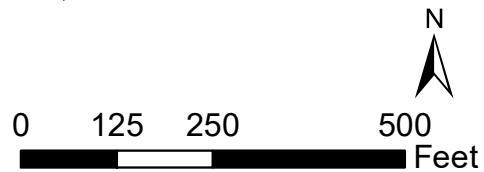


PROJECT LOCATION



WARREN COUNTY, OH

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: LEBANON AND SOUTH LEBANON, OHIO. OBTAINED VIA ESRI USA TOPO, NATIONAL GEOGRAPHIC TOPO, AND USGS, ACCESSED 01/2017.



- Existing Facility
- AccessRoute
- Project Centerline
- ROW Survey Area Center Line
- - - 100ft Corridor
- ▨ NWI



FIGURE:2
STORMWATER POLLUTION PREVENTION PLAN
F5484 – 138kV COLUMBIA SUBSTATION
REBUILD AND EXTENSION
DUKE ENERGY
National Wetland Inventory

DRAWN BY: COD DATE: 9/24/2018
 CHECKED: CJ APPROVED: JT

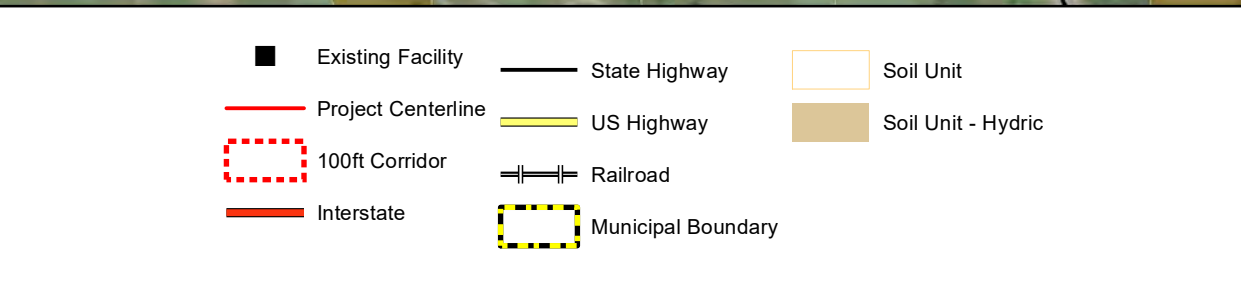
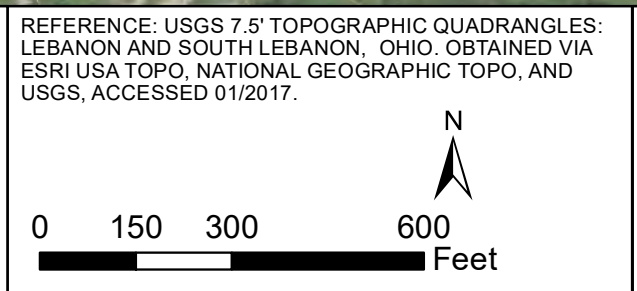
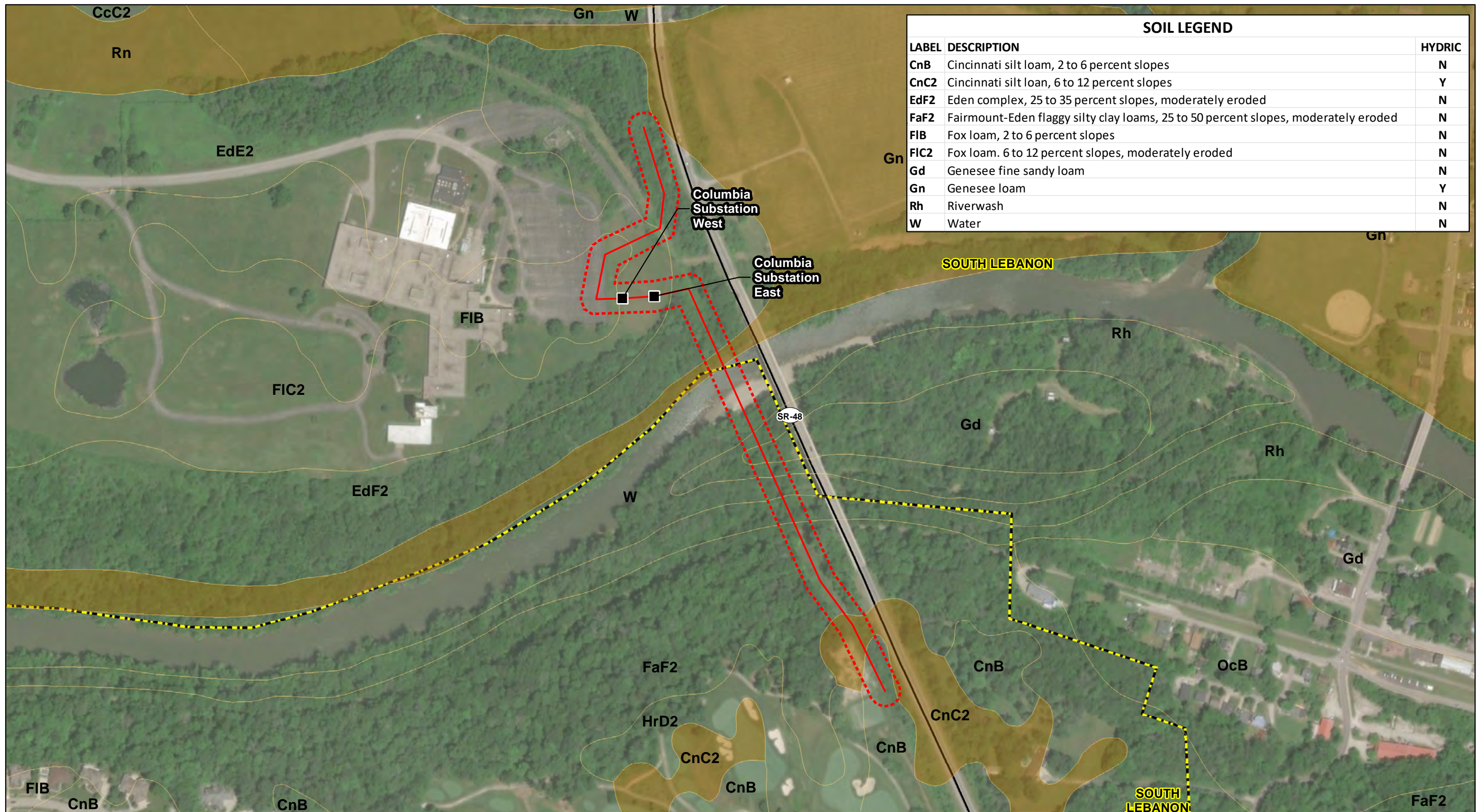
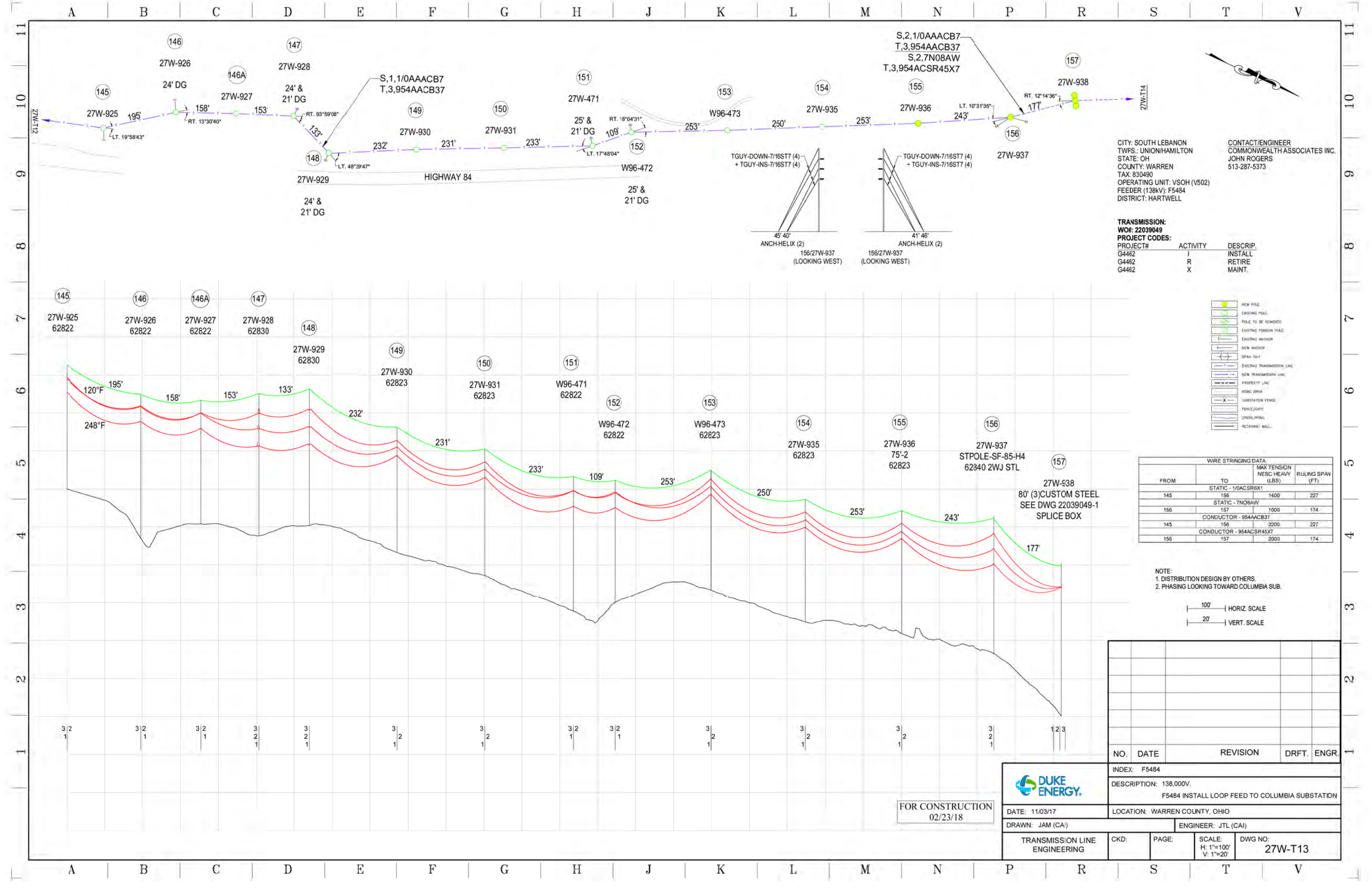


FIGURE:3
STORMWATER POLLUTION PREVENTION PLAN
F5484 – 138kV COLUMBIA SUBSTATION
REBUILD AND EXTENSION
DUKE ENERGY
SOIL CLASSIFICATIONS

DRAWN BY: COD DATE: 9/24/2018
 CHECKED: CJ APPROVED: JT



CITY: SOUTH LEBANON
 TWFS: UNION/HAMILTON
 STATE: OH
 COUNTY: WARREN
 TAX: 830490
 OPERATING UNIT: VSOH (V502)
 FEEDER (138kV): F5484
 DISTRICT: HARTWELL

CONTACT/ENGINEER
 COMMONWEALTH ASSOCIATES INC.
 JOHN ROGERS
 513-287-5373

- TRANSMISSION:**
 WOF: 22039049
PROJECT CODES:
- | PROJECT# | ACTIVITY | DESCRIP. |
|----------|----------|----------|
| G4462 | I | INSTALL |
| G4462 | R | RETIRE |
| G4462 | X | MAINT. |
- NEW POLE
 - EXISTING POLE
 - POLE TO BE REMOVED
 - EXISTING FOUNDATION POLE
 - EXISTING ANCHOR
 - NEW ANCHOR
 - SPAN 10/11
 - EXISTING TRANSMISSION LINE
 - NEW TRANSMISSION LINE
 - PROPERTY LINE
 - ROAD EDGE
 - SUBSTATION FENCE
 - FENCE/DATE
 - CHECK/PRNG
 - RETAINING WALL

WIRE STRINGING DATA

FROM	TO	MAX TENSION NESC HEAVY (LBS)	RULING SPAN (FT)
145	156	1400	227
156	157	1000	174
145	156	2000	227
156	157	2000	174

NOTE:
 1. DISTRIBUTION DESIGN BY OTHERS.
 2. PHASING LOOKING TOWARD COLUMBIA SUB.

100' HORIZ SCALE
 20' VERT SCALE

NO.	DATE	REVISION	DRFT.	ENGR.

DUKE ENERGY

INDEX: F5484
 DESCRIPTION: 138,000V.
 F5484 INSTALL LOOP FEED TO COLUMBIA SUBSTATION

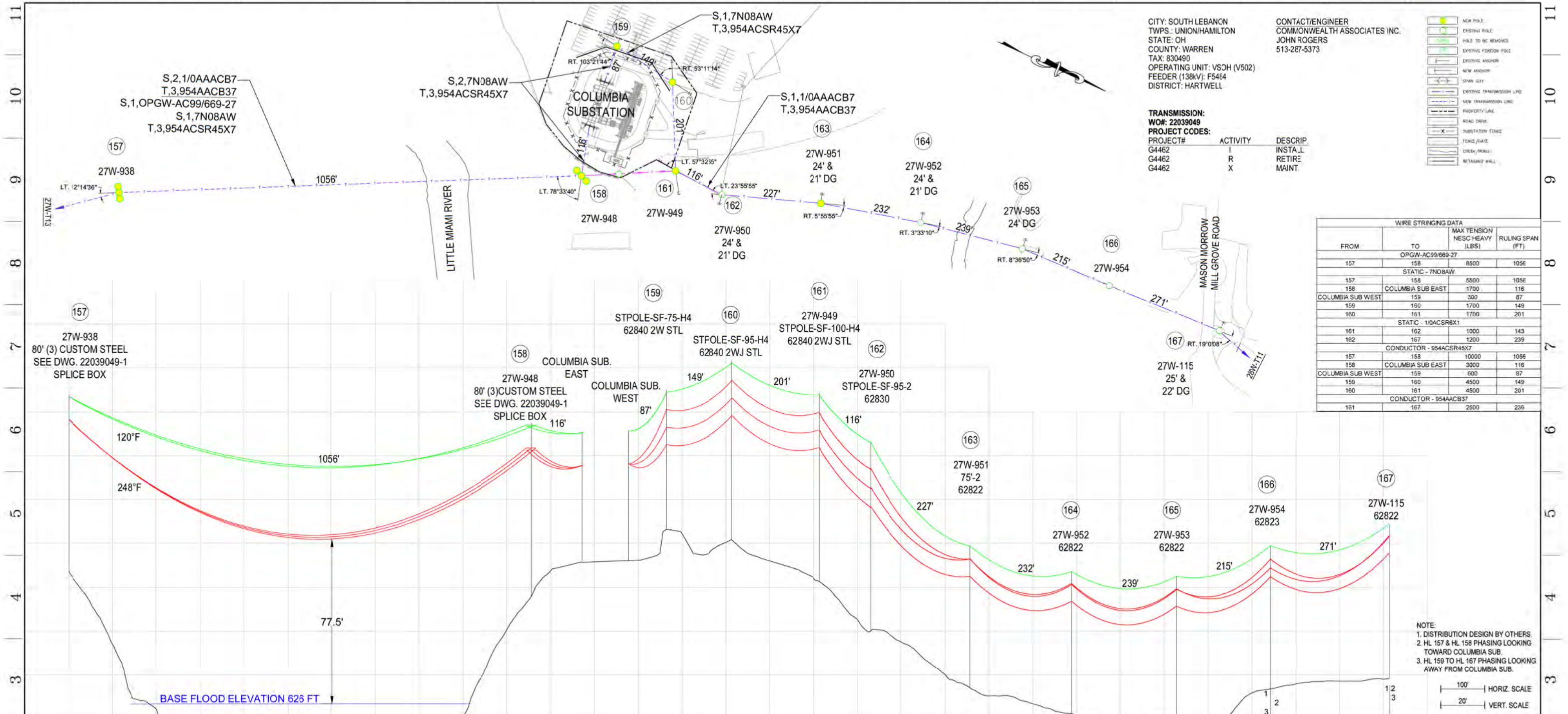
DATE: 11/03/17
 LOCATION: WARREN COUNTY, OHIO

DRAWN: JAM (CAI) ENGINEER: JTL (CAI)

TRANSMISSION LINE ENGINEERING CKD: PAGE: SCALE: DWG NO:
 H: 1"=100' V: 1"=20' 27W-T13

FOR CONSTRUCTION
 02/23/18

A B C D E F G H J K L M N P R S T V

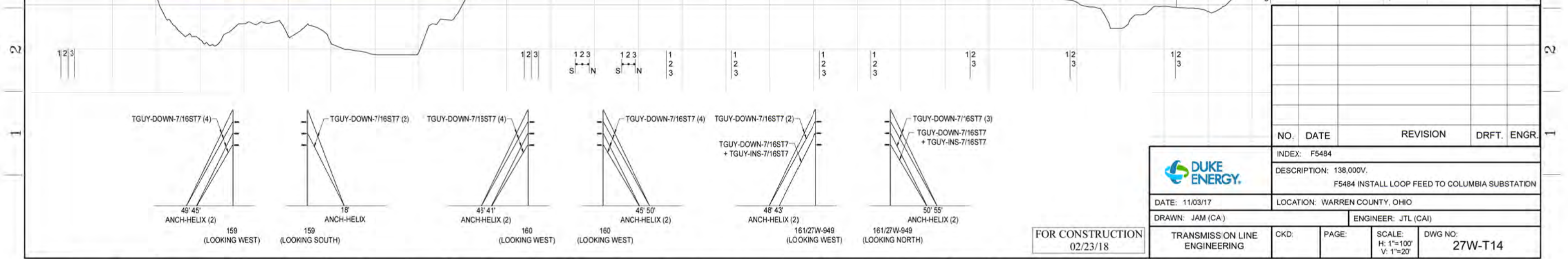


CITY: SOUTH LEBANON
 TWPS.: UNION/HAMILTON
 STATE: OH
 COUNTY: WARREN
 TAX: 830490
 OPERATING UNIT: VSOH (V502)
 FEEDER (138KV): F5484
 DISTRICT: HARTWELL

CONTACT/ENGINEER
 COMMONWEALTH ASSOCIATES INC.
 JOHN ROGERS
 513-267-5373

TRANSMISSION:
 WOH: 22039049
PROJECT#:
 G4462
 G4462
 G4462

ACTIVITY	DESCRIP.
I	INSTALL
R	RETIRE
X	MAINT.



DUKE ENERGY

INDEX: F5484
 DESCRIPTION: 138,000V.
 F5484 INSTALL LOOP FEED TO COLUMBIA SUBSTATION

DATE: 11/03/17
 LOCATION: WARREN COUNTY, OHIO

DRAWN: JAM (CAI)
 ENGINEER: JTL (CAI)

NO.	DATE	REVISION	DRFT.	ENGR.

TRANSMISSION LINE ENGINEERING
 CKD: PAGE: SCALE: H: 1"=100' V: 1"=20'
 DWG NO: **27W-T14**



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Office of Real Estate
Paul R. Baldrige, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

September 18, 2018

Cori Jansing
Cardno
11121 Canal Road
Cincinnati, Ohio 45241

Re: 18-852; F5484 kV 138 Columbia Substation Project

Project: The proposed project involves expanding existing line approximately 550 LF to facilitate the construction of the new Columbia Substation in addition to the removal and replacement of approximately 0.4 miles of existing transmission line.

Location: The proposed project is in South Lebanon and Hamilton Townships, Warren County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following records at or within a one-mile radius of the project area:

Snuffbox (*Epioblasma triquetra*), E, FE
Fawnsfoot (*Truncilla donaciformis*), T
Mountain madtom (*Noturus eleutherus*), T
Little Miami State Scenic River
Little Miami Scenic State Park – ODNR Division of Parks & Watercraft
Deerfield Gorge Scenic River Lands – ODNR Scenic Rivers Program
City of Lebanon, River Bend Land Co., TEJ Holdings, Taft Broadcast, & Tournament Players Club Scenic Rivers Easements – ODNR Scenic Rivers Program

The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; A = species recently added to state inventory, status not yet determined; X = presumed extirpated in Ohio; FE = federal endangered, FT = federal threatened, FSC = federal species of concern, FC = federal candidate species.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the club shell (*Pleurobema clava*), a state endangered and federally endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the washboard (*Megaloniaias nervosa*), a state endangered mussel, the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel, the black sandshell (*Ligumia recta*), a state threatened mussel, and the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel. The DOW has reviewed this project with the assumption that in-water work within the Little Miami River will not be necessary. Therefore, this project is not likely to impact these or other mussel species.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, the goldeye (*Hiodon alosoides*), a state endangered fish, the mountain brook lamprey (*Ichthyomyzon greeleyi*), a state endangered fish, the bigeye shiner (*Notropis boops*) a state threatened fish, the American eel (*Anguilla rostrata*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and

their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the eastern massasauga (*Sistrurus catenatus*), a state endangered and federally threatened snake species. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat. Due to the location, the type of habitat present at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but is also known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat present at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat present at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. Due to the location, the type of habitat present at the project site, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Sloan's crayfish (*Orconectes sloanii*), a state threatened species. Due to the location, and the habitat within the project area, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

Scenic Rivers: The Ohio Scenic Rivers Program has the following comment.

The proposed Duke Energy F5484 kv 138 Columbia Substation expansion project falls within 1,000 of the Little Miami State and National Scenic River in Warren County, Ohio. It crosses the Little Miami State and National Scenic River, the Little Miami State Park and protected conservation land owned and managed by the ODNR Scenic Rivers Program. Scenic Rivers and Park Management staff request that Cardno and Duke Energy schedule a time to meet on site to discuss the project in greater detail, including any potential real estate and mitigation needs, before the project moves forward. Please contact the ODNR regional manager, Melissa Clark at Melissa.clark@dnr.state.oh.us or (937)408-8554.

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us

From: Cori Jansing
To: [Danielle Thompson](#)
Subject: FW: Cardno - F5484 Columbia Substation Expansion 138 kV Project, Warren County
Date: Monday, September 24, 2018 6:35:04 AM
Attachments: [image001.jpg](#)
[image002.jpg](#)

Corrine Jansing
PROJECT SCIENTIST
CARDNO

Office +1 513 489 2402 **Direct** +1 513 233 7034 **Mobile** +1 513 833 6392
Address 11121 Canal Rd., Cincinnati (Sharonville), Ohio 45241
Email cori.jansing@cardno.com **Web** www.cardno.com

This email and its attachments may contain confidential and/or privileged information for the sole use of the intended recipient(s). All electronically supplied data must be checked against an applicable hardcopy version which shall be the only document which Cardno warrants accuracy. If you are not the intended recipient, any use, distribution or copying of the information contained in this email and its attachments is strictly prohibited. If you have received this email in error, please email the sender by replying to this message and immediately delete and destroy any copies of this email and any attachments. The views or opinions expressed are the author's own and may not reflect the views or opinions of Cardno.

From: susan_zimmermann@fws.gov <susan_zimmermann@fws.gov> **On Behalf Of** Ohio, FW3
Sent: Monday, July 23, 2018 8:50 AM
To: Cori Jansing <cori.jansing@cardno.com>
Subject: Cardno - F5484 Columbia Substation Expansion 138 kV Project, Warren County



TAILS# 03E15000-2018-TA-1693

Dear Ms. Jansing,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. We recommend that proposed activities minimize water quality impacts, including fill in streams and wetlands. Best management practices should be utilized to minimize erosion and sedimentation.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees =3 inches diameter at breast height between October 1 and March 31) to avoid impacts to the federally listed endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*), we do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the U.S. Fish and Wildlife Service (Service) should be initiated to assess any potential impacts.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act (ESA), between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Scott Pruitt
Acting Field Supervisor