawn 24" Pipeline Study Area

Vectren 24" Pipeline Study Area

Existing Wetland

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Basemap: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



APPENDIX

A

SITE PHOTOGRAPHS



Photo 1: View of Stream 1 on the Oaklawn segment, facing upstream.



Photo 2: View of the maintained ROW at DP01 on the Oaklawn segment.



Photo 3: View of wetland 01, at dp01 in the Vectren Segment.



Photo 4: View of wetland 02, at dp04 in the Vectren Segment.



Photo 5: View of wetland 03, at dp06 in the Vectren Segment.



Photo 6: View of stream 1, on the Vectren Segment.



Photo 7: View of stream 2, on the Vectren Segment.



Photo 8: View of stream 3, on the Vectren Segment.



Photo 9: View of stream 4, on the Vectren Segment.



Photo 10: View of stream 5, on the Vectren Segment.



Photo 11: View of stream 6, on the Vectren Segment.



Photo 12: View of potential bat roost tree located on Vectren Segment.

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Summary: Text Construction Notice Application of Vectren Energy Delivery of Ohio, Inc. - Part 1 electronically filed by Teresa Orahod on behalf of Sally Bloomfield