

CASE No. 17-467-GA-BNR
PIR 2352 VILLAGE OF BROOKLYN HEIGHTS AND
THE CITY OF INDEPENDENCE, CUYAHOGA COUNTY, OHIO
20-INCH PIPELINE REPLACEMENT PROJECT

ATTACHMENT E
(Part 3)

STORMWATER POLLUTION PREVENTION PLAN

LAND SERVICES:			
STEVEN CONLEY - 330-66			
TAPPING & STOPPING:			
RICK KAWIECKI - 216-736			
CORROSION:			
TED HARSHMAN 330-736			
CONTRACTOR INSPECTION:			
DAVE CROFT 330-575-7275			
MUNICIPALITY(IES):			
VILLAGE OF BROOKLYN			
MICHAEL HENRY 440-43			
CITY OF INDEPENDENCE			
216-524-1374			
IN CASE OF EMERGENCY CALL 9-1-1			
DOMINION DISPATCH 21			
DOMINION CUSTOMER S			
DOMINION EASTERN			
GAS PLANNING:			
JJ DHILLON - 216-736-68			
KERTIS LIMPET - 216-73			
GAS MEASUREMENT & REGULATION:			
JEFF PAVLIC - 216-736-68			
CONSTRUCTION & MAINTENANCE:			
GEORGE SMITH - 216-73			
ARTHUR HAMMOND - 21			
DOMINION CUSTOMER SERVICE (FIRE):			
DENNIS CULP - 216-736-59			
BRYAN PETHTEL - 216-73			
DOUGLAS TROUP - 216-7			
DOMINION WESTERN			
GAS PLANNING:			
KERTIS LIMPET - 216-73			
DAVID KANE - 216-736-57			
GAS MEASUREMENT & REGULATION:			
TOM D AGOSTINO - 216-7			
RICK MITCHELL 216-736-			
CONSTRUCTION & MAINTENANCE (ELECTRIC):			
DAVE KLEPCYK - 216-736			
DAVE REYNOLDS - 216-7			
DOMINION CUSTOMER SERVICE (FIRE):			
DANIEL NEWMAN - 216-73			
JAMES MARTINEZ - 216-7			
TONI ANDERSON - 216-73			
PIPELINE			
PRESS.	SYS. ID.	P	
HIGH	WH3		
INTERMEDIATE			
MEDIUM	WM15		
LOW			
MUNICIPALITY: Cuyahoga			
TAX DIST: OH11225			
MUNICIPALITY: Independent			
TAX DIST: OH11237			
MUNICIPALITY:			
TAX DIST:			
INV. DIV. 500			
OPERATING AREA: 1N			
PCB ZONE: SEE TABLE			
CLASS LOCATION: 3			
TEST MEDIUM: SEE TABLE			

Dominion®

PIR-2352

SCHAAF & GRANGER

CITIES OF BROOKLYN HEIGHTS

VILLAGE & INDEPENDENCE

CUYAHOGA COUNTY, OHIO

SAP P#400111885

MWO# 63279347

[CWO#]

OVERALL HIGH-LEVEL PROJECT SCOPE

(not for use in quantifying)

THIS PROJECT CONSISTS OF REPLACING APPROXIMATELY 2,660 FEET OF EXISTING HP WITH 2,115 FEET OF HP.

REFER TO MATERIAL LIST OR BID SHEET(S) FOR ACTUAL QUANTITIES. CONTACT PROJECT MANAGER FOR QUESTIONS.

INDEX OF SHEETS

TITLE SHEET	1
NOTES	2



Legend

- STONE IN MONUMENT BOX
- BAR IN MONUMENT BOX
- IRON BAR, PIPE, OR MONUMENT FOUND
- SANITARY MANHOLE
- SANITARY CLEAN OUT
- STORM MANHOLE
- CATCH BASIN
- DOWNSPOUT
- FIRE HYDRANT
- WATER VALVE
- WATER METER/MANHOLE
- WELL
- WATER SPIGOT
- HYDRANT HOOK UP
- ELECTRIC MANHOLE
- POWER / UTILITY POLE
- ELECTRIC METER
- COMMUNICATION MANHOLE
- UTILITY BOX
- GUY WIRE
- LIGHT POLE
- SATELLITE DISH
- TELEPHONE PEDESTAL
- SIGNAL POLE
- TRAFFIC SIGNAL BOX
- ROAD SIGN
- DECORATIVE LIGHT POLE
- HARDWOOD TREE WITH SIZE
- PINE TREE WITH SIZE
- BUSH
- LANDSCAPE AREA
- MISC. VALVE

LP	MP	IP	HP	TPL	PROD	STOR	ABAN GAS	STEAM	UC	UT	UE	UFO	SS	SD
LP	MP	IP	HP	TPL	PROD	STOR	ABAN GAS	STEAM	UC	UT	UE	UFO	SS	SD

ALL REQUIRE A MINIMUM LINE SIZE OF 1/32 INCHES.

6.

TRACER WIRE & BOX INSTALLATION:

CONTRACTOR SHALL CARRY ABSORBENT MATERIAL AND/OR SPILL KIT TO BE USED IN THE EVENT LIQUIDS ARE ENCOUNTERED WHILE WORKING ON THE PIPELINE MAINS OR SERVICES. WITHOUT ANY ADDITIONAL COST TO DEC.

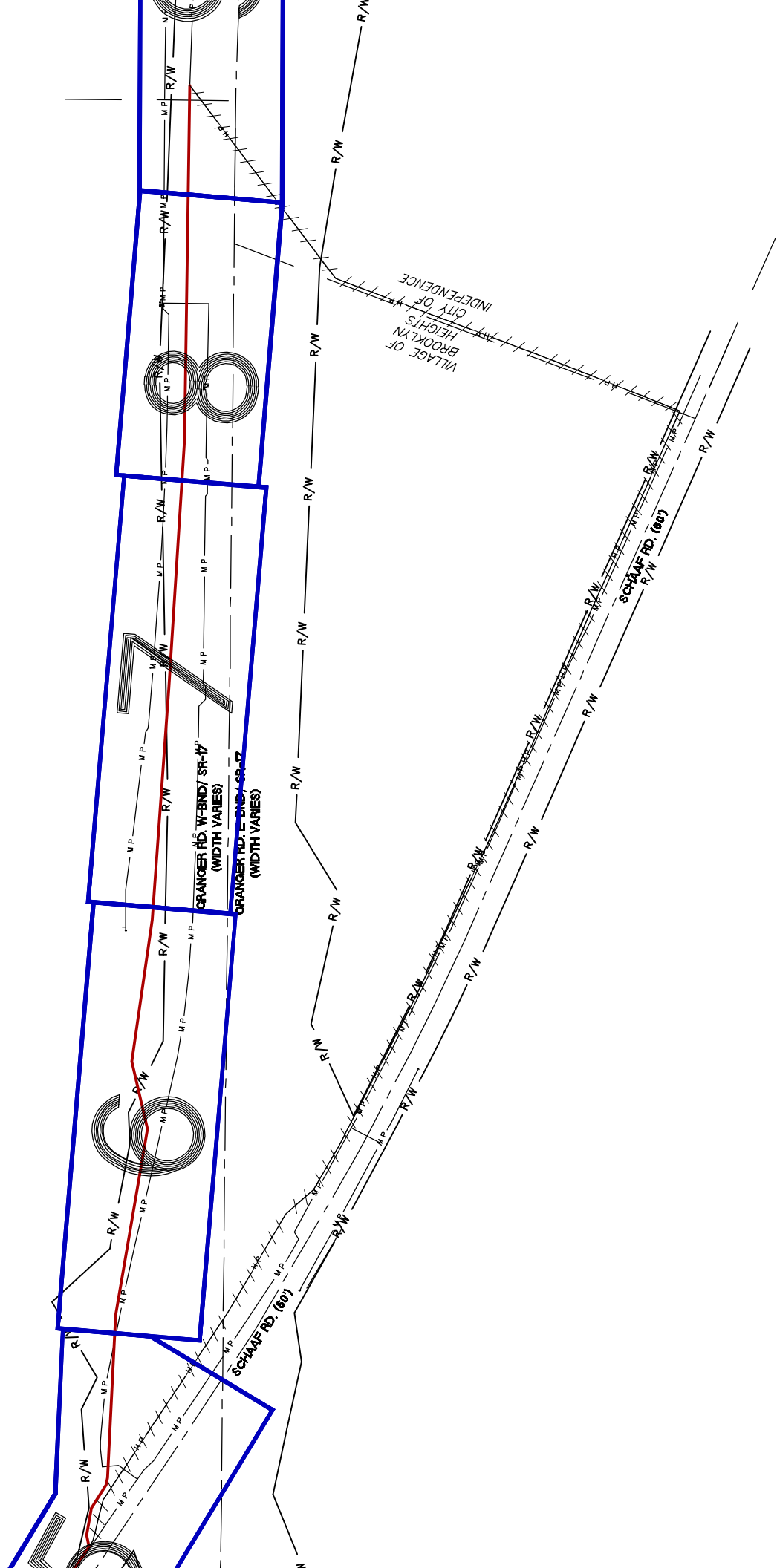
FOR ALL TEST POINTS INSTALLED OR REESTABLISHED, DEO INSPECTOR MUST ACHIEVE READING OF ~0.850 VOLTS. IN THE EVENT THE MINIMUM REQUIRED READ CANNOT BE OBTAINED, THE CONTRACTOR SHALL REPAIR OR REPLACE THE TEST POINT. THE CONTRACTOR WILL CONTACT DEO CORROSION TO TROUBLESHOOT. INSTALLATION OF ANY TEST POINTS SHALL BE CONSIDERED COMPLETE UNTIL DEO PERSONNEL HAVE VERIFIED THE MINIMUM READING WILL NOT BE CONSIDERED COMPLETE UNTIL DEO PERSONNEL HAVE VERIFIED THE MINIMUM READING WILL NOT BE CONSIDERED COMPLETE UNDER THE CONTRACT. BECAUSE CONTRACTOR SHALL NOT RECEIVE ADDITIONAL COMPENSATION UNDER THE CONTRACT FOR ANY EX TEST POINT DAMAGED DURING CONSTRUCTION MUST BE REESTABLISHED.

1. TRACER WIRE MUST BE BROUGHT TO THE SURFACE IN ALL CURB, GATE, TRACER, OR TEST WIRE BOXES TO CREATE AS MANY DIRECT CONNECTION POINTS AS POSSIBLE. THE MAXIMUM DISTANCE BETWEEN ABOVE-GROUND DIRECT CONNECTION ACCESS POINTS SHALL NOT EXCEED 500 FEET.
2. TRACER WIRE SHALL BE MINIMUM #12 AWG SOLID COPPER WIRE WITH YELLOW THERMOPLASTIC COATING.

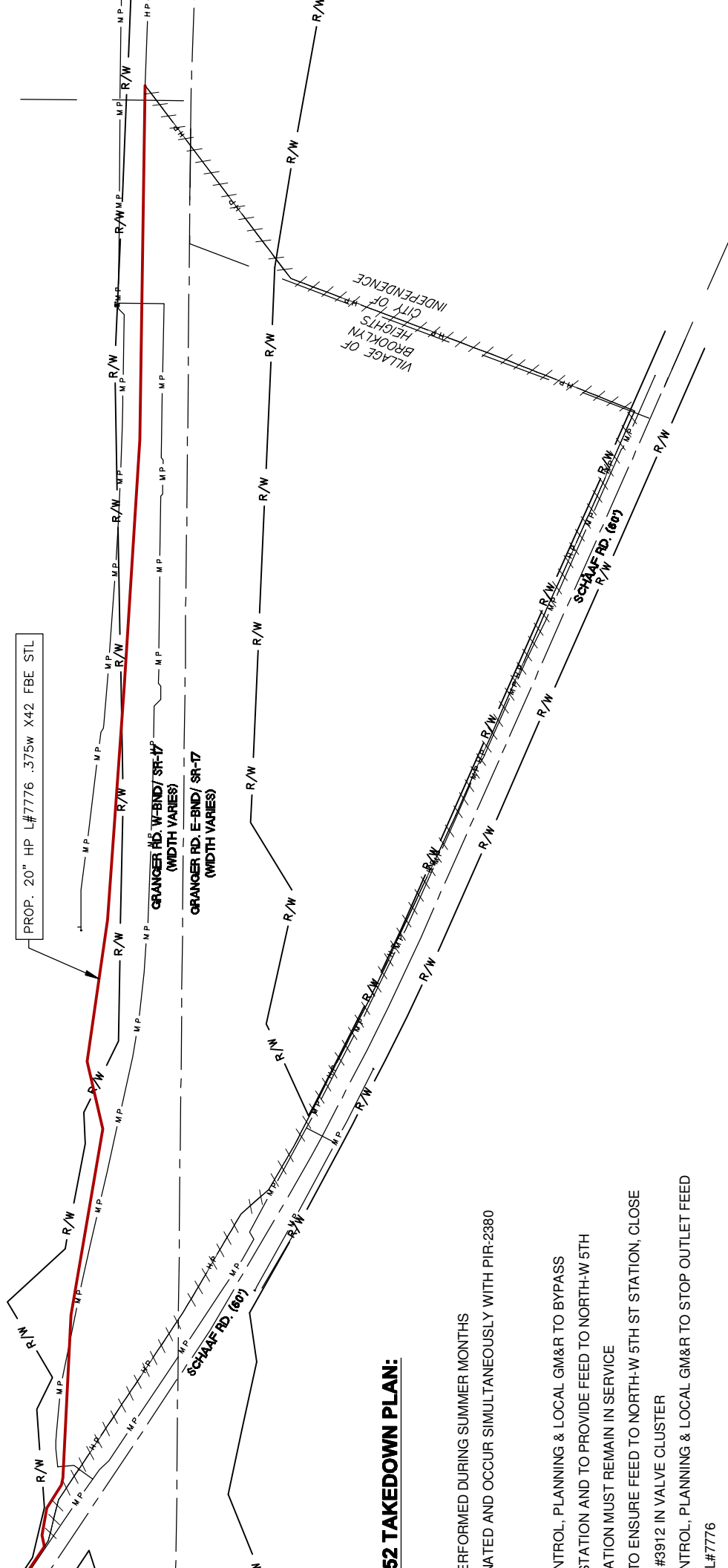
1. GAS FEE INFORMATION PROVIDED WAS OBTAINED FROM GAS P
UNDER NORMAL OPERATING CONDITIONS.
2. GAS FEE INFORMATION AS SHOWN AT TIE-IN LOCATIONS IS FOR
DETERMINING THE NEED FOR BY-PASS PROCEDURES.
3. GAS PLANNING MUST BE CONSULTED TO VERIFY FEE AT TIME OF

1. GAS FEE INFORMATION PROVIDED WAS OBTAINED FROM GAS P
UNDER NORMAL OPERATING CONDITIONS.
2. GAS FEE INFORMATION AS SHOWN AT TIE-IN LOCATIONS IS FOR
DETERMINING THE NEED FOR BY-PASS PROCEDURES.
3. GAS PLANNING MUST BE CONSULTED TO VERIFY FEE AT TIME OF

PHONE: 216.884.6910



TUXEDO AVE



52 TAKEDOWN PLAN:

PERFORMED DURING SUMMER MONTHS
NATED AND OCCUR SIMULTANEOUSLY WITH PIR-2380

NTROL, PLANNING & LOCAL GM&R TO BYPASS
STATION AND TO PROVIDE FEED TO NORTH-W 5TH
STATION MUST REMAIN IN SERVICE
TO ENSURE FEED TO NORTH-W 5TH ST STATION, CLOSE
#3912 IN VALVE CLUSTER

NTROL, PLANNING & LOCAL GM&R TO STOP OUTLET FEED
L#7776

P SYSTEM THROUGH TUXEDO-BROOKPARK STATION
D PRESSURE (60 PSI). ONCE EQUALIZED, ISOLATE
ON THROUGH FIRE GATE VALVE #2359 TO PREVENT

DOM WILLOW STATION TO ATMOSPHERE.

L#7776

L#21899

GAS FEED @ TIE-IN:
SINGLE

→

GAS FLOW DISCLAIMER - SEE GENERAL NOTES PAGE

HP L#21899 TIE-IN

CONTRACTOR TO REM EX FLG AND TIE COMPLETE

W/ 20" WN 300 ANSI FLG

4.8' SNPL E SCHAAF RD

16.5' W OF E PWR POLE #171168

F.B. 2382 PG. 62

F.B. STA 5730

MERHL MARK
1007 EAST SCHAAF RD
PID: 531-24-001

NOTE: HP L#21899 TO BE CAPPED AND ABANDONED IN PLACE

1200 GRANGER RD
1200 GRANGER RD
PID: 531-13-019

PROP. (2) 20" 22.5" ELL. .375w Y52 FBE STL

LIBRARY WORKSPACE

Vol. 12587 Pg. 561
PROPOSED DEO PERMANENT EASEMENT
4-00

ROPOSED DEO PERMANENT EASEMENT

Year	Percentage of Respondents (%)
1990	65
1992	75
1994	72
1996	78
1998	82
2000	85
2002	88
2004	90

[illegible]

PJG HOLDING COMPANY,
1350 GRANGER RD
PID: 531-13-016

22550

MP
83

X42 FBE STL

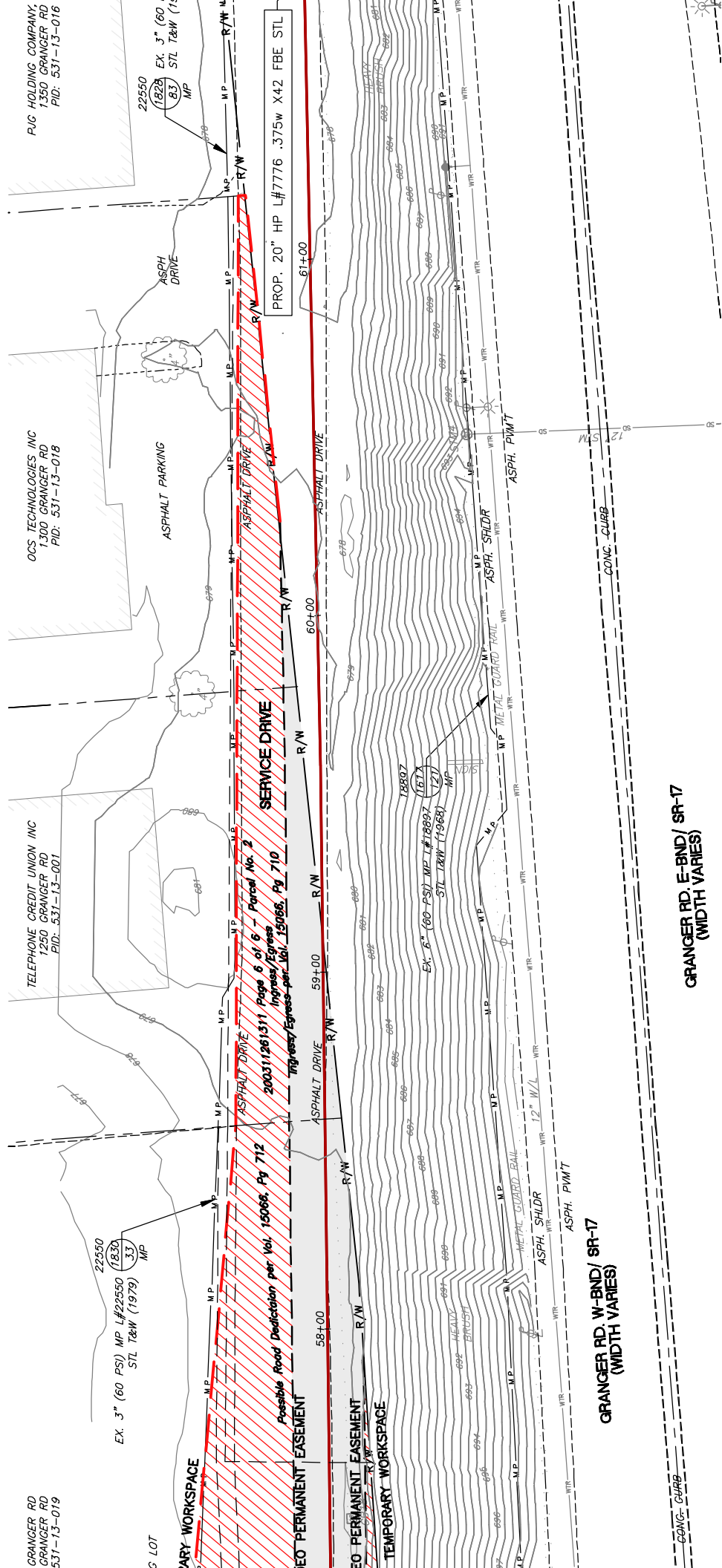
HEAVY
BRUSH 602

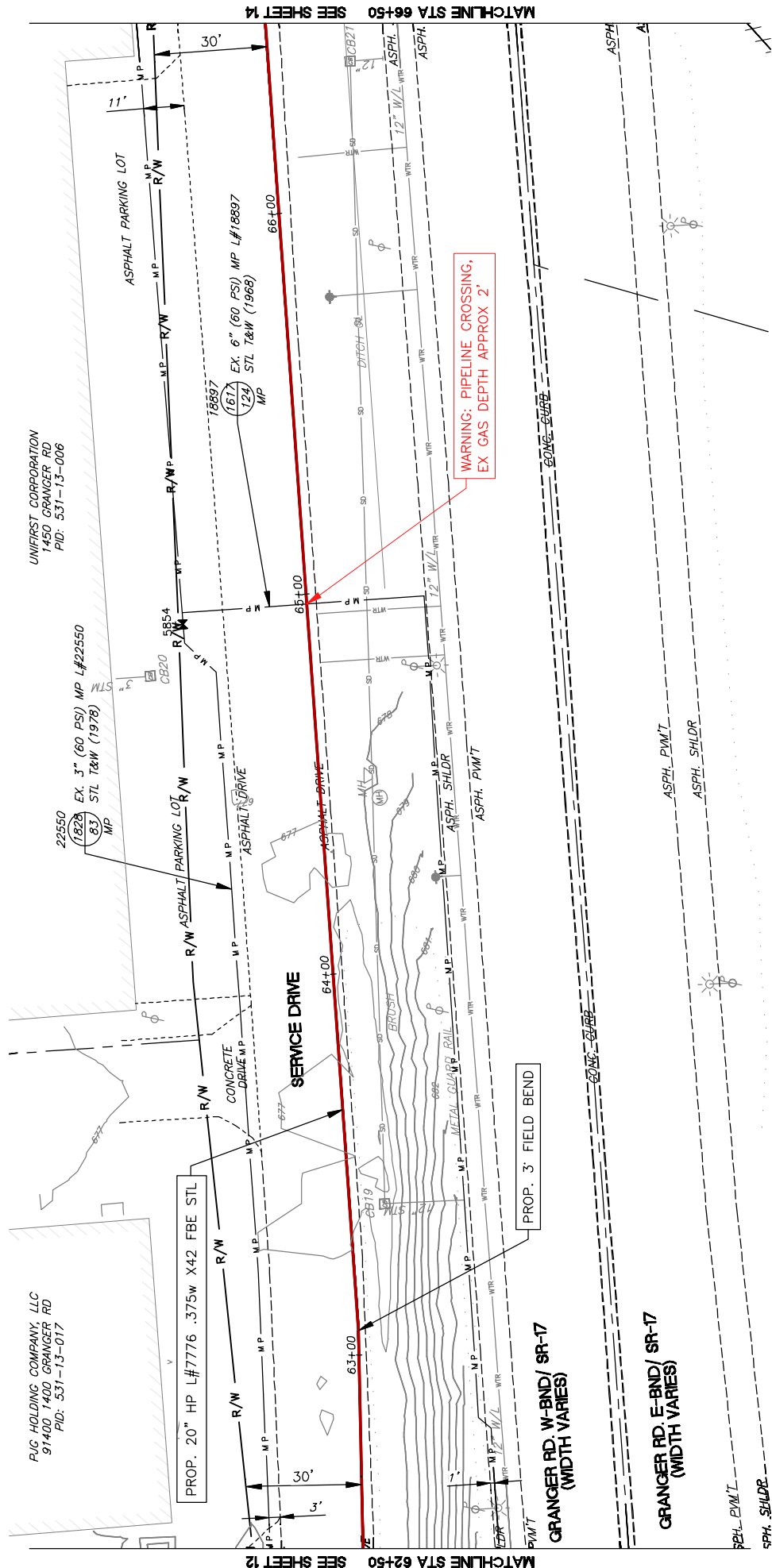
MP _____ WTR _____

11

1

1





MATCHLINE STA 62+50 SEE SHEET 12

MATCHLINE STA 66+50 SEE SHEET 14

P/G HOLDING COMPANY, LLC
91400 1400 GRANGER RD
PID: 531-13-017

UNIFIRST CORPORATION
1450 GRANGER RD
PID: 531-13-006

PROP. 20" HP L#7776 .375w X42 FBE STL

PROP. 3' FIELD BEND

GRANGER RD. W-BND/ SR-17
(WIDTH VARIES)

GRANGER RD. E-BND/ SR-17
(WIDTH VARIES)

WARNING: PIPELINE CROSSING,
EX GAS DEPTH APPROX 2'

GAS FEED @ TIE-IN:
SINGLE

→

GAS FLOW DISCLAIMER - SEE GENERAL NOTES PAGE

HP L#21899 TIE-IN

CONTRACTOR TO CUT AND TIE COMPLETE W/ (2)
20" WN 300 ANSI FLG
25.0' SNPL GRANGER RD
13.8' E OF W WALL HS #5555
F.B. 1454 PG. 51
F.B. STA 998

ABANDONED IN PLACE ALONG DEO RIGHT OF WAY



6100 West Canal Road
Valley View, Ohio 44125
216.524.6580
www.cuyahogawcd.org

Plan Review Recommendation of Approval

2016-10-17

Dominion East Ohio Gas ▶ Tara Buzzelli

320 Springside Drive #320

Akron OH 44333

Re: Dominion PIR - 2352 (Schaff & Granger), Granger Road

Plan Review - Submittal 1, 2016-09-09

NPDES Permit #: 3GC08833*AG

Application #: N/A

Dear Ms. Buzzelli:

A copy of the Storm Water Pollution Prevention Plan (SWP3) and/or associated information for the above referenced project has been reviewed by the Cuyahoga Soil and Water Conservation District (SWCD). The technical review of the SWP3 was performed by the Cuyahoga SWCD in accordance with local regulation, the current edition of Ohio's 'Rainwater and Land Development' standard guidance manual, and Ohio EPA's National Pollutant Discharge Elimination System (NPDES) rules. A review of the design calculations has not been made. Please be advised that this review does not constitute approval by the local government or Ohio EPA. While the Ohio EPA is the final authority, the SWP3, in the opinion of this office, meets or exceeds the minimum standards listed above. Note that technical reviews made by the Cuyahoga SWCD are not intended to be regulatory in nature. Regulation and enforcement is the responsibility of local government and the Ohio EPA, not the Cuyahoga SWCD.

Thank you for your cooperation with this SWP3 review process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brent A. Eysenbach".

Brent A. Eysenbach, CPESC, CESSWI

Storm Water Program Coordinator

CC:

Donald Ramm, P.E., City of Independence
Sheldon Socoloff, City of Brooklyn Heights

**CASE No. 17-467-GA-BNR
PIR 2352 VILLAGE OF BROOKLYN HEIGHTS AND
THE CITY OF INDEPENDENCE, CUYAHOGA COUNTY, OHIO
20-INCH PIPELINE REPLACEMENT PROJECT**

ATTACHMENT F

**OHIO ENVIRONMENTAL PROTECTION AGENCY
NOI FOR GENERAL CONSTRUCTION STORMWATER PERMIT**



July 29, 2016

BY US-MAIL, RETURN RECEIPT REQUESTED
7010 1670 0002 2644 2369

Ohio Environmental Protection Agency
Office of Fiscal Administration
P.O. Box 1049
50 West Town Street, Suite 700
Columbus, Ohio 43216-1049

RE: The East Ohio Gas Company – Pipeline Infrastructure Replacement Program
Construction Stormwater Notice of Intent
PIR 2352 – Schaaf and Granger

Dear Sir or Madam:

Please find enclosed a complete Notice of Intent for Coverage under the Ohio Environmental Protection Agency General Permit OHC000004 – Construction Stormwater for the East Ohio Gas Company's (EOG) Pipeline Infrastructure Replacement (PIR) project, PIR 2352 – Schaaf and Granger, located in the Village of Brooklyn Heights, Cuyahoga County, Ohio. This Notice of Intent consists of:

- Notice of Intent form, Ohio EPA 4494
- USGS topographic quadrangle map (Cleveland South, Ohio quadrangle)
- A check in the amount of \$200.00 made payable to "Treasurer, State of Ohio"

If you have any questions or need additional information please contact Tara Buzzelli at (330) 664-2579.

Sincerely,

Amanda B. Tornabene
Director, Energy Infrastructure Environmental Services

Enclosures

cc: Tara Buzzelli



Division of Surface Water - Notice of Intent (NOI) For Coverage Under Ohio
Environmental Protection Agency General NPDES Permit

(Read accompanying instructions carefully before completing this form.)

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized to discharge into state surface waters under Ohio EPA's NPDES general permit program. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. Complete all required information as indicated by the instructions. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. A check for the proper amount must accompany this form and be made payable to "Treasurer, State of Ohio." (See the fee table in Attachment C of the NOI instructions for the appropriate processing fee.)

I. Applicant Information/Mailing Address

Company (Applicant) Name: The East Ohio Gas Company

Mailing (Applicant) Address: 320 Springside Drive, Suite 320

City: Akron

State: Ohio

Zip Code: 44333

Contact Person: Tara Buzzelli

Phone: 330-664-2579

Fax: 330-664-2669

Contact E-mail Address: tara.e.buzzelli@dom.com

II. Facility/Site Location Information

Facility Name: PIR 2352 - Schaaf and Granger

Facility Address/Location: Along the public road right-of-way of East Granger Road and several intersecting roads.

City: Brooklyn Heights and Independence

State: Ohio

Zip Code: 44131

County(ies): Cuyahoga

Township(s): Click here to enter text.

Facility Contact Person: Mark Schaeffer

Phone: 330-644-2517

Fax: 888-504-0127

Facility Contact E-mail Address: mark.a.schaeffer@dom.com

(For Construction & Coal, must complete
lat/long & attach map) Latitude: 41.414961

Longitude: -81.657248

Receiving Stream or MS4: Cuyahoga

III. General Permit Information

General Permit Number: OHC000004 Construction Storm Water

Initial Coverage: ☒ Renewal Coverage: ☐

Type of Activity: All Construction Storm Water - 1 to 5.99 acres
disturbed Fee = \$200

SIC Code(s): Click here to enter text.

Existing NPDES Permit Number:

ODNR Coal Mining Application Number:

If Household Sewage Treatment System, is system for: ☐ new home construction or ☐ replacement of failed

Outfall:	Design Flow (MGD):	Associated Permit Effluent Table:	Latitude:	Longitude:
<u>#.</u>	<u>Flow.</u>	<u>Choose an item.</u>	<u>Click here.</u>	<u>Click here.</u>

Are These Permits Required? PTI No

Individual 401 Water Quality Certification No

Isolated Wetland No

USACE Nationwide
Permit No

Individual NPDES No

Proposed Project Start Date: 1/01/2017

Estimated Completion Date: 12/31/2017

Total Land Disturbance (Acres): 1.0

MS4 Drainage Area (Sq. Miles):

IV. Payment Information

Check #: 398

Check Amount: \$200.00

Date of Check: 7/27/16

For Ohio EPA Use Only

Check ID (OFA): _____ ORG #: _____

Rev ID: _____ DOC #: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name: Paul Johanning

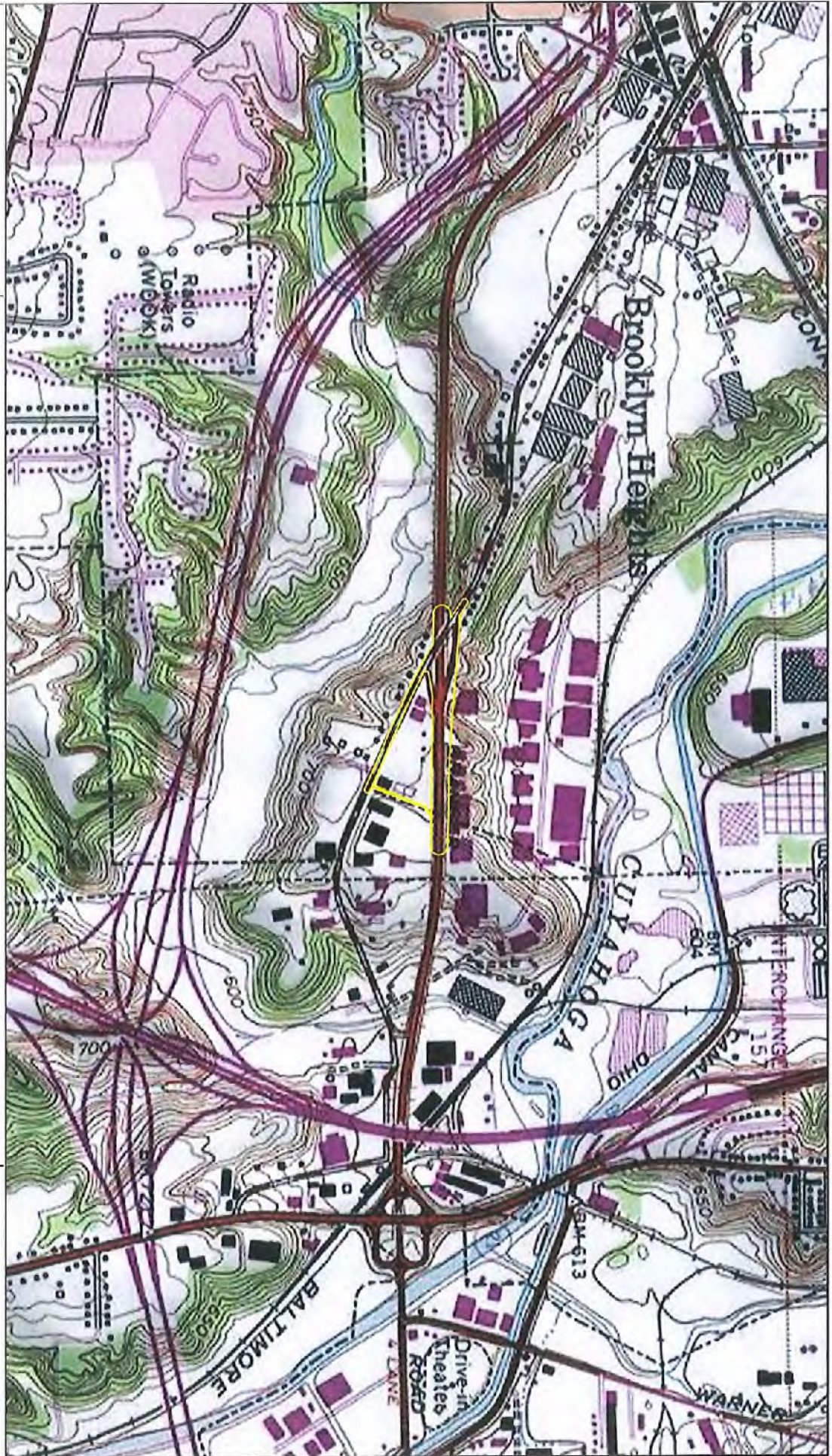
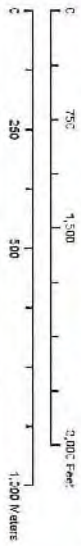
Title: Director, Gas Operations

Applicant Signature: Paul Johanning

Date: 07-26-16

Figure 1. USGS 7.5-minute
Topographic Map of Cleveland South Quadrangle.
P/R 2362 - Schaff and Grainger.

Project Area



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ohio EPA
Office of Fiscal Administration
PO Box 1049
Columbus, OH 43216

2. Article Number
(Transfer from service label)

7010 1670 0002 2644 2369

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

U.S. Postal Service™

CERTIFIED MAIL™ RECEIPT

(Domestic Mail Only, No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com**OFFICIAL USE**

Postage \$

Certified Fee

Return Receipt Fee
(Endorsement Required)Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees \$

Postmark
Here

Sent To

Street, Apt. No.,

or PO Box No.

City, State, ZIP+4

Please return to T. Bazzelli #11

US Form 3800, August 2003

See Reverse for Instructions



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

August 19, 2016

EAST OHIO GAS CO
TARA BUZZELLI
320 SPRINGSIDE DR, SUITE 320
AKRON, OH 44333

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) Construction Site Storm Water General Permit OHC000004 (the permit)

Dear Applicant:

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

Facility Name: PIR 2352-Schaaf & Granger
Facility Location: along E Granger Rd & others
City: Brooklyn Heights
County: Cuyahoga
Township:

Ohio EPA Facility Permit Number: 3GC08833*AG

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA. If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this facility permit number. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced NPDES CGP. The placement of fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Also, a Permit-To-Install (PTI) is required for the construction of sanitary or industrial wastewater collection, conveyance, storage, treatment, or disposal facility; unless a specific exemption by rule exists. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

You may obtain additional information, copies of the general permit and current forms/instructions from our website at <http://epa.ohio.gov/dsw/storm/index.aspx>. If you have questions, please call 614-644-2001 and ask to speak with a member of the Storm Water Section.

Sincerely,

A handwritten signature in black ink that reads "Craig W. Butler". The signature is written in a cursive, flowing style.

Craig W. Butler
Director

CASE No. 17-467-GA-BNR
PIR 2352 VILLAGE OF BROOKLYN HEIGHTS AND
THE CITY OF INDEPENDENCE, CUYAHOGA COUNTY, OHIO
20-INCH PIPELINE REPLACEMENT PROJECT

ATTACHMENT G

VILLAGE OF BROOKLYN HEIGHTS PERMIT
AND
CITY OF INDEPENDENCE RIGHT-OF-WAY PERMIT

VILLAGE OF BROOKLYN HEIGHTS

Building Department

345 Tuxedo Avenue

Brooklyn Heights, Ohio 44131

Office: 216-749-4300 EXT. 141 * Fax: 216-741-3753

Email: bldg@brooklynhts.org

GENERAL BUILDING PERMIT

PERMIT DATE: 01/13/2017

PERMIT NUMBER: 2017004 B

PROJECT COST: \$108,080,000

PERMISSION IS HEREBY GRANTED TO:

Owner: BROOKLYN HTS VILLAGE OF
345 TUXEDO AVE
INDEPENDENCE, OH 44131

Contractor: License No.

TO CONSTRUCT THE FOLLOWING: STREET OPENING
AT THE FOLLOWING LOCATION: 0 SCHAAF LN

PERMIT FEES:

OBC ALT/GEN/INS	2500.00
OBC ALT/GEN/INS	262.65
STREET OPENING	5000.00

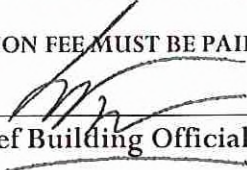
TOTAL FEES: \$7,762.65

INSPECTION REQUIREMENTS

IT IS HEREBY SPECIFICALLY AGREED THAT THE CONTRACTOR OR OWNER OR THEIR REPRESENTATIVES WILL NOTIFY THE BUILDING DEPARTMENT TO INSPECT ANY AND ALL WORK BEFORE COVERING OR CONCEALING.

FINAL INSPECTIONS ARE REQUIRED PRIOR TO OCCUPANCY. AN OCCUPANCY PERMIT IS REQUIRED FOR ALL NEW AND REMODELED STRUCTURES PRIOR TO TAKING OCCUPANCY. ALL INSPECTIONS REQUIRE AT LEAST TWENTY-FOUR (24) HOURS ADVANCE NOTICE. THIS PERMIT IS SUBJECT TO ALL VILLAGE ORDINANCES AND BUILDING CODES.

A FIFTY DOLLAR (\$50.00) RE-INSPECTION FEE MUST BE PAID PRIOR TO ANY RE-INSPECTIONS.

APPROVED BY: 
Nino Monaco, Chief Building Official

DATE: 1-13-17

VILLAGE OF BROOKLYN HEIGHTS

Building Department

345 Tuxedo Avenue

Brooklyn Heights, Ohio 44131

Office: 216-749-4300 EXT.141 * Fax: 216-741-3753

Email: bldg@brooklynhts.org

*** RECEIPT FOR BUILDING PERMIT ***

Receipt #: 2017004 01/13/2017

Application #: 2017004

Lot #: N/A

Address: 0 SCHAAF LN

Description: B

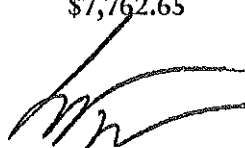
AMOUNT PAID: \$7,762.65

PAYMENT TYPE: CHK-450

FEES:	OBC ALT/GEN/INS	2500.00
	OBC ALT/GEN/INS	262.65
	STREET OPENING	5000.00

\$7,762.65

RECEIVED BY: _____



City of Independence
Engineering Department

Building Department
(216) 524-1374

PERMIT ATTACHMENT G-2
RIGHT-OF-WAY - R

Parcel Number: 561-01-002	Lot Number:
Property Type:	Property Use:
Work Classification:	Construct Value:

No.: 2017-0310

In referring to this job
always use this permit number.

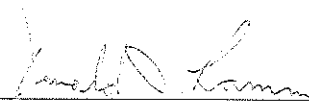
Permission is hereby granted to Dominion East Ohio to install gas line below specified at 5555 Granger Rd, the work to be done by 1127 Construction, Inc.

Contractor and/or owner are to contact the Engineering Department/Building Department, 24 hours prior for scheduling inspection(s).

All work to be done according to the ordinances of the City of Independence, and the Laws of the State of Ohio relating thereto; and on failure so to do, this permit may be revoked. If work authorized under this permit is not commenced within six (6) months after date of issue this permit shall be void (per 1305.03 of the Codified Ordinances).

Detail Type	Amount	Pay Type
44069 ROW Permit	70.00	CHECK - 456
44070 ROW Cash Deposit	500.00	CHECK - 456
44071 ROW Cash Bond	5000.00	CHECK - 456
TOTAL FEES	\$5570.00	

Additional Notes



Donald Ramm P.E. - City Engineer

02/22/2017

Date Issued

02/22/2018

Date Expires

Right-of-way deposit: If after two (2) years from the time of making such deposit, the work completed by the permit issued has not been completed and an occupancy permit therefore issued in accordance with Section 1305.10, or necessary repairs or restoration to the curb, treelawn, sidewalk, ditch, or culvert have not been made, such deposit or any portion thereof remaining shall be forfeited to the Municipality (per 1349.02 of the Codified Ordinances).

CASE No. 17-467-GA-BNR
PIR 2352 VILLAGE OF BROOKLYN HEIGHTS AND
THE CITY OF INDEPENDENCE, CUYAHOGA COUNTY, OHIO
20-INCH PIPELINE REPLACEMENT PROJECT

ATTACHMENT H

U.S FISH AND WILDLIFE SERVICE
WETLANDS DELINEATION REPORT

Wetlands and Other Waters Delineation Report

Prepared for:

The East Ohio Gas Company
320 Springside Drive, Suite 320
Akron, Ohio 44333

for the :

PIR 2352 – Schaaf and Granger
City of Brooklyn Heights and
City of Independence
Cuyahoga County, Ohio

Prepared by:



5070 Stow Rd.
Stow, OH 44224
800-940-4025

www.EnviroScienceInc.com

Project No. 8095

Date: January 21, 2016

STATEMENT OF CERTIFICATION

The analyses, opinions and conclusions in this report are based entirely on EnviroScience's unbiased, professional judgment. EnviroScience's compensation is not in any way contingent on any action or event resulting from this study. Neither EnviroScience nor any EnviroScience employee has any vested interest in the property examined in this study.

TABLE OF CONTENTS

LIST OF TABLES	iii
LIST OF APPENDICES	iii
EXECUTIVE SUMMARY	iv
1.0 INTRODUCTION AND SITE DESCRIPTION	1
2.0 METHODS	1
2.1 WETLANDS	2
2.1.1 Determination	2
2.1.1.1 Vegetation	3
2.1.1.2 Hydrology	4
2.1.1.3 Soils	5
2.1.2 ORAM Categorization	5
2.1.3 Cowardin Wetland Classification	6
2.2 OTHER WATERS	7
2.2.1 Ponds and Lakes	7
2.2.2 Streams and Rivers	7
3.0 LITERATURE REVIEW	8
3.1 USGS TOPOGRAPHIC MAP	8
3.2 NWI MAP	8
3.3 COUNTY SOIL SURVEY	8
3.4 U.S. FISH AND WILDLIFE SERVICE	9
3.5 AERIAL PHOTOGRAPHY	10
4.0 RESULTS	10
4.1 NONWETLANDS	11
4.2 WETLANDS	12
4.3 STREAMS AND RIVERS	12
4.4 PONDS AND LAKES	13
5.0 REGULATORY JURISDICTION	13
5.1 AGENCY COORDINATION	14
6.0 ASSUMPTIONS AND DISCLAIMERS	15
REFERENCES	16

LIST OF TABLES

LIST OF APPENDICES.....	iii
Table 1. Wetland Communities (Cowardin <i>et al.</i> 1979)	3
Table 2. Disturbed and Successional Nonwetland Communities	3
Table 3. Vegetative Strata.....	3
Table 4. Plant Indicators	4
Table 5. ORAM Scores and Categories	5
Table 6. Soil Types Mapped Project Area.	9
Table 7. Sample Plot Results.	11
Table 8. Wetland Results within the Project Area.	12

LIST OF APPENDICES

Appendix A: Figures

- Figure 1. Location of Site on Highway Map of Cuyahoga County, Ohio.
- Figure 2. USGS 7.5-minute Topographic Map of Cleveland South Quadrangle.
- Figure 3. NWI Map of Site (Cleveland South Quadrangle).
- Figure 4. Soil Map of Site in Cuyahoga County, Ohio.
- Figure 5. Site Map of Wetlands and Other Water Resources.
- Figure 6. Federal Emergency Management Agency Flood Insurance Rate Map.

Appendix B: Photographs

Appendix C: Routine Wetland Determination Data Forms

Appendix D: Ohio Rapid Assessment Method for Wetlands v 5.0 Rating Forms

EXECUTIVE SUMMARY

EnviroScience, Inc. performed a delineation of wetlands and other waters in October and December 2015 for the East Ohio Gas Company (EOG) at the location of the PIR 2352 – Schaaf and Granger project in the City of Brooklyn Heights and the City of Independence, Cuyahoga County, Ohio. The purpose of the project is to replace approximately 2,169 feet of natural gas pipeline (eighteen [18] and twenty [20]-inch diameter) under EOG's Pipeline Infrastructure Replacement Program. The PIR 2352 – Schaaf and Granger project is within the existing road right-of-way (ROW) of 155 feet (77.5 feet on either side of the road centerline) along East Granger Road; 50 feet (25 feet on either side of the road centerline) along East Schaaf Road, a ramp to East Schaaf Road, and a ramp to East Granger Road; and 15 feet along an off-road ROW.

Five (5) distinct vegetative communities were identified within the project area, including one (1) wetland community type. Upland communities exist primarily as maintained ROW and include maintained lawn, open field, scrub-shrub, and forest plant communities. The surrounding area exists as urban industrial, commercial, and residential properties as well as forest, scrub-shrub, and open field vegetative communities. The project area crosses one (1) wetland.

One (1) wetland was identified within the project area and accounts for 0.036 acres. No streams or open water aquatic resources were identified within the project area.

The wetland is under the jurisdiction of the Ohio EPA or U.S. Army Corps of Engineers (USACE). No filling may occur within these areas without their written permission. If impacts to onsite water resources are proposed, these activities would follow those authorized in the USACE 2012 Nationwide Permits for a Nationwide Permit (NWP) #12 (Utility Line Activities). However, if all onsite water resources are avoided, a USACE NWP or Ohio EPA Water Quality Certification will not be required for this project.

If the wetland is impacted for this project, U.S. Fish and Wildlife Service (USFWS) coordination will be initiated by the USACE. If no wetland impacts are proposed, this project would fall under EOG's Categorical Exclusion Agreement with the USFWS dated January 23, 2015. Coordination with the Ohio Department of Natural Resources is recommended to ensure compliance with the Endangered Species Act.

If the proposed ground disturbance for a project is greater than one (1) acre, the following must be prepared and submitted before construction: a Notice of Intent through the Ohio EPA, a Stormwater Pollution Prevention Plan, the City of Brooklyn Heights for any projects over one (1) acre of disturbance. A copy of the City of Brooklyn Heights submittal

should be sent to the Cuyahoga County Soil and Water Conservation District. There is no pipeline replacement located in the City of Independence; therefore, no project coordination is required with the City of Independence.

1.0 INTRODUCTION AND SITE DESCRIPTION

EnviroScience, Inc. performed a delineation of wetlands and other waters in October and December 2015 for the East Ohio Gas Company (EOG) at the location of the PIR 2352 – Schaaf and Granger project in the City of Brooklyn Heights and the City of Independence, Cuyahoga County, Ohio. The purpose of the project is to replace approximately 2,169 feet of natural gas pipeline (eighteen [18] and twenty [20]-inch diameter) under EOG's Pipeline Infrastructure Replacement Program. The PIR 2352 – Schaaf and Granger project is within the existing road right-of-way (ROW) of 155 feet (77.5 feet on either side of the road centerline) along East Granger Road; 50 feet (25 feet on either side of the road centerline) along East Schaaf Road, a ramp to East Schaaf Road, and a ramp to East Granger Road; and 15 feet along an off-road ROW.

Five (5) distinct vegetative communities were identified within the project area, including one (1) wetland community type. Upland communities exist primarily as maintained ROW and include maintained lawn, open field, scrub-shrub, and forest plant communities. The surrounding area exists as urban industrial, commercial, and residential properties as well as forest, scrub-shrub, and open field vegetative communities. The project area crosses one (1) wetland.

The project area is located in the Cuyahoga River drainage basin (Hydrologic # 04110002) which drains approximately 804 square miles in northeast Ohio. It is within the Eastern Great Lakes Lowlands ecoregion (Woods *et al.* 1998) of Ohio. The project area is located within the area covered by the Northcentral and Northeast Regional Supplement (USACE 2012) and associated plant list (Lichvar 2012). The project area is regulated by the USACE Buffalo District.

2.0 METHODS

Government agencies regulate coastal and inland waters for commerce, flood control and water quality. These water bodies provide numerous functions and values necessary to protect and sustain our quality of life. Wetlands comprise a significant portion of regulated waters. The U.S. Army Corps of Engineers (Corps) and Environmental Protection Agency (EPA) jointly define wetlands as:

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The remaining deepwater aquatic habitats (open waters) are defined by the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) as:

“ . . . areas that are permanently inundated at mean annual water depths >6.6 ft or permanently inundated areas <6.6 ft in depth that do not support rooted emergent or woody plant species.”

The methods used for determining and delineating wetlands and open waters strictly adhere to those found in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (USACE 2012). Wetlands and open water boundaries were determined by the disappearance of one or more of their diagnostic characteristics.

Ordinary high water marks (OHWM) defined the outermost regulatory boundaries of ephemeral and open waters.

Each sample plot and the perimeter of each wetland and other water was surveyed and marked in the field with plain pink flags and pink “wetland boundary” flags, respectively. A global positioning system (GPS) unit with submeter accuracy was used, in conjunction with aerial photography and topographic figures, for the survey. Computer Aided Design (CAD) software was used to determine wetland dimensions and produce a map of the project area showing wetlands and other waters.

2.1 WETLANDS

2.1.1 Determination

A review of secondary literature sources was performed to find known wetlands and other significant ecological resources and areas with high potential for wetlands in or near the proposed project area. Resources included some or all of the following:

1. U.S. Geological Survey (USGS) topographic maps;
2. National Wetlands Inventory (NWI) maps;
3. Web Soil Survey;
4. Aerial Photographs; and
5. Federal Emergency Management Agency Flood Insurance Rate Map.

A field inspection of the project area was then completed to identify major plant communities and to visually locate potential wetlands. The routine, onsite (Level 2) wetland determination was used to perform the delineation. Wetland communities were classified according to the classification scheme of Cowardin *et al.* (1979) (Table 1). Mature nonwetland communities that had reached a stable equilibrium were classified according to Anderson (1982) and Gordon (1966, 1969). Disturbed and successional nonwetland communities were classified as one of the categories described in Table 2.

Table 1. Wetland Communities (Cowardin *et al.* 1979)

Community	Description
PEM	Palustrine Emergent
PSS	Palustrine Scrub-Shrub
PFO	Palustrine Forested
POW	Palustrine Open Water

Table 2. Disturbed and Successional Nonwetland Communities

Community		Description
Disturbed	Urban	regularly maintained land; residential; industrial
	Agricultural	land used for producing crops or raising livestock; cropland; pastureland
	Cleared	disturbed areas devoid of most vegetation from recent clearing, grading or filling
Successional	Open Field	herbaceous community without woody vegetation
	Old Field	herbaceous community having woody vegetation coverage of <50%
	Scrub-Shrub	community dominated by woody vegetation <6 m (20 ft) tall
	Forest	community dominated by woody vegetation >6 m (20 ft) tall

Sample plots were established within each natural community and potential wetland within the study area. Complete data for each sample plot were collected and recorded on the USACE's Routine Wetland Determination Data Forms contained in the applicable USACE Regional Supplement (USACE 2012). Vegetation, hydrology and soils were evaluated at each sample plot.

2.1.1.1 Vegetation

To detect the presence or absence of hydrophytic vegetation, four plant strata were evaluated within specific radii of the plot center. Each stratum was ranked by aerial cover in descending order of abundance. Table 3 provides information on each vegetative stratum.

Table 3. Vegetative Strata

Stratum	Definition	Survey Area
Tree	woody plants > or equal to 3 in. (7.6 cm) dbh, regardless of height	30 ft (9.1 m) radius
Sapling/shrub	woody plants <3 in. (7.6 cm) dbh and \geq 3.28 ft (1 m) tall	15 ft (4.6 m) radius
Herbaceous	herbs and woody plants less than 3.28 ft (1 m) in height	5 ft (1.5 m) radius

Woody vines	woody vines >3.28 ft (1 m) in height	30 ft (9.1 m) radius
-------------	--------------------------------------	----------------------

Percent dominance was obtained for each species and within each stratum. Dominant species are those which cumulatively totaled in order of abundance immediately exceed 50% and also include any individual species with an abundance of 20% or more (USACE 2012). Dominant taxa were identified using recognized local guides: nomenclature follows the *National List of Scientific Plant Names* (USDA 1982). Following the identification of each plant species present within the plot, all dominant species within each stratum were assigned a wetland indicator status according to Lichvar (2012). Indicators are summarized in Table 4.

Table 4. Plant Indicators

Indicator	Category	Definition
OBL	Obligate Wetland	almost exclusively (>99% of occurrences) found in wetlands
FACW	Facultative Wetland	most likely found in wetlands (67-99% of occurrences)
FAC	Facultative	equally likely found in wetlands or nonwetlands (34-66%)
FACU	Facultative Upland	most likely found in nonwetlands (1-33% occurrence in wetlands)
UPL	Obligate Upland	almost exclusively found in nonwetlands (<1% occurrence in wetlands)

An 'NI' (no indicator) designation represents species where not enough information is available to assign an indicator; an 'NL' (no listing) designation is given to species whose identification was not determined sufficiently enough to assign an indicator. Once the indicator status is assigned to each dominant species, the evaluator can perform the percent dominance test according to the protocol outlined within the applicable Regional Supplement (USACE 2012) to determine if the plot meets the criterion for hydrophytic vegetation.

2.1.1.2 Hydrology

To detect the presence or absence of wetland hydrology, surface and subsurface hydrologic indicators were evaluated at the sample plot and throughout the adjacent community. Primary sources of wetland hydrology include direct precipitation, headwater flooding, backwater flooding, groundwater or any combination of these. When obtaining data at each sample plot, the evaluator observes evidence of hydrology. Primary indicators of hydrology (only one of these is necessary to indicate sufficient wetland hydrology) include the presence of surface water, water marks, sediment deposits, drift

deposits, etc. (USACE 2012). Secondary indicators of hydrology (which requires two or more at each sample plot) include surface soil cracks, drainage patterns, crayfish burrows, etc. (USACE 2012).

2.1.1.3 Soils

The upper horizons of the soil at each sample plot were examined to detect the presence or absence of hydric soils indicators. Current USACE guidance requires the evaluator to assess the upper 20 inches of soil for hydric soil characteristics. Most indicators of hydric soils require an assessment of soil matrix color and mottle characteristics (Environmental Laboratory 1987, USACE 2012) for each horizon. These characteristics were determined by comparing a moist sample with *Munsell Soil Color Chart* (Munsell Color 2009) or *The Globe Soil Color Book* (Visual Color Systems, 2004).

2.1.2 ORAM Categorization

Each wetland system was categorized in accordance with version 5.0 of the Ohio EPA's Ohio Rapid Assessment Method for Wetlands (ORAM) (Mack 2001). Field scoring forms are contained in Appendix D

Ohio EPA has established three primary and three intermediate categories of wetland quality which are based on a wetland's size, its hydrologic function, the types of plant communities present, the physical structure of the wetland plant community and the wetland's level of disturbance (OAC 3745-1-54). The relationship between the various wetland categories and their respective ORAM scores is presented in Table 5. ES also evaluated the project area for the presence of state threatened and endangered species as part of the ORAM evaluation.

Table 5. ORAM Scores and Categories

ORAM Score	ORAM Category	Description
0-29.9	Category 1	Lowest quality, and are generally characterized by hydrological isolation, lack of plant species diversity, insufficient habitat availability, and limited potential to perform major wetland functions.
30-34.9	Category 1 or 2 (Gray Zone)	ORAM score is insufficient to categorize wetland. In absence of a nonrapid method such as VIBI, assign the wetland to the higher functional category (Category 2)
35-44.9	Modified Category 2	Category 2 wetlands that may be of lower quality or degraded but have reasonable potential to be restored.
45-59.9	Category 2	Wetlands that have the capability to support a moderate wildlife community or maintain mid-level hydrological functions.

60-64.9	Category 2 or 3 (Gray Zone)	ORAM score is insufficient to categorize wetland. In absence of a nonrapid method such as VIBI, assign the wetland to the higher functional category (Category 3)
65-100	Category 3	Highest quality, generally characterized by a high level of biological diversity and topographical variation, threatened or endangered species, large numbers of native species, or a high level of functional importance to its surroundings.

Category 3 wetlands have the highest quality, and are generally characterized by a high level of biological diversity and topographical variation, large numbers of native species, or a high level of functional importance to its surroundings. Category 2 wetlands have the capability to support a moderate wildlife community or maintain mid-level hydrological functions. Category 2 also includes wetlands that may be of lower quality or degraded but have reasonable potential to be restored (Modified Category 2). Category 1 wetlands are of the lowest quality, and are generally characterized by hydrological isolation, lack of plant species diversity, insufficient habitat availability, and limited potential to perform major wetland functions (OAC 3745-1-54).

Since the ORAM is a rapid assessment method, there are certain wetland scores which fail to clearly differentiate the wetland's functional category. The so-called "gray zone" wetlands fall between the definite scoring breaks between the categories. Ohio EPA requires that "gray zone" wetlands be considered as the higher category unless more detailed functional assessments such as the VIBI or AmphIBI are conducted on those wetlands. As a result of this requirement, wetlands whose scores fall between the breakpoints for Categories 1 and 2 (1 or 2 gray zone wetlands) wetlands will be considered as Category 2 wetland for purposes of this report. Wetlands whose scores fall between the breakpoints for Categories 2 and 3 wetlands (2 or 3 gray zone wetlands) will be considered a Category 3 wetland for purposes of this report.

2.1.3 Cowardin Wetland Classification

The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory uses the *Classification of Wetlands and Deepwater Habitats of the United States* to classify wetland habitat types (Cowardin et al 1979). This classification system is hierarchical and defines five major systems – Marine, Estuarine, Riverine, Lacustrine, and Palustrine. The Palustrine system was the only type of wetland system identified within the study area and is defined as including all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean driven-derived salts is below 0.5 percent (Cowardin et al 1979).

2.2 OTHER WATERS

Other waters include ephemeral and open waters. These waters are broken down into two categories: 1) ponds and lakes; and 2) streams and rivers.

2.2.1 Ponds and Lakes

Palustrine systems other than wetlands, and lacustrine waters are addressed as ponds and lakes, respectively. These non-linear open waters may harbor important aquatic communities such as vegetated shallows (aquatic bed) and mud flats. They are classified according to Cowardin *et al.* (1979).

2.2.2 Streams and Rivers

Riverine systems are linear flowing waters bounded by a channel. Cowardin *et al.* (1979) divides these system into four groups, however, for the purpose of this report streams are placed into three regulatory types, listed below.

Ephemeral: An ephemeral stream only conveys runoff precipitation and meltwater. It is permanently located above the water table and is most often dry.

Intermittent: An intermittent stream is located below the water table for parts of the year, but does have dry periods.

Perennial: A perennial stream typically has flowing water throughout the entire year.

In addition to flow characteristics, the USACE has defined other regulatory categories that apply to streams, which are listed below (USACE and USEPA, 2007).

Traditional Navigable Waters (TNW): all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

Relatively Permanent Waters (RPW): non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).

Non-Relatively Permanent Waters (Non-RPW): non-navigable tributaries of traditional navigable waters that are not relatively permanent where the

tributaries typically do not have continuous flow at least seasonally (e.g., typically three months).

The Corps and USEPA will assert jurisdiction under the Clean Water Act on Traditional Navigable Waters (TNWs) and all wetlands adjacent to them, non-navigable tributaries of TNWs that are Relatively Permanent Waters (RPW) [i.e., tributaries that typically flow year-round or have continuous flow at least seasonally]; and wetlands that directly abut such tributaries. In addition, the agencies will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW.

“A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.”

3.0 LITERATURE REVIEW

3.1 USGS TOPOGRAPHIC MAP

The U.S. Geological Survey (USGS) 7.5-minute topographic series (Cleveland South Quadrangle) is shown on Figure 2 (Appendix A). The project area is relatively flat, sitting on a ridge between the Cuyahoga River and West Creek valleys. Elevations within the project area range from approximately 640 feet above mean sea level (AMSL) to 720 feet AMSL. The Cuyahoga River is depicted north of the project area with West Creek to the southwest.

3.2 NWI MAP

The National Wetlands Inventory (NWI) map (Cleveland South Quadrangle) of the project area is shown on Figure 3 in Appendix A. No wetland systems or other aquatic features are depicted within the project area.

3.3 COUNTY SOIL SURVEY

The project area is found on the *Soil Survey of Cuyahoga County, Ohio* and was accessed on the Soil Survey Geographic (SSURGO) Database (USDA Web Soil Survey, 2010) (Figure 4; Appendix A). Five (5) soil types are depicted within the project area and are listed in Table 6. All of these soil types are listed as not hydric within Cuyahoga County.

Table 6. Soil Types Mapped Project Area.

Symbol	Soil Type	Status	Common Landform	Percent Hydric	Acres in Project Area	Percent Within Project Area
GeF	Geeburg-Mentor silt loams, 25 to 70 percent slopes	Not Hydric	terraces	0	0.642	5.5
GfB	Glenford silt loam, 2 to 6 percent slopes	Not Hydric	lake plains	0	1.146	9.7
OsF	Oshtemo sandy loam, 25 to 55 percent slopes	Not Hydric	till plains	0	0.544	4.6
Ua	Udorthents, loamy	Not Hydric	N/A	0	7.022	59.6
Ub	Urban land	Not Hydric	N/A	0	2.419	20.5

3.4 U.S. FISH AND WILDLIFE SERVICE

The project area was examined for suitable habitat for federally listed species whose known range includes Cuyahoga County, Ohio. These species are the federally endangered Indiana bat (*Myotis sodalis*), the federally threatened northern long-eared bat (*Myotis septentrionalis*), the federally endangered Kirtland's warbler (*Setophaga kirtlandii*), the federally endangered piping plover (*Charadrius melodus*), the federally threatened rufa red knot (*Calidris canutus rufa*), and the federal species of concern bald eagle (*Haliaeetus leucocephalus*).

The EOG has a Categorical Exclusion Agreement with the USFWS (dated January 23, 2015). To qualify under this agreement and in order to receive a "no effect" determination, three conditions within EOG's Categorical Exclusion Agreement with the USFWS dated January 23, 2015 must be followed. First, the PIR 2352 – Schaaf and Granger project qualifies as a minor activity because it involves the replacement of existing pipeline within the permanent ROW (condition I.1.a). Second, temporary or permanent impacts to perennial streams or wetlands must not occur. One (1) wetland exists within the project area and will not be impacted by this project. In addition, the project must not impact the listed species or their habitat as listed below. If one (1) of these conditions cannot be met, consultation with the USFWS is recommended.

The project area is a densely populated urban industrial, commercial, and residential setting with trees of various sizes scattered throughout the project area. A small amount of contiguous forest habitat is located within the project area, approximately 0.9 acres, along East Granger Road near the western terminus of the project area and along a portion of the off-road ROW. No trees with characteristics that may potentially provide some level of roosting habitat for the Indiana bat and/or the northern long eared bat are located within the project area.

Kirtland's warblers are known to migrate along the Lake Erie shoreline counties and use scrub-shrub and forested areas as migratory stopover habitat. If the project area is located within three (3) miles of the Lake Erie shore, no shrub or tree clearing must occur during the spring and fall migration. Although some forest and scrub-shrub habitat exists onsite, the project area is not located within 3 miles of the Lake Erie shore. Therefore, no further coordination with USFWS is required with respect to the Kirtland's warbler.

The piping plover and rufa red knot both utilize shoreline habitat along Lake Erie (including sand or pebble beaches and mudflats). The project does not contain suitable habitat for the piping plover or the rufa red knot. Therefore, no further coordination with USFWS is required with respect to the piping plover or rufa red knot.

The bald eagle nests in large trees near water. No bald eagle habitat was observed within the project area. Moreover, according to the EOG Categorical Exclusion Agreement with USFWS dated January 23, 2015, Independence Township in Cuyahoga County has no known occurrences of bald eagle nesting sites. Therefore, no further coordination with the USFWS is required with regard to the bald eagle.

3.5 AERIAL PHOTOGRAPHY

A recent aerial photograph of the project area is shown on Figure 5 (Appendix A). The site is depicted as maintained and unmaintained ROW with maintained lawn, open field, scrub-shrub, and forest vegetative communities. West Creek is shown southwest of the project area. The surrounding land use includes industrial, commercial, and residential properties as well as maintained lawn, open field, forest, and scrub-shrub communities.

4.0 RESULTS

Five (5) sample plots were established within five (5) natural communities. One (1) of these communities is considered a wetland community. Table 7 summarizes the sample plot data.

Table 7. Sample Plot Results.

Sample Plot	Photo*	Community**	Hydrophytic Vegetation	Wetlands Hydrology	Hydric Soil	Status	Location
1	1	Open Field				Non-Wetland	SP 1
2	2	Maintained Lawn				Non-Wetland	SP 2
3	3	Forest				Non-Wetland	SP 3
4	4	Scrub-Shrub				Non-Wetland	SP 4
5	5	PEM	X	X	X	Wetland	W-1

*photos are located in Appendix B

** PEM=Palustrine Emergent

Each sample plot, delineated wetland, and other waters are illustrated on Figure 5 (Appendix A). The following section describes general conditions found within each plant community and summarizes relevant information from the data forms, located in Appendix C.

4.1 NONWETLANDS

Four (4) upland communities, open field, maintained lawn, forest, and scrub-shrub exist within the project area. The open field community is represented by Sample Plot 1 and is dominated by Canada goldenrod (*Solidago canadensis*, FACU) and an aster (*Symphyotrichum* sp., NL). Great plantain (*Plantago major*, FACU), common milkweed (*Asclepias syriaca*, UPL), and giant ironweed (*Vernonia gigantea*, FAC) were other herbaceous species within this community.

Sample Plot 2 represents the maintained lawn community. This community is dominated by Kentucky bluegrass (*Poa pratensis*, FACU). Great plantain and white clover (*Trifolium repens*, FACU) are also present within this community.

The forest is represented by Sample Plot 3. The tree stratum is dominated by large (diameter at breast height greater than 3 inches) autumn olive (*Elaeagnus umbellata*, UPL) and Amur honeysuckle (*Lonicera maackii*, UPL), as well as black cherry (*Prunus serotina*, FACU) and choke cherry (*Prunus virginiana*, FACU). Silver maple (*Acer saccharinum*, FACW) and eastern cottonwood (*Populus deltoides*, FAC) also occur in this stratum. Autumn olive and Amur honeysuckle dominate the shrub stratum with rambler rose (*Rosa multiflora*, FACU) also present. No species were present in the herbaceous or woody vine strata.

Sample Plot 4 represents the scrub-shrub community and is dominated by eastern white pine (*Pinus strobus*, FACU) and eastern cottonwood in the tree stratum. Amur honeysuckle and staghorn sumac (*Rhus typhina*, UPL) are dominant species within the shrub stratum. The herbaceous stratum is dominated by tall goldenrod (*Solidago altissima*, FACU) and white heath American-aster (*Symphyotrichum ericoides*, FACU). Other common herbaceous species includes fowl blue grass (*Poa palustris*, FACW), field horsetail (*Equisetum arvense*, FAC), and common wormwood (*Artemisia vulgaris*, UPL).

4.2 WETLANDS

One (1) wetland was identified and delineated within the project area. This wetland consists of palustrine emergent (PEM) vegetation. The delineated wetland has been categorized using the Ohio Rapid Assessment Method for Wetlands v.5.0 (ORAM); the scoring form is included in Appendix D. Wetland results are given in Table 8 and are briefly described in the following section. Wetland size has been determined for areas within the project area. The wetland is illustrated on Figure 5 (Appendix A).

Table 8. Wetland Results within the Project Area.

Wetland	Photo*	Cowardin Classification	ORAM Score	ORAM Category	Size within Project Area (acres)	Length of Wetland Crossing (feet)
W-1	6	PEM	11	1	0.036	112
Total Wetlands					0.036	112

*photos are located in Appendix B

Wetland W-1 is composed of PEM vegetation and is represented by Sample Plot 5. This wetland is dominated by common reed (*Phragmites australis*, FACW) and narrow-leaf cattail (*Typha angustifolia*, OBL). Wetland W-1 assessed within the range of Category 1 wetlands using the ORAM scoring method. This wetland is small in area, has narrow buffers with low to high intensity surrounding land use, has poor habitat development, and has extensive cover of invasive species.

4.3 Streams and Rivers

No streams were identified within the project area.

4.4 PONDS AND LAKES

No open water aquatic resources were identified within the project area.

5.0 REGULATORY JURISDICTION

The wetland is under the jurisdiction of the Ohio EPA or Corps. No filling may occur within this area without their written permission. Please contact the Ohio EPA Division of Surface Water at (614) 644-2001 or the Buffalo District, U.S. Army Corps of Engineers, at (716) 879-4330 before working in these areas. Based on the site plans for the PIR 2352 – Schaaf and Granger project, the proposed activities would follow those authorized in the U.S. Army Corps of Engineers (USACE) 2012 Nationwide Permits for a Nationwide Permit (NWP) #12 (Utility Line Activities) if impacts to onsite water resources are proposed. However, if all onsite water resources are avoided, a U.S. Army Corps of Engineers NWP or Ohio EPA Water Quality Certification will not be required for this project.

The following information is excerpted and summarized from the 2007 *U.S. Army Corps Of Engineers Jurisdictional Determination Form Instructional Guidebook*.

“In 2001, the ... U.S. Supreme Court's decision in the *Solid Waste Agency of Northern Cook County (SWANCC) v. Corps* held that isolated, intrastate, non-navigable waters could not be regulated under the CWA based solely on the presence of migratory birds. Following the SWANCC decision it generally was believed that a water body (including a wetland) was subject to CWA jurisdiction if the water body was part of the U.S. territorial seas, or a traditional navigable water, or any tributary to a traditional navigable water, or a wetland adjacent to any one of the above. In addition, isolated wetlands and other waters might be considered jurisdictional where they had the necessary link to either navigable waters or interstate commerce.”

In the state of Ohio, the Ohio EPA isolated wetland permitting program was legislatively created in response to the 2001 SWANCC decision. On July 17, 2001, House Bill 231 was signed into law, establishing a permanent permitting process for isolated wetlands. The provisions of House Bill 231 were incorporated in Sections 6111.021 through 6111.029 of the Ohio Revised Code.

“In 2006, the Supreme Court once again addressed the jurisdictional scope of Section 404 of the CWA, specifically the term “the waters of the U.S.,” in *Rapanos v. U.S.* and in *Carabell v. U.S.* (hereafter referred to as *Rapanos*).

The decision provides two new analytical standards for determining whether water bodies that are not traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction: (1) if the water body is relatively permanent, or if the water body is a wetland that directly abuts (e.g., the wetland is not separated from the tributary by uplands, a berm, dike, or similar feature) a relatively permanent water body (RPW), or (2) if a water body, in combination with all wetlands adjacent to that water body,

has a significant nexus with TNWs. CWA jurisdiction over TNWs and their adjacent wetlands was not in question in this case, and, therefore, was not affected by the Rapanos decision. In addition, at least five of the Justices in Rapanos agreed that CWA jurisdiction exists over all TNWs and over all wetlands adjacent to TNWs.

The Memo states that the [Corps and USEPA] will assert jurisdiction over the following categories of water bodies: TNWs; all wetlands adjacent to TNWs; non-navigable tributaries of TNWs that are relatively permanent (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally); and wetlands that directly abut such tributaries. In addition, the agencies will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW. The classes of water body that are subject to CWA jurisdiction only if such a significant nexus is demonstrated are: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.”

5.1 AGENCY COORDINATION

If the wetland is impacted for this project, U.S. Fish and Wildlife Service (USFWS) coordination will be initiated by the USACE. If no wetland impacts are proposed this project would fall under EOG’s Categorical Exclusion Agreement with the USFWS dated January 23, 2015. Coordination with the Ohio Department of Natural Resources is recommended to ensure compliance with the Endangered Species Act.

A Stormwater Pollution Prevention Plan (SWPPP) should be prepared in accordance with the Ohio Rain Water and Land Development Manual for projects with earth disturbance greater than one (1) acre. In addition, the National Pollution Discharge Elimination System (NPDES) General Construction Site Stormwater Permit (OHC000004) through the Ohio EPA is required for projects resulting in earth disturbance greater than one (1) acre unless the project is located in a combined sewer serviced area in which NOI submittal is not required. This project is located within a combined sewer service area; therefore, no NOI is required to be submitted for this project. Earth disturbance for pipeline replacement activities may result from pipeline installation, pipeline capping of abandoned lines, vehicular and construction traffic within unpaved pipe yard areas, and/or equipment access along unpaved routes.

For the PIR 2352 – Shaaf and Granger project, if no additional unpaved areas are required for the pipeline replacement and earth disturbance is limited to pipeline installation within the designated project area, the one (1) acre threshold will not be

exceeded. If additional disturbance is required for pipeline capping of abandoned lines, vehicular and construction traffic within unpaved pipe yard areas, and/or equipment access along unpaved routes, this area will be included in the calculation and the disturbance width will be reduced. For projects over one (1) acre, coordination with the City of Brooklyn Heights is required. A copy of the City of Brooklyn Heights should be sent to the Cuyahoga County Soil and Water Conservation District.

The USACE and the Ohio Historical Preservation Office (OHPO) do not require a formal Section 106 consultation be completed for pipeline replacement/repair projects due to previous ground disturbance unless historical properties will be impacted by the project. However, if PCN will be submitted to USACE for temporary impacts to the wetland, the USACE will take the lead with regards to Section 106. Any additional coordination with OHPO will be determined by the USACE at that time. If no impacts to the wetland will occur as a result of this project, an OHPO literature review will be conducted. A preliminary review of historic features was conducted and indicates that one (1) historic feature, the W. Franz House, is located near or within the project area.

6.0 ASSUMPTIONS AND DISCLAIMERS

The constant influence of human activity on the project area can result in a rapid change of ecological boundaries. Over time, natural succession and changes in hydrology can also affect their boundaries. Precision of GPS collected data is subject to variation caused by canopy cover, atmospheric interference and satellite configuration. Because slight inaccuracies are possible, all acreages and derived boundaries presented in this report are approximate.

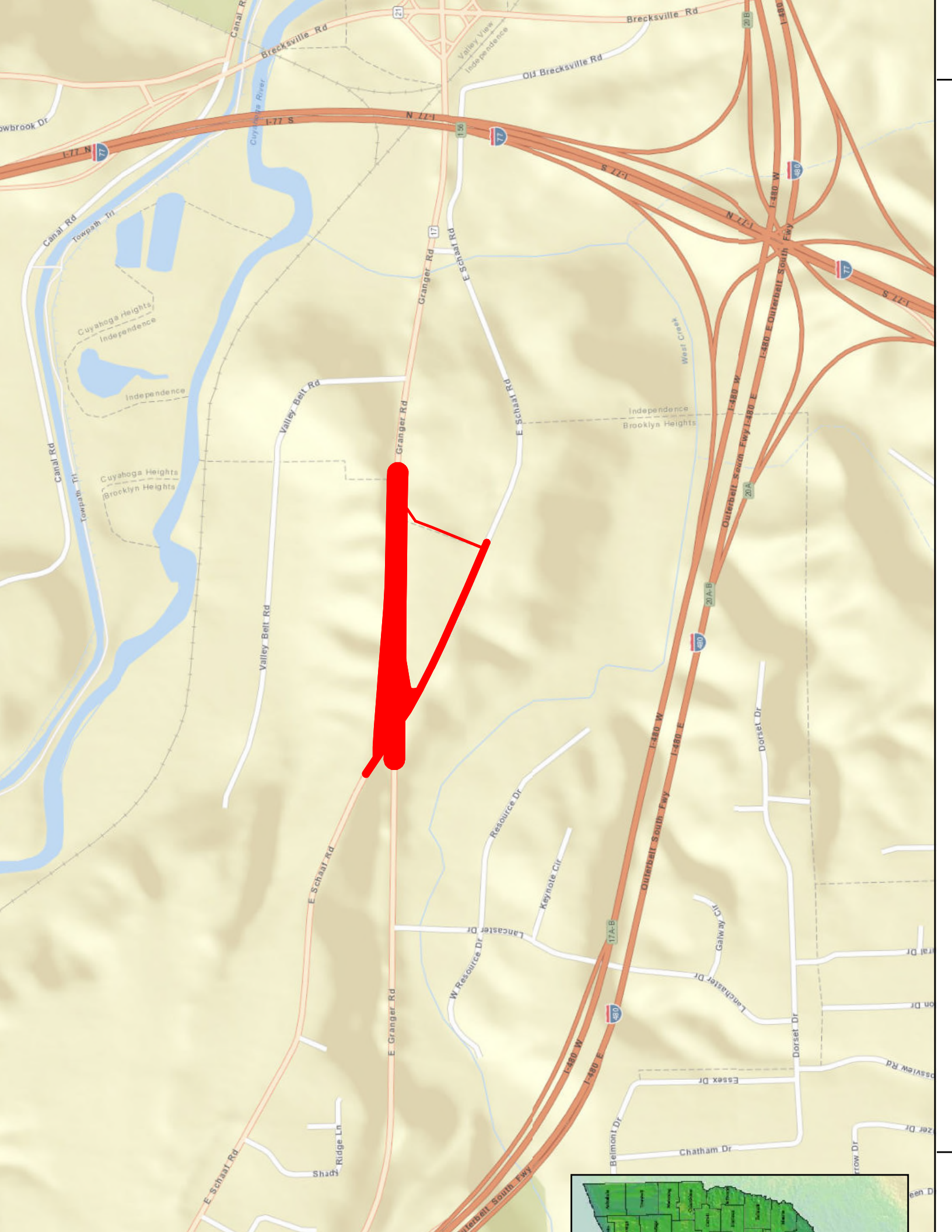
The results and conclusions contained in this report apply to the year and date in which the data were collected. This report is not considered officially valid until it is approved by the Corps. The report is then valid for a period of five years. Refer to the Corps' Regulatory Guidance Letter # 94-1 (23 May 1994).

REFERENCES

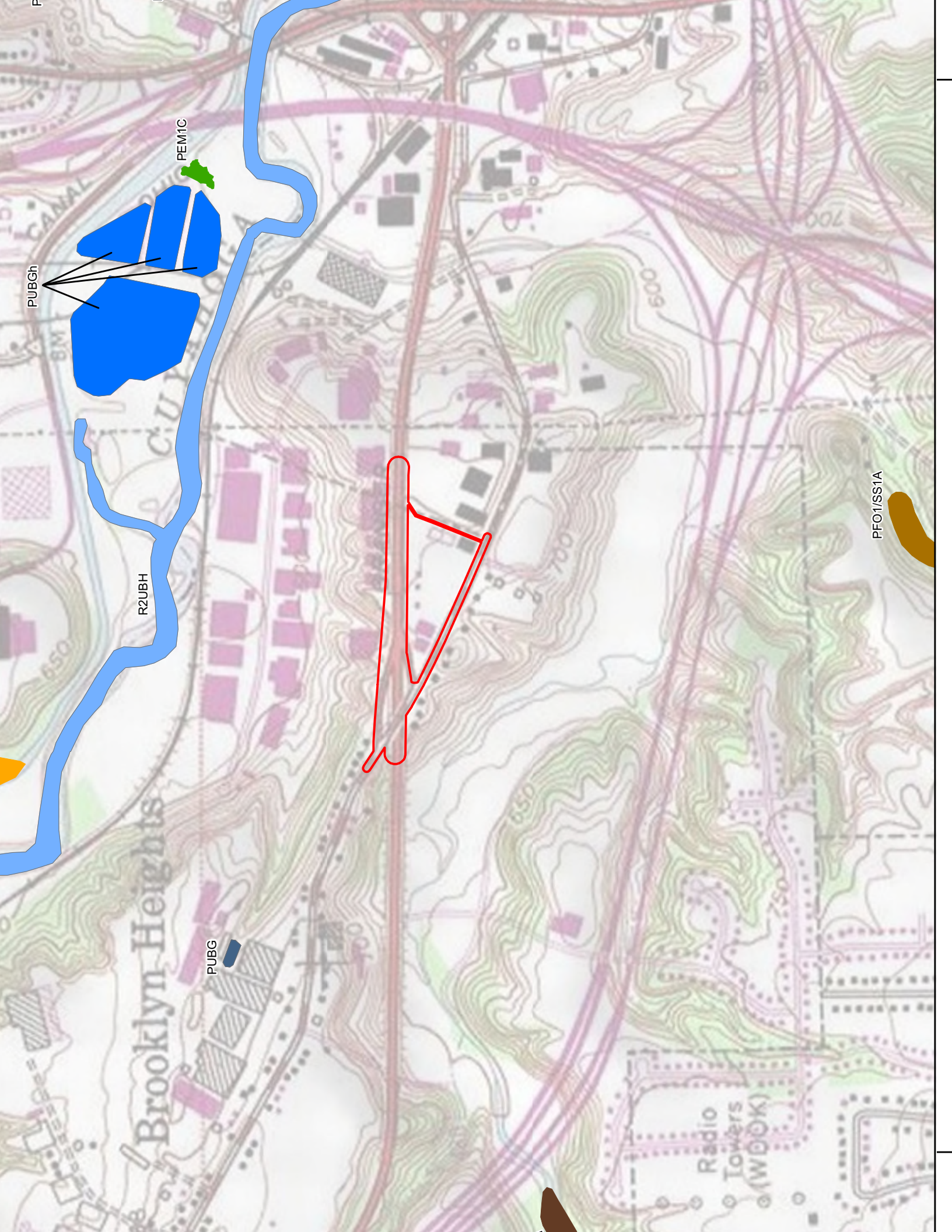
- Anderson, D.M. 1982. *Plant Communities of Ohio: A Preliminary Classification and Description*. Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Columbus, Ohio.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classifications of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. U.S. Department of Interior, Fish and Wildlife Service, Office of Biological Services, Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Lichvar, R.W. 2012. The National Plant List. Technical Report ERDC/CRREL TR-12-11. Cold Regions Research and Engineering Laboratory, U.S. Army Engineer Research and Development Center, Hanover, NH.
- Mack, J.J. 2000. *ORAM v. 5.0 Quantitative Score Calibration*. Ohio Environmental Protection Agency, Division of Surface Water, Wetland Ecology Unit, Columbus, Ohio.
- Mack, J.J. 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms*. Ohio EPA Technical Report WET/2001-1. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.
- Munsell Color. 2009. *Munsell Soil Color Charts* (Rev. ed.). Grand Rapids, Michigan.
- Ohio Environmental Protection Agency, 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. Ohio EPA Technical Bulletin EAS/2006-06-1. Ohio EPA Division of Surface Water, Columbus, Ohio.
- Ohio Environmental Protection Agency, 2012. *Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams*. Version 3.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 117 pp.
- Ohio Department of Natural Resources, Division of Wildlife Website. 2012.
http://www.dnr.state.oh.us/Home/species_a_to_z/SpeciesGuideIndex/tabid/6491/Default.aspx
- Ohio Department of Natural Resources, Division of Natural Areas and Preserves Website. 2012.
http://ohiodnr.com/Home/Rare_Plants/RareNativeOhioPlants/tabid/22557/Default.aspx
- Rapanos vs. United States; June Carabell, et al., Petitioners vs. United States Army Corps of Engineers. 547 U.S. 715. 2006.
- Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers. 531 U.S. 159. 2001.
- U.S. Army Corps of Engineers. 1994. Regulatory Guidance Letter 94-01. Expiration of Geographic Jurisdictional Determinations.
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region (version 2.0). Technical Report ERDC/EL TR-12-1. US Army Engineer Research and Development Center, Vicksburg, Mississippi.
- U.S. Army Corps of Engineers and U.S. Environmental Protection Agency. 2007. U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook. Washington, D.C.
- U.S. Department of Agriculture. 2010. Web Soil Survey. USDA. Natural Resource Conservation Service.
<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.
- U.S. Fish and Wildlife Service. 2010. Wetlands Mapper Documentation and Instructions Manual. U.S. Fish and Wildlife Service, Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, National Standards and Support Team, Madison, WI 53711-1061.
- Visual Color Systems. 2004. The Globe Soil Color Book. Mountaintale, New York
- Woods, A.J., J.M. Omernick, C.S. Brockman, T.D. Gerber, W.D. Hosteter and S.H. Azevedo. 1998. *Ecoregions of Indiana and Ohio*. U.S. Geological Survey, Denver, Colorado.

Appendix A:

Figures







PUBGH

PEM1C

R2UBH

PUBG

PFO1/SS1A

Brooklyn Heights

Radio
Towers
(WDOX)





E GRANGER RD

5.01

RAMP

RAMP

RESOURCE DR

ER RD

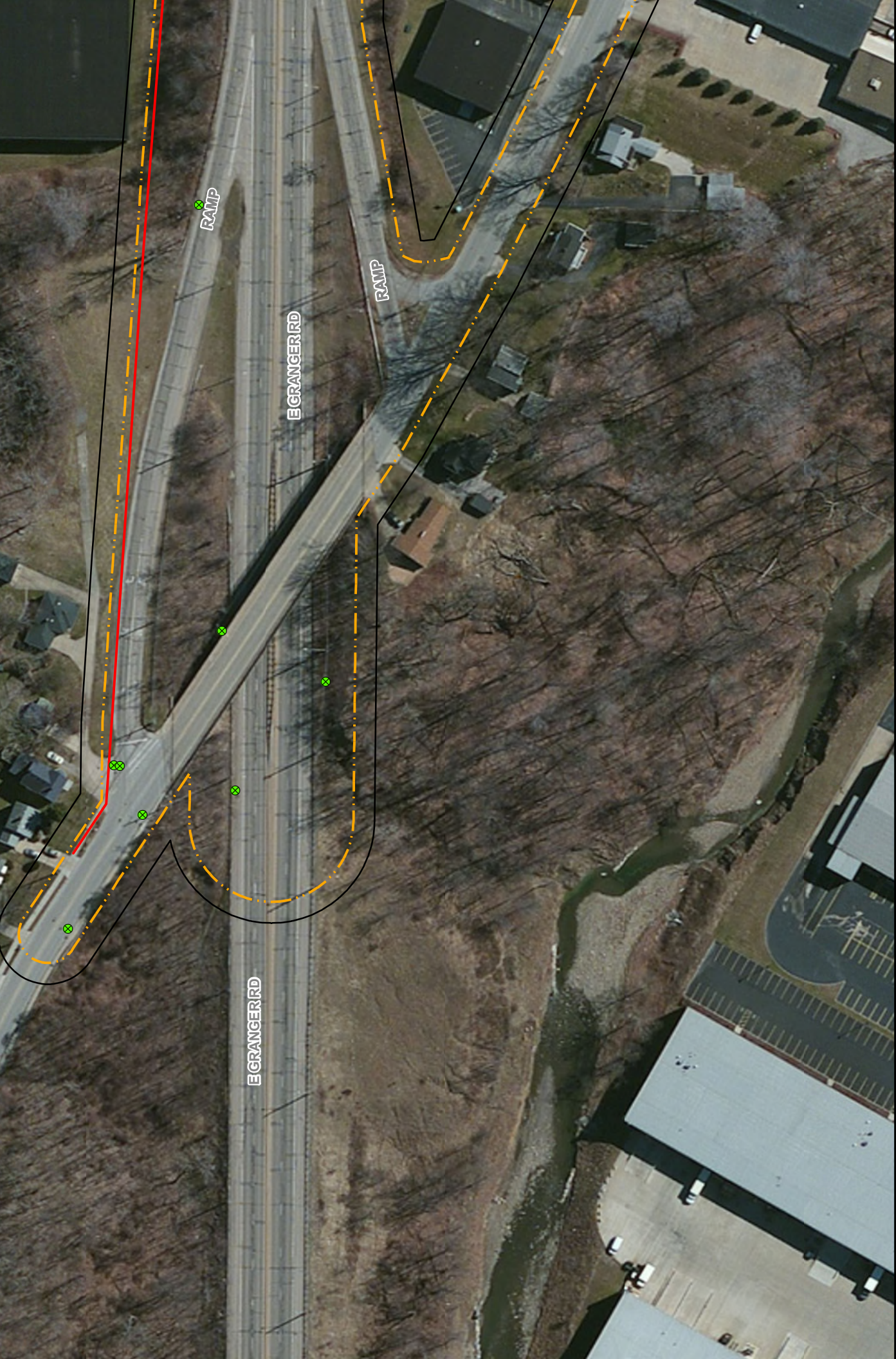


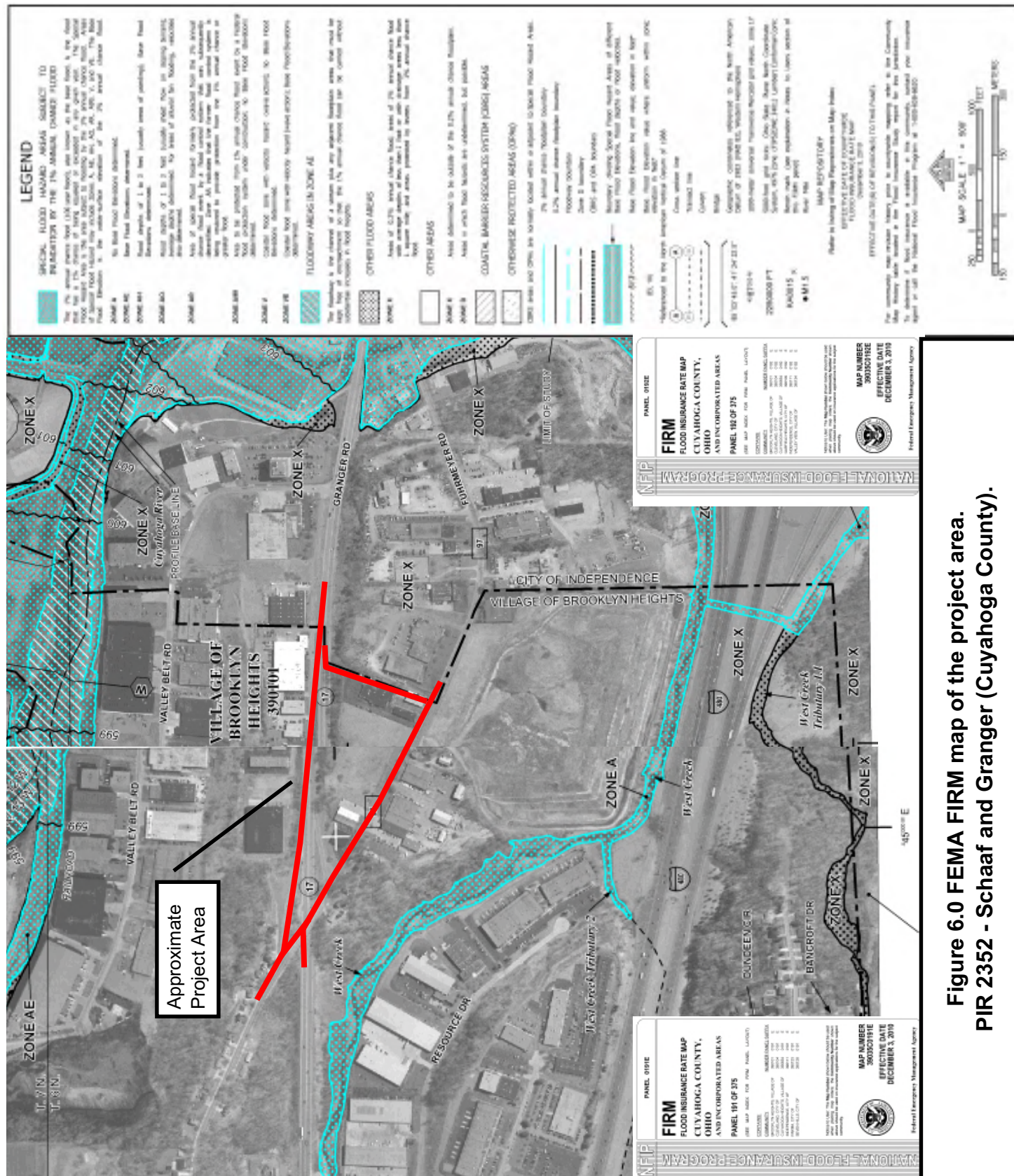
Figure 5.01. Site Map of Wetlands and Other Water Resources.
PIR 2352 - Schaaf and Granger.

- Sample Plot
- Inlet
- Wetland (PEM)
- Project Area
- Delineation
- Project Area Buffer (Add'l 20')



Figure 5.02. Site Map of Wetlands and Other Water Resources.
PIR 2352 - Schaaf and Granger.

- Sample Plot
- Inlet
- Wetland (PEM)
- Project Area
- Culvert
- Inlet (Offsite)
- Dineline
- Project Area Buffer (Add'l 20')



Appendix B:

Photographs



Photo 1. Sample Plot 1 within open field community.



Photo 2. Sample Plot 2 within maintained lawn community.



Photo 3. Sample Plot 3 within a forest community.



Photo 4. Sample Plot 4 within a scrub-shrub community.



Photo 5. Sample Plot 5 within Wetland W-1.



Photo 6. Wetland W-1 facing east.

Appendix C:
Routine Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2352 - Schaaf and Granger City/County: Brooklyn Heights, Cuyahoga Sampling Date: 1/8/2016
 Applicant/Owner: Dominion State: OH Sampling Point: SP1
 Investigator(s): N. Knowles, ES Section, Township, Range: _____
 Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.413622 Long: -81.655811 Datum: WGS84
 Soil Map Unit Name: Glenford silt loam, 2 to 6 percent slopes (GfB) NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Open field.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point: SP1

Tree Stratum	Plot size: 30	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		=Total Cover		
Sapling/Shrub Stratum	Plot size: 15	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		=Total Cover		
Herb Stratum	Plot size: 5	Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Symphyotrichum sp</i>	45	Yes	NL
2.	<i>Solidago canadensis</i>	30	Yes	FACU
3.	<i>Plantago major</i>	15	No	FACU
4.	<i>Asclepias syriaca</i>	5	No	UPL
5.	<i>Vernonia gigantea</i>	5	No	FAC
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		100 =Total Cover		
Woody Vine Stratum	Plot size: 30	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 5	x 3 = 15
FACU species 45	x 4 = 180
UPL species 5	x 5 = 25
Column Totals: 55 (A)	220 (B)
Prevalence Index = B/A = 4.00	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

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

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/4	100					Loamy/Clayey	
6-12	10YR 5/6	100					Loamy/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/>	Polyvalue Below Surface (S8) (LRR R,	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)		
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/>	MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)		
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/>	Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/>	High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)		
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/>	Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/>	Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/>	Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/>	Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/>	Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/>	Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/>	Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Dark Surface (S7)					

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

Restrictive Layer (if observed):		
Type: _____		
Depth (inches): _____		
		Hydric Soil Present? Yes ____ No <u>X</u>

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2352 - Schaaf and Granger City/County: Brooklyn Heights, Cuyahoga Sampling Date: 1/8/2016
Applicant/Owner: Dominion State: OH Sampling Point: SP2
Investigator(s): N. Knowles, ES Section, Township, Range: _____
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.413673 Long: -81.654869 Datum: WGS84
Soil Map Unit Name: Urban land (Ub) NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Lawn	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP2

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>100</u>	x 4 = <u>400</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>100</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
=Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
=Total Cover																				
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Poa pratensis</u>	<u>80</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Plantago major</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Trifolium repens</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
=Total Cover																				
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				
Hydrophytic Vegetation Present?																				
Yes <u> </u> No <u>X</u>																				

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

SOIL

Sampling Point: SP2

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2352 - Schaaf and Granger City/County: Brooklyn Heights, Cuyahoga Sampling Date: 1/8/2015
Applicant/Owner: Dominion State: OH Sampling Point: SP3
Investigator(s): N.Knowles Section, Township, Range: _____
Landform (hillside, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.414806 Long: -81.654203 Datum: WGS84
Soil Map Unit Name: Urban land (Ub) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Forest	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP3

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Prunus serotina</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u>Elaeagnus umbellata</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
3. <u>Lonicera maackii</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>																	
4. <u>Prunus virginiana</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
5. <u>Acer saccharinum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
6. <u>Populus deltoides</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
7. _____	_____	_____	_____																	
		<u>80</u>	=Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>55</u></td> <td>x 4 = <u>220</u></td> </tr> <tr> <td>UPL species <u>65</u></td> <td>x 5 = <u>325</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>570</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.38</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>65</u>	x 5 = <u>325</u>	Column Totals: <u>130</u> (A)	<u>570</u> (B)	Prevalence Index = B/A = <u>4.38</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>5</u>	x 3 = <u>15</u>																			
FACU species <u>55</u>	x 4 = <u>220</u>																			
UPL species <u>65</u>	x 5 = <u>325</u>																			
Column Totals: <u>130</u> (A)	<u>570</u> (B)																			
Prevalence Index = B/A = <u>4.38</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Lonicera maackii</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Elaeagnus angustifolia</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Rosa multiflora</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>50</u>	=Total Cover	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>5</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		_____	=Total Cover	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		_____	=Total Cover																	
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																				

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

SOIL

Sampling Point: SP3

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

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Polyvalue Below Surface (S8) (LRR R,
_____ Histic Epipedon (A2)	_____ MLRA 149B)
_____ Black Histic (A3)	_____ Thin Dark Surface (S9) (LRR R, MLRA 149B)
_____ Hydrogen Sulfide (A4)	_____ High Chroma Sands (S11) (LRR K, L)
_____ Stratified Layers (A5)	_____ Loamy Mucky Mineral (F1) (LRR K, L)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)
_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Sandy Gleyed Matrix (S4)	_____ Depleted Dark Surface (F7)
_____ Sandy Redox (S5)	_____ Redox Depressions (F8)
_____ Stripped Matrix (S6)	_____ Marl (F10) (LRR K, L)
_____ Dark Surface (S7)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes No ☒

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2352 - Schaaf and Granger City/County: Independence, Cuyahoga Sampling Date: 12/3/2016
 Applicant/Owner: Dominion State: OH Sampling Point: SP4
 Investigator(s): A. Gilmore and M. Gilmore, ES Section, Township, Range: _____
 Landform (hillside, terrace, etc.): bottom of hill Local relief (concave, convex, none): none Slope (%): 5%
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.414922 Long: -81.65403 Datum: WGS84
 Soil Map Unit Name: Urban land (Ub) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Scrub-Shrub.		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP4

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Pinus strobus</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B)																
2. <u><i>Populus deltoides</i></u>	<u>3</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>8</u>	=Total Cover																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u><i>Lonicera maackii</i></u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>	Prevalence Index worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>18</u></td> <td>x 3 = <u>54</u></td> </tr> <tr> <td>FACU species <u>85</u></td> <td>x 4 = <u>340</u></td> </tr> <tr> <td>UPL species <u>70</u></td> <td>x 5 = <u>350</u></td> </tr> <tr> <td>Column Totals: <u>198</u> (A)</td> <td><u>789</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.98</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>18</u>	x 3 = <u>54</u>	FACU species <u>85</u>	x 4 = <u>340</u>	UPL species <u>70</u>	x 5 = <u>350</u>	Column Totals: <u>198</u> (A)	<u>789</u> (B)	Prevalence Index = B/A = <u>3.98</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5</u>	x 1 = <u>5</u>																			
FACW species <u>20</u>	x 2 = <u>40</u>																			
FAC species <u>18</u>	x 3 = <u>54</u>																			
FACU species <u>85</u>	x 4 = <u>340</u>																			
UPL species <u>70</u>	x 5 = <u>350</u>																			
Column Totals: <u>198</u> (A)	<u>789</u> (B)																			
Prevalence Index = B/A = <u>3.98</u>																				
2. <u><i>Rhus typhina</i></u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>60</u>	=Total Cover																	
Herb Stratum (Plot size: <u>5</u>)																				
1. <u><i>Solidago altissima</i></u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u><i>Symphyotrichum ericoides</i></u>	<u>35</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u><i>Poa palustris</i></u>	<u>20</u>	<u>No</u>	<u>FACW</u>																	
4. <u><i>Equisetum arvense</i></u>	<u>15</u>	<u>No</u>	<u>FAC</u>																	
5. <u><i>Artemisia vulgaris</i></u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
6. <u><i>Rosa multiflora</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u><i>Eutrochium maculatum</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
8. <u><i>Quercus alba</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>130</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		_____	=Total Cover																	
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																				

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

SOIL

Sampling Point: SP4

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2352 - Schaaf and Granger City/County: Independence, Cuyahoga Sampling Date: 12/3/2015
 Applicant/Owner: Dominion State: OH Sampling Point: SP5
 Investigator(s): A. Gilmore and M. Gilmore, ES Section, Township, Range: _____
 Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.41492 Long: -81.653654 Datum: WGS84
 Soil Map Unit Name: Urban land (Ub) NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>W-1</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) PEM	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) <u>X</u> Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>16</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>7</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: SP5

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
_____ =Total Cover																				
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
_____ =Total Cover																				
_____ =Total Cover																				
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Phragmites australis</u>	<u>80</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Typha angustifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ 100 =Total Cover																				
Woody Vine Stratum (Plot size: <u>30</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
_____ =Total Cover																				
Hydrophytic Vegetation Present?																				
Yes <u>X</u> No _____																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

Sampling Point: SP5

Northcentral and Northeast Region – Version 2.0

Appendix D:
Ohio Rapid Assessment Method for
Wetlands v. 5.0 Rating Forms

Background Information

Name: Brian Slaby	
Date: 12/3/2015	
Affiliation: EnviroScience Inc.	
Address: 5070 Stow Road, Stow, Ohio 44224	
Phone Number: 330-688-0111	
e-mail address: bslaby@EnviroScienceInc.com	
Name of Wetland: W-1	
Vegetation Communit(ies): PEM	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Please refer to site wetlands and water resources map.	
Lat/Long or UTM Coordinate	41.414908, -81.653711
USGS Quad Name	Cleveland South
County	Cuyahoga
Township	Independence
Section and Subsection	
Hydrologic Unit Code	#4110002
Site Visit	12/3/2015
National Wetland Inventory Map	X
Ohio Wetland Inventory Map	
Soil Survey	X
Delineation report/map	X

Name of Wetland: W-1	
Wetland Size (acres, hectares): 0.036 acres onsite	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Please refer to site wetlands and water resources map.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 11	Category: 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the “scoring boundaries” of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the “jurisdictional boundaries.” For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland’s jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		X

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), <http://www.dnr.state.oh.us/dnap>. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	<input checked="" type="radio"/> NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	<input checked="" type="radio"/> NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	Oak Opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinatum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: PIR 2352 - Schaaf and Granger

Rater(s): B. Slaby

12/3/2015

0

max 6 pts.

0

subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1 ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4 ha) (3 pts)
- ☐ 0.3 to < 3 acres (0.12 to <1.2ha) (2 pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☒ <0.1 acres (0.04ha) (0 pts)

4

max 14 pts.

4

subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164 ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☒ 1 NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ 5 LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☒ 1 HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

6

max 30 pts.

10

subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ 1 Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ 1 <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☐ Recovered (7)
- ☒ 3 Recovering (3)
- ☒ 1 Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

on/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ 2 Seasonally inundated (2)
- ☐ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- ☒ ditch
- ☐ tile
- ☐ dike
- ☐ weir
- ☒ stormwater input

- ☐ point source (nonstormwater)
- ☐ filling/grading
- ☒ road bed/RR track
- ☒ dredging
- ☐ Other:

5

max 20 pts.

15

subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☐ Recovered (3)
- ☒ 2 Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☒ 1 Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☐ Recovered (6)
- ☒ 3 Recovering (3)
- ☒ 1 Recent or no recovery (1)

Check all disturbances observed

- ☐ mowing
- ☐ grazing
- ☒ X clearcutting
- ☐ selective cutting
- ☒ X woody debris removal
- ☒ X toxic pollutants

- ☐ shrub/sapling removal
- ☐ herbaceous/aquatic bed removal
- ☒ X sedimentation
- ☒ X dredging
- ☐ farming
- ☐ nutrient enrichment

15

subtotal this page

Site: **PIR 2352 - Schaaf and Granger** Rater(s): **B. Slaby**

12/3/2015

15

subtotal first page

0

max 10 pts.

15

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland -unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

-4

max 20 pts.

11

subtotal

Metric 6. Plant communities, interspersions, microtopography.**6a. Wetland Vegetation Communities.**

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☒ 1 Emergent
- ☐ Shrub
- ☐ Forest
- ☐ Mudflats
- ☐ Open Water
- ☐ Other _____

6b. Horizontal (plan view) Interspersion.

Score only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☐ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☒ 0 None (0)

6c. Coverage of invasive plants. Refer to

Table 1 ORAM long form for list. Add or deduct points for coverage.

- ☒ -5 Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality, or comprises a small part and is of high quality.
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality.

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare, threatened, or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present in very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

11

GRAND TOTAL (max 100 pts)

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	<input checked="" type="radio"/> NO	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	<input checked="" type="radio"/> NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	<input checked="" type="radio"/> NO	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	<input checked="" type="radio"/> YES Wetland is assigned to the appropriate category based on the scoring range	<input type="radio"/> NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	<input checked="" type="radio"/> NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	<input checked="" type="radio"/> NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category			
Choose one	<input checked="" type="radio"/> Category 1	<input type="radio"/> Category 2	<input type="radio"/> Category 3

End of Ohio Rapid Assessment Method for Wetlands.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

2/28/2017 11:06:33 AM

in

Case No(s). 17-0467-GA-BNR

Summary: Text Construction Notice of Dominion East Ohio for PIR 2352 Replacement Project
- Part 3 electronically filed by Teresa Orahod on behalf of Sally W. Bloomfield