



Legal Department

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

November 29, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

Hector Garcia-Santana
Senior Counsel –
Regulatory Services
(614) 716-3410 (P)
hgarcia1@aep.com

**RE: Docket Permit
PUCO Case No. 21-0860-EL-BLN
Sifford Station Project**

Dear Ms. Troupe:

AEP Ohio Transmission Company, Inc. hereby files the attached Stormwater Pollution Prevention Plan (SWPPP) in compliance with Condition No. 2 in the Staff Report for the above-referenced project application.

Respectfully submitted,

/s/ Hector Garcia-Santana
Hector Garcia (0084517)
Counsel for AEP Ohio Transmission Company, Inc.

cc: Jon Pawley



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

Sep 14, 2021

AEP, Ohio Transmission Company, Inc.
Aimee Toole
8500 Smiths Mill Road
New Albany, OH 43054

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) - Construction Site Stormwater General Permit - OHC000005

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:	Sifford Station Project
Facility Location:	Whiley Road
City:	Lancaster
County:	Fairfield
Township:	Liberty
Ohio EPA Facility Permit Number:	4GC08038*AG
Permit Effective Date:	Sep 14, 2021

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 permit. 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 to 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.

To view your electronic submissions and permits please Logon in to the Ohio EPA's eBusiness Center at <http://ebiz.epa.ohio.gov>.

If you need assistance or have questions please call (614) 644-2001 and ask for Construction Site Stormwater General Permit support or visit our website at <http://www.epa.ohio.gov>.

Sincerely,

Laurie A. Stevenson
Director



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: AEP, Ohio Transmission Company, Inc.

Mailing (Applicant) Address: 8500 Smiths Mill Road

City: New Albany

State : OH

Zip Code: 43054

Country: USA

Contact Person: Aimee Toole

Phone: (614) 309-9582

Fax:

Contact E-mail Address: arttoole@aep.com

II. Facility/Site Location Information

Facility/Site Name: Sifford Station Project

Facility Address: Whiley Road

City: Lancaster

State: OH

Zip Code: 43130

County: Fairfield

Township: Greenfield

Facility Contact Person: David Sams

Phone: (614) 698-9445

Fax:

Facility Contact E-mail Address: dsams@aep.com

Latitude: 39.726975

Longitude: -82.691847

Facility/Map Attachment Sifford Station
Location map.pdf

Receiving Stream or MS4: City of Lancaster MS4

III. General Permit Information

General Permit Number: OHC000005

Initial Coverage: Y **Renewal Coverage:** N

Type of Activity: Construction Site Stormwater General Permit

SIC Code(s):

Existing NPDES Facility Permit Number:

ODNR Coal Mining Application Number:

If Household Sewage Treatment System, is system for:

New Home Construction:

Replacement of failed existing system:

Outfall

Design Flow (MGD):

Associated Permit Effluent Table:

Receiving Water :

Latitude

Longitude

Are These Permits Required?

PTI: NO

Individual 401 Water Quality Certification: NO

Individual NPDES: NO

Isolated Wetland: NO

U.S. Army Corp Nationwide Permit: APPROVED

Proposed Project Start Date(if applicable): September 30, 2021

Estimated Completion Date(if applicable): September 01, 2022

Total Land Disturbance (Acres): 15

MS4 Drainage Area (Sq. Miles):

SWP3 Attachment(s): <None>

IV. Payment Information

Check #:

Check Amount:

Date of Check:

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: Aimee Toole

Title: Transmission Project Environmental Support Manager

Signature: Electronically submitted by p000106	Date: Electronically submitted on 09/13/2021
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Project Environmental Considerations

Project Name: Sifford Ruble Station Project

WERS Permit Specialist: Amy Toohey

SMG WERS: Brad Newman

Regional Environmental Coordinator/LERS SMG: Vaughn Kaufman

NOTE: Review of this form is not a substitute for reviewing, understanding, and maintaining full compliance with all applicable regulations, permits, plans and the Transmission Contractors Environmental Requirements Document (CERD). This form is intended only to highlight a few key requirements and is not an exhaustive list of all compliance obligations.

Project Environmental Permits:

- ☒ General Stormwater Construction Permit
- ☒ US Army Corps of Engineers Permit-PCN Held by Customer
- ☐ State/401 Permit
- ☐ Floodplain Permit
- ☒ Other: Local-City of Lancaster SWPPP permit

Project Environmental Considerations:

- ☐ Threatened/Endangered Species
- ☐ Cultural

Stormwater Compliance:

General:

- ☒ Must comply with all aspects of the Stormwater Pollution Prevention Plan (SWPPP) until final stabilization is achieved, accepted by WERS, and Notice of Termination is filed/approved by agency. Read the SWPPP and plan for full compliance during each phase of the project.
- ☒ All forms included in SWPPP must be completed as required:
 - See swppp for forms required
- ☒ SWPPP is a living document and must be kept up-to-date. Adjustments and improvements to adequately control erosion & sediment are expected & required and must be documented on the SWPPP map. SWPPP maps must also include location of insert location of construction trailer/porta john/waste containers-should be in LOD established.
- ☒ Documented SWPPP Training for SWPPP contractors & construction crews is required. Identify responsible party.
- ☒ Access roads can be the largest contributor of sediment to stormwater. Careful planning and consideration must be given to management of run-on and run-off from access roads.
- ☒ Adequate stabilized construction entrances must be installed and maintained/enhanced as necessary to avoid soil tracking onto public roads. Roads must be kept clear of track-out (make a plan to immediately address road cleaning should it become necessary).
- ☐ Public notice signs must be posted ahead of construction n/a for Ohio.
- ☒ Concrete washouts must be used. Do not fill past 50% capacity . Any spilled concrete must be cleaned up immediately.

Installation of Controls:

- ☒ Downslope controls must be in-place ahead of upslope soil disturbance. If site conditions warrant significant changes/adjustments to the controls identified in the SWPPP, engage WERS. Update SWPPP accordingly.
- ☒ Controls must be properly installed in accordance with specifications in the SWPPP (e.g. silt fence trenched in, straw wattles must not substituted for compost sock/silt fence unless approved by WERS, Please make sure sit fence is anchored correctly along with filter sock being staked correctly).
- ☒ All inclined access roads must be accompanied by adequate water conveyance such as drainage ditches and water bars/culverts to divert water away from the roadbed. All ditches must permit positive drainage.
- ☒ Grade sediment basin as one of the first phases of earthwork so it can function as a control throughout the project.

Inspections & Maintenance:

- ☒ SWPPP inspections must be completed by qualified inspector.
- ☒ SWPPP inspections must be complete every 7 calendar days and after every storm event of 0.5 inch/24 hours. There are no exceptions to this frequency. Identify responsible party and backup for each phase of project.
- ☒ All required information must be documented on inspection reports and reports must reflect site conditions.
- ☒ Copies of reports must be provided to Nick Hornbeck and Brad Newman within 1 week.
- ☒ Maintenance/corrective actions for inspection items must be completed within 3 days of the inspection date. Identify plan & responsible party to complete maintenance/corrective actions in required timeframe for each phase of project.
- ☒ Inspection reports must be signed as required in the SWPPP Charles Barthoomew.

Temporary & Final Stabilization:

- ☒ Areas of soil disturbance (including stockpiles) where the soil will not be actively graded/disturbed for 7 days, must receive temporary stabilization (such as mulch & seed) within 7 days.
- ☒ Clean out/seed sediment basin upon project completion and prior to demobilization
- ☒ Final stabilization must be completed with 7 days of achieving final grade in an area.
- ☒ It is unacceptable and a violation to allow disturbed areas to remain unstabilized until final restoration phases of the project. Note, it may be necessary to reseed/straw disturbed areas following demobilization. Identify plan and responsible party for temporary & final stabilization.

Wetland/Stream Compliance:

- ☒ All wetlands/stream areas that are not permitted for impact, must be field marked with orange barrier construction fencing and signs. Wetlands/streams must also be protected with sediment controls (such as silt sock) in accordance with the SWPPP/permit.
- ☒ Wetland/streams must not be used as areas to store materials or for placement waste containers. Materials, waste containers, and vehicle parking areas should not be in or adjacent to wetlands/streams.
- ☒ Pertinent wetland/stream permits must be located on project-site.

NOTE: WERS must be notified ahead of any changes in Limits of Disturbances, unplanned tree clearing, adjustments in access plans, and of any agency inspections. All agency inspection reports or violation/enforcement must be communicated to WERS immediately.

COMMENTS:

Track out is important to control. Stabilization is required as soon as possible; be proactive to slips, cracks, or early signs of erosion.

Sign Off:

Facilitator: A. Toohey _____

Contractor/subcontractor firms present: _____ Beaver Excavating, NRE, Scott McManus _____

_ Date: _ Weekly progress meetings _ 11/22/2021 _____

*****Please place this completed document in the PSSEP***



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

September 2, 2021

Regulatory Division
North Branch
LRH-2021-599-HOC-Unnamed Tributary Hocking River

NATIONWIDE PERMIT NO. 57 VERIFICATION

C/O Mr. Rob Milligan
Table Mountain Industries, LLC
5500 New Albany Road
Columbus, Ohio 43054

Dear Mr. Milligan:

I refer to the pre-construction notification (PCN) received in this office on July 19, 2021, concerning the American Electric Power (AEP) Sifford Station Project. The proposed project is located along Whiley Road NW in the City of Lancaster, Fairfield County, Ohio (39.727725 latitude, -82.687519 longitude). We have assigned the following file number to your PCN: LRH-2021-599-HOC-Unnamed Tributary Hocking River. Please reference this file number on all future correspondence related to this subject proposal.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328, including the amendments to 33 CFR 328.3 (85 Federal Register 22250), and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a DA permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The proposed project, as described in the submitted information, has been reviewed in accordance with Section 404 and Section 10. Based on your description of the proposed work, it has been determined that this project would involve the discharge of dredged and/or fill material into waters of the United States and is subject to the requirements of Section 404.

In the submitted PCN materials received in this office on July 19, 2021, you have requested a DA authorization to discharge dredged and/or fill material into 0.42 acre of open-water pond (Pond 1) and 0.03 acre of emergent wetland (Wetland Fringe A) in conjunction with the construction of a substation pad, an access drive, and a security fence. All work will be conducted in accordance with the PCN received in this office on July 19, 2021.

Based on your description of the proposed work, and other information available to us, it has been determined the proposed discharge of dredged and/or fill material into waters of the United States in conjunction with the proposed project meets the criteria for Nationwide Permit (NWP) No. 57 (enclosed) under the January 13, 2021 Federal Register, Reissuance of NWPs (86

FR 2744) provided you comply with all terms and conditions of the enclosed material and the enclosed special conditions.

Please be aware this NWP verification does not obviate the requirement to obtain any other federal, state, or local assent required by law for the activities. This letter does not grant any property rights or exclusive privileges or authorize any injury to the property or rights of others. In addition, this NWP verification must be transferred to the appropriate applicant responsible for project implementation prior to conducting the proposed work within waters of the United States.

This verification is valid until the expiration date of the NWPs, unless the NWP authorization is modified, suspended, or revoked. The verification will remain valid if the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization. The 2021 NWPs published January 13, 2021 in the Federal Register (86 FR 2744), are scheduled to be modified, reissued, or revoked on March 14, 2026. Prior to this date, it is not necessary to contact this office for re-verification of your project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence this activity before March 14, 2026, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of the NWPs and this verification letter must be kept at the site during construction. Upon completion of the activities authorized by this NWP verification, the enclosed certification must be signed and returned to this office. If you have any questions concerning the above, please contact Ms. Katie Samples of the North Branch at 304-399-6933, by mail at the above address, or by email at katie.e.samples@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew J. Wendt', with a stylized flourish at the end.

Andrew J. Wendt
Regulatory Project Manager
North Branch

Enclosures

Cc (by email):

Mr. Pat Hoyng (EMH&T)

**SPECIAL CONDITIONS FOR NATIONWIDE PERMIT 57 VERIFICATION
AMERICAN ELECTRIC POWER (AEP) SIFFORD STATION PROJECT
LRH-2021-599-HOC-UNNAMED TRIBUTARY HOCKING RIVER
PAGE 1 OF 1**

1. All work will be conducted in accordance with the submitted pre-construction notification for the AEP Sifford Station Project received in the office on July 19, 2021.
2. Enclosed is a copy of Nationwide Permit 57, which will be kept at the site during construction. A copy of the nationwide permit verification, special conditions, and the submitted construction plans must be kept at the site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.
3. Work activities will be performed during low flow conditions to the greatest extent practicable. Additionally, appropriate site specific best management practices for sediment and erosion control will be fully implemented during construction activities at the site.
4. No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.
5. Should new information regarding the scope and/or impacts of the project become available that was not submitted to this office during our review of the proposal, the permittee will submit written information concerning proposed modification(s) to this office for review and evaluation, as soon as practicable.
6. In the event any previously unknown historic or archaeological sites or human remains are uncovered while accomplishing the activity authorized by this nationwide permit authorization, the permittee must cease all work in waters of the United States immediately and contact local, state and county law enforcement offices (only contact law enforcement on findings of human remains), the Corps at 304-399-5210 and Ohio State Historic Preservation Office at 614-298-2000. The Corps will initiate the Federal, state and tribal coordination required to comply with the National Historic Preservation Act and applicable state and local laws and regulations. Federally recognized tribes are afforded a government-to-government status as sovereign nations and consultation is required under Executive Order 13175 and 36 CFR Part 800.
7. Section 7 obligations under Endangered Species Act must be reconsidered if new information reveals impacts of the project that may affect federally listed species or critical habitat in a manner not previously considered, the proposed project is subsequently modified to include activities which were not considered during Section 7 consultation with the United States Fish and Wildlife Service, or new species are listed or critical habitat designated that might be affected by the subject project.

NATIONWIDE PERMITS FOR THE STATE OF OHIO

U.S. ARMY CORPS OF ENGINEERS (CORPS) REGULATORY PROGRAM REISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS WITH OHIO DEPARTMENT OF NATURAL RESOURCES CONSISTENCY DETERMINATION UNDER THE COASTAL ZONE MANAGEMENT ACT AND WAIVED OHIO EPA 401 WATER QUALITY CERTIFICATION

NWP 57

NWP 57. *Electric Utility Line and Telecommunications Activities.* Activities required for the construction, maintenance, repair, and removal of electric utility lines, telecommunication lines, and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Electric utility lines and telecommunication lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of electric utility lines and telecommunication lines. There must be no change in preconstruction contours of waters of the United States. An “electric utility line and telecommunication line” is defined as any cable, line, fiber optic line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the electric utility line or telecommunication line crossing of each waterbody.

Electric utility line and telecommunications substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with an electric utility line or telecommunication line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead electric utility line or telecommunication line towers, poles, and anchors:

This NWP authorizes the construction or maintenance of foundations for overhead electric utility line or telecommunication line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of electric utility lines or telecommunication lines, including overhead lines and substations, in nontidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize electric utility lines or telecommunication lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Electric utility lines or telecommunication lines constructed over section 10 waters and electric utility lines or telecommunication lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing electric utility lines or telecommunication lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing electric utility lines or telecommunication lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the electric utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of

materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) A section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where the electric utility line is constructed, installed, or maintained in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the electric utility line to protect navigation.

Note 2: For electric utility line or telecommunications activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Electric utility line and telecommunications activities must comply with 33 CFR 330.6(d).

Note 3: Electric utility lines or telecommunication lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP.

Access roads used solely for construction of the electric utility line or telecommunication line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: This NWP authorizes electric utility line and telecommunication line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For overhead electric utility lines and telecommunication lines authorized by this NWP, a copy of the PCN and NWP verification will be provided by the Corps to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 7: For activities that require preconstruction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be

used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require preconstruction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Corps NWP 57 Specific Regional Conditions:

- PCN in accordance with NWP General Condition 32 and Regional General Condition 6 is required for all permanent conversion of scrub/shrub and forested wetlands of greater than 1/10 of an acre per each single and complete project. Use of conversion in this regional condition relates to the change of a scrub/shrub and forested wetlands to a herbaceous state, but it would not result in a loss of waters of the United States as the wetland would continue to exist in the landscape.
- This NWP does not authorize the placement of manholes in wetlands.

Ohio Department of Natural Resources CZMA Federal Consistency Determination Condition:

- For all activities located within or along the shore of Ohio's portion of Lake Erie, including Maumee Bay and Sandusky Bay, all applicable authorizations under the Ohio Coastal Management Program must be obtained.

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

- a. No activity may cause more than a minimal adverse effect on navigation.

- b. Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- c. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below.

The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

- a. No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
- b. If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.
- c. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species.

- a. No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a
- b. species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

- c. Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
- d. Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
- e. As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.
- f. Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a

Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

- g. If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP
- h. activity or whether additional ESA section 7 consultation is required.
- i. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

- a. No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register

- of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
- b. Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If preconstruction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.
 - c. Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the preconstruction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: No historic properties affected, no adverse effect, or adverse effect.
 - d. Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to

cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

- e. Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

- (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50,

51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

- a. The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
- b. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.
- c. Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require preconstruction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.
- d. Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require preconstruction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult to-replace resources (see 33 CFR 332.3(e)(3)).

- e. Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
- f. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
 - 1. The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the
 - 2. district engineer may approve the use of permittee-responsible mitigation.
 - 3. The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)
 - 4. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option
 - 5. considered for permittee-responsible mitigation.
 - 6. If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A

conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

7. If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).
8. Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).
- g. Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.
- h. (h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

- i. Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

- a. Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.
- b. If the NWP activity requires preconstruction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.
- c. The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may

require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

- a. If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.
- b. If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- a. A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- b. A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- c. The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

- a. **Timing.** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the

prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

1. He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
2. 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b. Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

1. Name, address and telephone numbers of the prospective permittee;
2. Location of the proposed activity;
3. Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;
4.
 - i. A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s)

used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

- ii. For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.
- iii. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- iv. The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- 5. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

7. For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;
 8. For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;
 9. For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and
 10. For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.
- c. **Form of Pre-Construction Notification:** The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.
- d. **Agency Coordination:**
1. The district engineer will consider any comments from Federal and state agencies concerning the proposed activity’s compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity’s adverse environmental effects so that they are no more than minimal.
 2. Agency coordination is required for:

- i. All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States;
 - ii. NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and
 - iii. NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.
- 3. When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.
- 4. In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- 5. Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.
2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.
3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included

in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural. Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the

use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Nontidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Preconstruction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where preconstruction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Reestablishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: Reestablishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and

distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of

the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a “water of the United States.” If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

Nationwide Permits Regional General Conditions For the State of Ohio

1. NWPs shall not authorize any regulated activity which negatively impacts bogs and/or fens.
2. NWPs shall not authorize any regulated activity in Lake Erie which would result in diversion of water from the Great Lakes.

3. NWP's shall not authorize any regulated activity which has an adverse impact on littoral transport within Lake Erie.

4. In-Water Work Exclusion Dates: Any work associated with a regulated activity under a nationwide permit cannot take place during the restricted period of the following Ohio Department of Natural Resources (ODNR), Division of Wildlife (DOW) In-Water Work Restrictions, unless the applicant receives advanced written approval from the DOW, notifies the District Engineer in accordance with Nationwide Permit General Condition 32 and Regional General Condition 6, and receives written approval from the Corps:

Statewide In-Water Work Restriction Periods and Locations

1. Salmonid Locations Restriction Period: September 15 – June 30

Arcola Creek (entire reach)
Ashtabula Harbor
Ashtabula River (Hadlock Rd. to mouth)
Aurora Branch (Chagrin River (RM 0.38 to mouth))
Big Creek (Grand River (Girdled Road to mouth))
Black River (entire reach)
Chagrin River (Chagrin Falls to mouth)
Cold Creek (entire reach)
Conneaut Creek (entire reach)
Conneaut Harbor
Corporation Creek (Chagrin River (entire reach))
Cowles Creek (entire reach)
Ellison Creek (Grand River (entire reach))
Euclid Creek (entire reach)
Fairport Harbor
Grand River (Dam at Harpersfield Covered Bridge Park to mouth)
Gulley Brook (Chagrin River (entire reach))
Huron River (East Branch-West Branch confluence to mouth)
Indian Creek (entire reach)
Kellogg Creek (Grand River (entire reach))
Mill Creek (Grand River (entire reach))
Paine Creek (Grand River (Paine Falls to mouth))
Rocky River (East Branch-West Branch confluence to mouth)
Smokey Run (Conneaut Creek (entire reach))
Turkey Creek (entire reach)
Vermilion River (dam at Wakeman upstream of the US 20/SR 60 bridge to mouth)
Ward Creek (Chagrin River (entire reach))
Wheeler Creek (entire reach)
Whitman Creek (entire reach)

2. Other Locations Restriction Period: March 15 – June 30

All other perennial streams not listed above as salmonid.
Also includes Lake Erie and bays not listed above as salmonid.

Note: This condition does not apply to Ohio Department of Transportation projects that are covered under the “Memorandum of Agreement Between The Ohio Department of Transportation, The Ohio Department of Natural Resources, and The United States Fish and Wildlife Service For Interagency Coordination For Projects Which Require Consultation Under the Endangered Species Act, Impact State Listed Species, and/or Modify Jurisdictional Waters 2016 Agreement Number: 19394” or subsequent amendments to this Ohio Department of Transportation memorandum of agreement.

5. Waters of Special Concern: PCN in accordance with NWP General Condition 32 and Regional General Condition 6 is required for regulated activities in the following resources:

- a. **Threatened and Endangered Species:** Due to the potential presence of federally threatened or endangered species or their habitats, PCN in accordance with NWP General Conditions 18 and 32 and Regional General Condition 6 is required for any regulated activity under the NWPs in Ohio that includes:
 - i. The removal of trees \geq three (3) inches diameter at breast height. These trees may provide suitable roosting, foraging, or traveling habitat for the federally listed endangered Indiana bat and the federally-listed threatened northern long-eared bat; and/or
 - ii. Regulated activities that impact a sand, gravel, and/or cobble beach (landform between the low and high water marks affected by waves) and/or mud flat (areas affected by natural seiche effect) on the Lake Erie shoreline; and/or
 - iii. Regulated activities in the waterway or township of the corresponding counties listed in Appendix 1.

Note 1: Applicants must ensure they are referencing the latest version of Appendix 1 by contacting their nearest U.S. Army Corps of Engineers district office and visiting the online resources identified in General Condition 18(f) of these NWPs, since federally listed species are continuously listed, proposed for listing, and/or de-listed.

Note 2: As mentioned in General Condition 18, federal applicants should follow their own procedures for complying with the requirements of the Endangered Species Act (ESA). Federal applicants, including applicants that have received federal funding, must provide the District Engineer with the appropriate documentation to demonstrate compliance with ESA requirements.

- b. **Critical Resource Waters:**

- i. In Ohio, two (2) areas have been designated critical habitat for the piping plover (*Charadrius melodus*) and are defined as lands 0.62 mile inland from normal high water line. Unit OH-1 extends from the mouth of Sawmill Creek to the western property boundary of Sheldon Marsh State Natural Area, Erie County, encompassing approximately two (2) miles. Unit OH-2 extends from the eastern boundary line of Headland Dunes Nature Preserve to the western boundary of the Nature Preserve and Headland Dunes State Park, Lake County, encompassing approximately 0.5 mile.
 - ii. In Ohio three (3) areas have been designated critical habitat for the rabbitsfoot mussel (*Quadrula cylindrica cylindrica*). Unit RF26 includes 17.5 river kilometers (rkm) (10.9 river miles [rimi]) of the Walhonding River from the convergence of the Kokosing and Mohican Rivers downstream to Ohio Highway 60 near Warsaw, Coshocton County, Ohio. Unit RF27 includes 33.3 rkm (20.7 rmi) of Little Darby Creek from Ohio Highway 161 near Chuckery, Union County, Ohio, downstream to U.S. Highway 40 near West Jefferson, Madison County, Ohio. Unit RF29 includes 7.7 rkm (4.8 rmi) of Fish Creek from the Indiana and Ohio State line northwest of Edgerton, Ohio, downstream to its confluence with the St. Joseph's River north of Edgerton, Williams County, Ohio.
 - iii. Old Woman Creek National Estuarine Research Preserve.
 - c. **Oak Openings:** Wetland activities conducted in the Oak Openings Region of Northwest Ohio located in Lucas, Henry and Fulton Counties. For a map of the Oak Openings Region, visit <https://www.google.com/maps/d/viewer?mid=1JADupaZXJzO6AUDvnUaV18GVjG7yfBim&usp=sharing>
 - d. **Category 3 Wetlands:** As determined through use of the latest approved version of the Ohio Environmental Protection Agency's Ohio Rapid Assessment Method wetland evaluation form.
 - e. **Ohio Stream Designations:** Exceptional Warmwater Habitat, Cold Water Habitat, Seasonal Salmonid, or any equivalent designation; or water bodies with an antidegradation category of Superior High Quality Water, Outstanding National Resource Water, or Outstanding State Waters as determined by the Ohio Environmental Protection Agency except for NWP 1, 2, 3, 9, 10, 11, 27, 28, 32, and 35 or maintenance activities covered under NWPs 7 and 12. The current list of these rivers and tributaries can be found on the Ohio Environmental Protection Agency web-site at: http://www.epa.ohio.gov/dsw/rules/3745_1.aspx. These designations can be found under the aquatic life use of the rivers and tributaries within its basin and under the "Anti-deg Rule #05."
6. **PCN Submittals:** In addition to the information required under NWP General Condition 32, the following information must be provided with the PCN:

- a. **Threatened and Endangered Species:** Section 7(a)(2) of the Endangered Species Act (ESA) states that each federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the ESA, called "Interagency Cooperation," is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the continued existence of any federally or proposed federally listed species. Consistent with NWP General Condition 18, information for federally threatened and endangered species must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 18 and to facilitate project-specific coordination with the USFWS. All relevant information obtained from the USFWS must be submitted with the PCN.
- b. **Cultural Resources:** Under the National Historic Preservation Act (NHPA), the Corps must ensure no federal undertaking, including a Corps permit action, which may affect historic resources, is commenced before the impacts of such action are considered and the Advisory Council on Historic Preservation and the State Historic Preservation Office (SHPO) are provided an opportunity to comment as required by the NHPA, 36 CFR 800, and 33 CFR 325, Appendix C. Consistent with NWP General Condition 20, historic properties information must be provided in the PCN if the proposed undertaking might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. All relevant information obtained from the SHPO must be submitted with the PCN.
- c. **National Wild and Scenic Rivers:** The following waterways are components of the National Wild and Scenic River System and require PCN to the Corps:

Big and Little Darby Creeks

- Big Darby Creek from Champaign-Union County line downstream to the Conrail railroad trestle and from the confluence with the Little Darby Creek downstream to the Scioto River;
- Little Darby Creek from the Lafayette-Plain City Road bridge downstream to within 0.8 mile from the confluence with Big Darby Creek; and
- Total designation is approximately 82 miles.

Little Beaver Creek

- Little Beaver Creek main stem, from the confluence of West Fork with Middle Fork near Williamsport to mouth;
- North Fork from confluence of Brush Run and North Fork to confluence of North Fork with main stem at Fredericktown;

- Middle Fork from vicinity of Co. Rd. 901 (Elkton Road) bridge crossing to confluence of Middle Fork with West Fork near Williamsport;
- West Fork from vicinity of Co. Rd. 914 (Y-Camp Road) bridge crossing east to confluence of West Fork with Middle Fork near Williamsport; and
- Total designation is 33 miles.

Little Miami River

- Little Miami River - St. Rt. 72 at Clifton to the Ohio River;
- Caesar Creek - lower two (2) miles of Caesars Creek; and
- Total designation is 94 miles.

- d. **Temporary Fills or Structures:** When a PCN is required for temporary fills or structures, the PCN must specify how long the temporary fills or structures will remain and include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-construction contours and elevations. Native, non-invasive vegetation must be used unless otherwise authorized by a Corps NWP verification.

7. **Invasive Species:** No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
County	Waterway	Township
Adams	Ohio River, Scioto Brush Creek, South Fork Scioto Brush Creek	
Ashtabula	Grand River, Pymatuning Creek	Andover, Austinburg, Cherry Valley, Colebrook, Dorset, Hartsgrove, Harpersfield, Morgan, New Lyme, Orwell, Richmond, Rome, Trumbull, Wayne, Williamsfield, Windsor
Athens	Ohio River	
Brown	East Fork Little Miami River, Ohio River	
Butler	Great Miami River	Lemon, Liberty
Champaign		Mad River, Union, Urbana
Clark	Little Miami River	Bethel, Moorfield, Pleasant, Springfield
Clermont	East Fork Little Miami River, Little Miami River,	

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)

County	Waterway	Township
	Ohio River	
Clinton		Chester, Richland, Wayne
Columbiana		Butler, Fairfield, Hanover, Knox, Unity
Coshocton	Killbuck Creek, Muskingum River, Walhonding River	
Crawford		Auburn, Bucyrus, Cranberry, Dallas, Holmes, Whetstone
Darke	Stillwater River	
Defiance	St. Joseph River	Milford
Delaware	Mill Creek, Olentangy River	
Erie		Margaretta
Fairfield		Walnut
Fayette		Concord, Green, Jasper, Union
Franklin	Big Darby Creek, Little Darby Creek, Scioto River	
Fulton	Swan Creek	
Gallia	Ohio River	
Greene	Little Miami River	Bath, Beaver Creek, Spring Valley, Sugar Creek
Hamilton	Great Miami River, Little Miami River, Ohio River	
Hancock	Blanchard River	
Hardin	Blanchard River	Blanchard, Dudley, Hale, Jackson, McDonald, Roundhead
Hocking		Benton, Laurel
Holmes		All townships
Huron		New Haven, Richmond
Lake	Grand River	Madison
Lawrence	Ohio River	
Licking		Licking, Union
Logan	Great Miami River	Perry, Richland, Stokes, Washington, Zane
Lucas	Swan Creek	All townships
Madison	Big Darby Creek, Little Darby Creek	
Mahoning		Beaver, Boardman, Canfield, Green, Poland, Springfield
Marion	Tymochtee Creek	Big Island, Bowling Green, Grand, Green Camp, Montgomery, Salt Rock

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)

County	Waterway	Township
Meigs	Ohio River	
Miami	Great Miami River, Stillwater River	
Montgomery	Great Miami River, Stillwater River	Mad River, Wayne
Morgan	Muskingum River	
Muskingum	Muskingum River	
Ottawa		All townships
Perry		Thorn
Pickaway	Big Darby Creek, Scioto River	
Pike	Scioto River	
Portage		Aurora, Atwater, Charlestown, Deerfield, Edinburg, Franklin, Freedom, Mantua, Nelson, Palmyra, Paris, Randolph, Ravenna, Rootstown, Streetsboro
Preble		Dixon, Gasper, Israel, Jackson, Lanier, Monroe, Somers, Twin, Washington
Richland		Plymouth
Ross	Salt Creek, Scioto River	
Sandusky		All townships
Scioto	Ohio River, Scioto Brush Creek, Scioto River, South Fork Scioto Brush Creek	Nile, Rush, Union
Shelby	Great Miami River	
Stark		Lexington, Marlboro
Summit		Hudson, Tallmadge, Twinsburg
Trumbull	Pymatuning Creek	All townships
Union	Big Darby Creek, Little Darby Creek, Mill Creek, Treacle Creek	Allen, Darby, Washington
Warren	Great Miami River, Little Miami River	Clear Creek, Deerfield, Massie, Turtle Creek, Union, Washington, Wayne
Washington	Muskingum River, Ohio River	
Wayne		All townships
Williams	Fish Creek, St. Joseph River	Bridgewater, Center, Florence, Jefferson, Madison, Northwest, St. Joseph, Superior
Wyandot	Tymochtee Creek	Antrim, Marseilles, Mifflin, Pitt

HELPFUL INFORMATION FOR COMPLIANCE WITH THE NWP GENERAL CONDITIONS:

DISCLAIMER: The below information is intended to provide helpful contact information and other submittal recommendations. Contact the appropriate local, state, or federal agency for the most updated links to ensure compliance with the NWP General Conditions.

General Condition 1 (Navigation)

List of Section 10 Navigable Waters of the U.S.:

Buffalo District –

https://www.lrb.usace.army.mil/Portals/45/docs/regulatory/DistrictInfo/waterway_oh.pdf

Huntington District – <https://www.lrh.usace.army.mil/Missions/Regulatory/Section-10-Streams/>

Louisville District –

<https://www.lrl.usace.army.mil/Portals/64/docs/Regulatory/Public%20Notices/Limits%20of%20Jurisdiction%20Public%20Notice-revised.pdf?ver=2013-02-13-120705-203>

Pittsburgh District –

<https://www.lrp.usace.army.mil/Portals/72/docs/regulatory/RegulatoryBoundaries/PN12-2.pdf>

Navigation Charts:

Buffalo District – <https://www.lrb.usace.army.mil/Library/Maps-and-Charts/>

Huntington District – <https://www.lrh.usace.army.mil/Missions/Regulatory/Section-10-Streams/>

Louisville District –

<https://www.lrl.usace.army.mil/Portals/64/docs/Ops/Navigation/Charts/Ohio/OhioRiverCharts102-122.pdf>

Pittsburgh District – <https://www.lrp.usace.army.mil/Missions/Navigation/Navigation-Charts/>

Locks and Dams:

Buffalo District – <https://www.lrb.usace.army.mil/Library/Maps-and-Charts/>

Huntington District – <https://www.lrh.usace.army.mil/Missions/Civil-Works/Locks-and->

Dams/

Louisville District – <https://www.lrl.usae.army.mil/Missions/Civil-Works/Navigation/Locks-and-Dams/>

Pittsburgh District –
<https://www.lrp.usace.army.mil/Missions/Navigation/Locks-and-Dams/#:~:text=Locks%20and%20Dams%20%20%20Allegheny%20River%20,Locks%20%26%20Dam%20%20%205%20more%20rows%20>

Notice to Navigation Interests Request Sheets:

Huntington District –
<https://www.lrh.usace.army.mil/Portals/38/docs/navigation/Notice%20Info%20sheet.pdf>

Louisville –
<https://www.lrl.usace.army.mil/Portals/64/docs/Regulatory/Forms/Notice%20to%20Navigation%20Interests%20Data%20Form%202019.pdf?ver=2019-07-22-101251-297>

Pittsburgh District –
<https://www.lrp.usace.army.mil/Portals/72/docs/regulatory/NavNoticeRequestForm.pdf>

General Condition 5 (Shellfish Beds)

Shellfish beds in Ohio include concentrations of freshwater mussels. All native mussels are protected in the State of Ohio (Section 1533.324 of the Ohio Revised Code). In addition, 10 federally listed species occur in the state and are protected by the ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). All rivers and tributaries that contain mussels or potential mussel habitat must be surveyed prior to any proposed streambed disturbance. Currently accepted protocol and supporting materials can be found on the Ohio Department of Natural Resources' website:

<https://ohiodnr.gov/wps/portal/gov/odnr/buy-and-apply/special-use-permits/collecting-research/ohio-mussel-surveyor>

General Condition 7 (Water Supply Intakes)

Locations of drinking water source protection areas associated with public water supply intakes, including the name of the public water supply, can be found at the following link:

<https://oepa.maps.arcgis.com/apps/webappviewer/index.html?id=3b39e11ba7fc43c3b41801e3580e6d21>

Contact information for public water suppliers can be obtained from Ohio EPA by contacting the Division of Drinking and Ground Waters at whp@epa.ohio.gov or 614-644-2752.

General Condition 10 (Fills Within 100-year Floodplains)

The following website provides a statewide listing of Floodplain Managers in Ohio:
<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/water-resources/floodplains/>

General Condition 16 (Wild and Scenic Rivers)

Prior to submitting a PCN for work in a National Wild and Scenic River System, it is recommended that the applicant contact the National Park Service Regional Wild and Scenic Rivers Specialist, at the Midwest Regional Office, 601 Riverfront Drive, Omaha, Nebraska 68102, for assistance in complying with NWP General Condition 16. Any determination provided by the National Park Service should be submitted with the PCN. The following website provides information on National Wild and Scenic Rivers within Ohio:

<https://www.rivers.gov/ohio.php>

General Condition 18 (Endangered Species)

To obtain the most up to date information on federally threatened and endangered species applicants are encouraged to utilize the USFWS's Information for Planning and Consultation System (IPaC) found at <https://ecos.fws.gov/ipac/>

Prior to the submittal of a PCN, applicants may also contact the USFWS, Ohio Ecological Services Field Office at:

Address: 4625 Morse Road, Suite 104
Columbus, Ohio 43230

Email: ohio@fws.gov

Phone: (614) 416-8993

The Ohio Mussel Survey Protocol may be found at the following link:

<https://ohiodnr.gov/wps/portal/gov/odnr/buy-and-apply/special-use-permits/collecting-research/ohio-mussel-surveyor>

General Condition 4 (Migratory Bird Breeding Areas) and General Condition 19 (Migratory Birds and Bald and Golden Eagles)

Prior to the submittal of a PCN, information to assist in complying with NWP General Conditions 4 and 19 may be obtained from the USFWS, Ohio Ecological Services Field Office at:

Address: 4625 Morse Road, Suite 104
Columbus, Ohio 43230

Email: ohio@fws.gov

Phone: (614) 416-8993

The Ohio Division of Natural Resources Division of Wildlife may be contacted at (800) 945-3543.

General Condition 20 (Historic Properties)

The Ohio National Register of Historic Places can be found at the following link:
<https://www.ohiohistory.org/preserve/state-historic-preservation-office/nationalregister>

When reviewing a PCN, the Corps will scope appropriate historic property identification efforts and, if applicable, work with the applicant to take into account the effect of the proposed activity on historic properties. In these instances, information and coordination may include:

- Requesting comments directly from the Ohio History Connection SHPO on the effect the proposed regulated activity may have on historic properties. The Ohio History Connection SHPO may be contacted at:

Address: Ohio History Center
800 E. 17th Ave., Columbus, Ohio 43211
Phone: (614) 297-2300
Email: info@ohiohistory.org

- To identify potential historic properties that may be affected by a proposed project, the following information may be reviewed and/or provided with the PCN when applicable:
 - A detailed description of the project site in its current condition (i.e. prior to construction activities) including information on the terrain and topography of the site, the acreage of the site, the proximity of the site to major waterways, and any known disturbances within the site.
 - A detailed description of past land uses in the project site.
 - Photographs and mapping showing the site conditions and all buildings or structures within the project site and on adjacent parcels are useful. Photographs and maps supporting past land uses should be provided as available.
 - Information regarding any past cultural resource studies or coordination pertinent to the project area, if available.
 - U.S. Geological Survey (USGS) 7.5' series topographic maps;
 - Ohio History Connection SHPO files including:

- Ohio Archaeological Inventory (OAI) files;
 - Ohio Historic Inventory files (OHI);
 - Ohio SHPO Cultural Resources Management (CRM)/contract archaeology files;
 - NRHP files including Historic Districts; and
 - County atlases, histories and historic USGS 15' series topographic map(s).
- When needed to evaluate effects to historic properties, the applicant is encouraged to consult with professionals meeting the Professional Qualification Standards as set forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) during this data gathering process. These professionals can assist with compiling the project information discussed above and should provide recommendations as to whether the proposal has the potential to affect historic properties and if further effort is needed to identify or assess potential effects to historic properties. These professionals can also compile preliminary review information to submit to the District Engineer as part of the PCN.

General Condition 23 (Mitigation)

Information pertaining to mitigation can be found at the following link:
<https://www.lrh.usace.army.mil/Missions/Regulatory/Mitigation.aspx>

General Condition 25 (Water Quality)

The Ohio Environmental Protection Agency may be contacted at:

Address: Lazarus Government Center
 50 W Town St. Suite 700
 Columbus, Ohio 43215

Phone: (614) 644-2001

Information pertaining to the Ohio Environmental Protection Agency water quality certification (WQC) program, including the Section 401 Clean Water Act WQC application form, can be obtained at the following link:
<https://www.epa.state.oh.us/dsw/#113292723-programs>

General Condition 32 (Pre-Construction Notification)

The nationwide permit pre-construction notification form (Form ENG 6082) may be obtained at the following link:

https://www.publications.usace.army.mil/Portals/76/Eng_Form_6082_2019Oct.pdf?ver=2019-10-22-081550-710/

A checklist of information that must be provided in a pre-construction notification can be obtained at the following link:

<https://www.lrh.usace.army.mil/Missions/Regulatory/How-to-Apply-for-a-Permit/Nationwide-Permits/>

Electronic Submittal:

- PCNs should be saved as a PDF document, and then submitted as an attachment in an email to the appropriate Regulatory Office:

Buffalo District – LRB.Ohio.RegActions@usace.army.mil

Huntington District – LRH.permits@usace.army.mil

Louisville District – CELRL.Door.To.The.Corps@usace.army.mil

Pittsburgh District – Regulatory.Permits@usace.army.mil

- Electronic documents must have sufficient resolution to show project details. The PCN and supporting documents submitted electronically must not exceed 10 megabytes (10MB) per email. Multiple emails may be required to transmit documents to ensure the 10MB limit is not exceeded. Alternatively, use of the Department of Defense Secure Access File Exchange (DoD SAFE) service to transfer large files may be requested in your email.
- For tracking and processing purposes, the email should include the following:
 - **Email Subject Line:** include the name of the applicant, type of PCN request, and location (County and State). Example: RE: Doe, John, PCN and Section 401 WQC Request, Summit County, Ohio;
 - **Email Body:** 1) Brief description of the proposed project, 2) contact information (phone number, mailing address, and email address) for the applicant and/or their agent, and 3) the project location: Address and Latitude/Longitude in decimal degrees (e.g. 42.92788° N, 88.36257° W).
- If you do not have internet access, information may be submitted through the U.S. Postal Service to the appropriate Regulatory Office:

U.S. Army Corps of Engineers, Buffalo District
ATTN: Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207
Phone: (716) 879-4330
Fax: (716) 879-4310

U.S. Army Corps of Engineers, Huntington District
ATTN: Regulatory Division
502 Eighth Street
Huntington, West Virginia 25701-2070
Phone: (304) 399-5210
Fax: (304) 399-5805

U.S. Army Corps of Engineers, Pittsburgh District
ATTN: Regulatory Division
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222-4186
Phone: (412) 395-7155
Fax: (412) 644-4211

U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-RD, Room 752
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202-0059
Phone: (502) 315-6733
Fax: (502) 315-6677

SIFFORD STATION

Whiley Road, Lancaster, Fairfield County, Ohio

LAT/LONG: 39.726975°, -82.691847°

STORM WATER POLLUTION PREVENTION PLAN (SWP3)



Prepared for:

AEP Ohio Transmission Company, Inc.
8400 Smith's Mill Road
New Albany, OH 43054

Prepared by:

EMH&T
5500 New Albany Road
New Albany, Ohio, 43054

Site Contact: David Sams
Phone: 614-698-9445
E-mail: dsams@aep.com

October 2021
Rev1: November 2021

Project Start Date: October 2021
Project End Date: September 2022

SIFFORD STATION

CERTIFICATION

"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 gathered and evaluated 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."

Name: Aimee Toole

Title: Mngr-Project Environmental Support

Signature: 

Date: 9/13/2021

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APPENDIX 1 – Ohio EPA General Permit No. OHC000005

APPENDIX 2 – Project Location Map, Soil Erosion and Sediment Control Plan, USDA Soils Map, Watershed (HUC-12) Map,

APPENDIX 3 – SWP3 Inspection Form and SWP3 Amendments, Grading, and Stabilization Log

APPENDIX 4 – Duty to Inform Contractors and Subcontractors Signature Form

APPENDIX 5 – United States Army Corps of Engineers Nationwide Permit

APPENDIX 6 – Long-term Maintenance Plan

APPENDIX 7 – Storm Water Calculations Report

I. Site Description

A. Description of Construction Activity

AEP Ohio Transmission Company, Inc. (AEP) is proposing to conduct construction activities for the Sifford Station (Project) located west of Whiley Road in the City of Lancaster, Fairfield County, Ohio. The Project consists of construction of a substation pad and equipment, future expansion pad, skid station, a permanent access road, and five pole location pads. The proposed construction activities propose to permanently disturb 20.00-acres, including 12.11 acres of gravel installation for the substation pad and pole pads. Construction activities will include grading, utility installation, and permanent stabilization. Stormwater runoff from the site will be managed by the adjacent Sediment Basin 02, per the Project Ruble Mass Excavation plan, during construction. Post-Construction Stormwater runoff will also be tributary to Basin 02, which will be designed per the Project Ruble Site Construction Plans. Basin 02 will be installed and maintained by others.

B. Disturbed Area

Total Area of the Site – 20.00 acres

Total Disturbed Area – 20.00 acres

Table 1: Disturbed Area

County	Township/Village/City	Disturbance Acreage
Fairfield	City of Lancaster	20.00

C. Impervious Area

The station will result in 5.65 acre of impervious surface from the construction of the substation pad and gravel access road. Post-construction best management practices (BMPs) are warranted for this project and stormwater will be treated by an offsite stormwater basin that is installed and maintained by others. See Section II.D.5 of this SWP3 for post-construction storm water management requirements.

Table 2: Impervious Area

	Impervious Acreage	% Imperviousness
Existing	0	0%
New	12.11	60.55%
Total	12.11	60.55%

D. Storm Water Calculations

Pre- and post-development runoff coefficients have been calculated based on the pre- and post-estimates for impervious surfaces within the existing facility. The proposed substation construction includes the addition of impermeable materials such as gravel or other hard surfaces. A measure of the impervious areas and percent imperviousness created by the construction activity can be found above. Due to the increase in impervious area, water quantity detention will be provided offsite within the adjacent Basin 02, built by others. Basin 02 was designed per Project Ruble Mass Excavation Plan to meet the Ohio EPA water quality and quantity requirements along with City of Lancaster detention requirements.

Subarea 11 (per Ruble – Mass Excavation Erosion and Sediment Control Memo, 10-5-21) :

Pre-development runoff coefficient – 0.05

- 0.05 is the pre-development runoff coefficient due to the existing land use of farm land.

Post-development runoff coefficient – 0.59

- 0.59 is a result of the 12.11 acres of impervious area added as a result of construction, utilizing the Ohio EPA volumetric runoff coefficient:
 - $R_v = 0.05 + 0.9i$
 - $i = 60.55\% [(12.11 \text{ acres} / 20 \text{ acres}) * (100)]$
 - $R_v = 0.05 + 0.9(0.6655)$
 - $R_v = 0.59$

E. Existing Soil Data

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey was used to determine soil types within the Project area. A copy of the web-based soil map is included in Appendix 2. Soils in the Project area are shown in Table 3.

Table 3: Soil Types

Map Unit Symbol	Map Unit Description	Drainage Class	Hydric Soil?
Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	Moderately well drained	No
Ma	Marengo clay loam	Very poorly drained	Yes

F. Prior Land Uses

The Project is located on the existing agricultural fields. Portions of the site have been previously graded by the Project Ruble Mass Excavation Plan. Sediment Basin 02 has been constructed per the Project Ruble Mass Excavation Plan.

G. On-site Streams and Receiving Streams and Surface Waters

1. On-Site Waterbodies

Table 4: Delineated Streams

Stream ID	Stream Name	Flow Regime	Ohio EPA 401 Permitting Eligibility	Stream Stability
N/A	N/A	N/A	N/A	N/A

Table 5: Delineated Wetlands and Ponds

Wetland ID	Cowardin Classification	ORAM Category
Wetland Fringe A	Emergent	1
Pond 1	Open Water	N/A

The construction of the proposed AEP Sifford Station project will require a total of approximately 964 cubic yards of permanent fill to complete the project, which is associated with the impacts to the onsite jurisdictional pond and fringe wetland. The impacted portion of the jurisdictional pond and fringe wetland will have clean fill material installed as part of the grading/fill for the access road and the installation of the security fence around the pond. Impacts to the pond will require approximately 823 cubic yards of fill while the wetland fringe impacts include approximately 141 cubic yards of fill. As part of the impacts to the pond, a new outfall culvert structure will be installed under the new access road. This outfall structure will not impact the hydrology of the existing pond. Based on the approximately 0.03 acre of Category 1 jurisdictional wetland impacts and 0.30 acre of open water pond impacts associated with the proposed AEP Sifford Station project, no compensatory mitigation is being proposed for the project since the wetland impacts are below 0.1 acre and pond impacts do not require compensatory mitigation.

Compensatory Mitigation is not required per Section 23 (c) of the Nationwide Permit 57 – Electric Utility Line and Telecommunication Activities, Effective March 15, 2021.

However, Best Management Practices (BMPs) will be used during and after the construction of the project. Stormwater permits and storm water prevention plans for construction activities will also be prepared as needed for site construction following the requirements of the National Pollutant Discharge Elimination System program (USEPA, 09/1992). Appropriate BMPs will be included in construction plans to decrease erosion and sedimentation during and after construction of the project. All sediment controls that are utilized will be kept in place during construction activities and until the construction area has been stabilized.

The Approved United States Army Corps of Engineers Nationwide Permit is included within Appendix 5.

2. Receiving Waters

The Project is located in the Headwater Hocking River Watershed (HUC-12: 050302040401) which ultimately drains to the Ohio River.

H. Implementation Schedule

A construction log will be kept at the Project site to record major dates of grading and stabilization. The general order of construction is provided in Table 6 below and will begin in September 2021 and is estimated to end in September 2022.

Table 6: Implementation Schedule

Task	Date
Identify environmental avoidance areas in the field [i.e. wetlands, 50' stream buffers, other environmental commitments]	October 2021
Mobilize construction equipment	October 2021
Initial Grading	October 2021
Install [erosion controls/BMPs] sediment fence and temporary construction entrances, as needed	October 2021
Install temporary seed and mulch, as needed, during Project activities	Throughout Project

Install Gravel Pad and Access Road	December 2021
Construct substation Infrastructure	February 2022
Repair/restore all remaining disturbed areas	May 2022
Seed and mulch all remaining disturbed areas	May 2022
Construction demobilization	June 2022
Inspection with AEP and SWP3 contractor	September 2022

I. Subdivided Development Drawing

Not applicable.

J. Dedicated Asphalt and Concrete Plant Discharges

Not applicable.

K. Log of Grading and Stabilization Activities

A log for documenting grading and stabilization activities and amendments to the SWP3 is included in Appendix 3.

L. Site Map

A vicinity of the Project area is included in Appendix 2, along with the Soil Erosion Sediment and Sediment Control Plan and details. The Soil Erosion and Sediment Control Plan shows the Project boundaries and contours, the limits of construction, and the locations of the erosion and sediment control features.

M. Permit Requirements

The permit requirements can be reviewed in the Ohio EPA General Permit No. OHC000005 which has been included as Appendix 1.

II. **Storm Water Pollution Prevention Plan**

The SWP3 was developed to meet the objectives in Part II. Non-numeric Effluent Limitations and Part III. Storm Water Pollution Prevention Plan (SWP3) of Ohio EPA General Permit No. OHC000005.

A. SWP3 Availability

This Plan, a copy of the Notice of Intent (NOI), and the Ohio EPA authorization shall be made available on-site immediately upon request of the director or an authorized representative and the City of Lancaster or authorized representative during working hours. Per Ohio EPA, an electronic copy is an acceptable format for on-site availability and review.

B. Amendments

The SWP3 is a living document that will be updated as needed. The SWP3 shall be amended whenever there is a change in design, construction, operation or maintenance, or if the SWP3 proves to be ineffective in controlling pollutants in storm water discharges associated with construction activity. A log for documenting amendments is included in Appendix 3.

AEP Environmental Services shall be notified prior to any significant modifications to the SWP3, such as changes to the access roads, disturbance acreage, culvert installations, etc., to ensure the Project remains in compliance with Ohio EPA General Permit No. OHC000005.

C. Duty to Inform Contractors

All contractors and subcontractors who will be involved in implementation of the SWP3 shall review and understand the conditions and responsibilities of the SWP3 and document their acknowledgement by signing the form included in Appendix 4.

D. Controls

Timing: Temporary erosion and sediment control measures shall be installed prior to earth-disturbing activity. Temporary control measures will not be removed until final site stabilization, in the form of permanent gravel cover or perennial vegetative cover with a density of at least 70%, is achieved.

The locations of the control methods are shown on the Soil Erosion and Sediment Control Plans in Appendix 2. Maintenance and inspections requirements for these controls can be found in Section II.D.6 of this SWP3. The control measures for this Project include the following:

1. Preservation Methods

Existing natural conditions shall be preserved as much as feasible. Such practices may include: preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; minimizing soil compaction; minimizing disturbance of steep slopes; phasing of construction operations to minimize the amount of disturbed land at any one time; and protective clearing or grubbing practices. For all construction activity adjacent to surface waters of the state, a 50-foot undisturbed natural buffer will be maintained as measured from the ordinary high water mark (OHWM).

2. Erosion, Sediment, and Runoff Controls

a. *Stabilization and Seeding*

Disturbed areas will be stabilized as specified in tables 7 and 8 below per the Soil Erosion and Sediment Control Plan and BMP detail sheets in Appendix 2. Mulch shall be applied to all exposed soil that has been seeded in an effort to facilitate seed germination and development.

Table 7: Permanent Stabilization

Area Requiring Permanent Stabilization	Time Frame to Apply Erosion Controls
Any areas that will lie dormant for one year or more.	Within seven calendar days of the most recent disturbance.
Any areas within 50 feet of a surface water of the state and at final grade.	Within two calendar days of reaching final grade.
Other areas at final grade.	Within seven calendar days of reaching final grade within that area.

Table 8: Temporary Stabilization

Area Requiring Temporary Stabilization	Time Frame to Apply Erosion Controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade.	Within two calendar days of the most recent disturbance if the area will remain idle for more than 14 calendar days.
Any disturbed areas that will be dormant for more than 14 calendar days but less than one year, and not within 50 feet of a surface water of the state.	Within seven calendar days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter.	Prior to the onset of winter weather.

b. *Sediment Barriers and Diversions*

Sediment Fence will be installed to encompass the entire site at all appropriate locations to filter sediment from site runoff. Orange barrier fencing will be used as needed. 12" diameter compost filter sock can be used as an approved equivalent to sediment fence. After Project completion, the posts, fencing, and ties shall be removed from the Project site and transported to an appropriate off-site disposal facility.

c. *Wetland and Stream Crossings*

An existing 30" culvert is to be replaced by a proposed 30" culvert north of the Jurisdictional Pond. Wetland Fringe A will be impacted during the culvert replacement. A proposed cattle fence will also be installed around the jurisdictional pond, causes some impacts to Wetland Fringe A.

d. *Temporary Construction Entrances*

Construction entrances consisting of a stabilized pad of aggregate will be installed where construction vehicles leave active construction areas and enter public roadways to reduce the amount of sediment tracked offsite. Temporary construction entrance locations and details are provided in Appendix 2.

e. *Sediment Settling Ponds / Sediment Basins*

Sediment basins are provided by the adjacent property, by others. Sediment fence used for portions of the site that are not tributary to the sediment basin. The sediment fence is a sufficient BMP's to manage the runoff based upon the sites tributary area and runoff flow lengths.

3. Surface Water Protection

No direct discharge to surface waters is proposed for this Project. Surface waters will be protected through the erosion and sediment controls outlined in the sections above.

4. Other Controls

a. *Non-sediment Pollutant Controls*

Waste disposal containers shall be provided for proper collection of all waste material including sanitary garbage, petroleum products and any materials to be used onsite (excluding inert waste/materials such as construction debris that would not be expected to contribute pollution to storm water). Containers shall be covered and not leaking. No construction waste materials shall be buried on-site. All waste materials shall be disposed of in the manner specified by local or state regulations or by the manufacturer. No solid or liquid wastes will be discharged in storm water runoff.

b. *Off-site Traffic and Dust Control*

Any paved roads adjacent to the site entrance shall be swept to remove any excess mud, dirt, or rock tracked from the site, as necessary. Dump trucks hauling materials to or from the site shall be covered with a tarpaulin. Dust control shall be observed both on and off the site for the duration of the Project. Dust and sedimentation will be minimized by limiting earth-moving activities, site traffic, and soil and vegetation disturbances throughout the site. Chemical stabilizers and adhesives will not be used unless written permission is received from AEP Environmental Representative. Dust control details can be found in Appendix 2.

c. *Concrete Washouts*

Concrete washouts will be located in upland areas outside of wetlands or flood zones. Under no circumstances will concrete trucks wash out into a drainage channel, storm sewer or surface water.

d. *Wash Water*

Water from vehicle washing, wheel washing, and other wash waters will be treated appropriately prior to discharge to minimize pollutants. Spills and leaks will be prevented and responded to as necessary. The use of detergents is prohibited.

e. *Compliance with Other Requirements*

This SWP3 is consistent with state and/or local waste disposal, sanitary sewer or septic system regulations including provisions prohibiting waste disposal by open burning. The use of portable restroom facilities is permitted. The portable restroom facility shall not be located near any storm sewer inlets or ditches. Spill response, disposal of suspect contaminated soils and clean-up activities are initiated by calling the AEP Regional Environmental Coordinator (REC), Burak Ergezen (614) 582-1522.

f. *Trench and Groundwater Control and Dewatering*

If dewatering is needed during utility installation, ensure a geotextile dewatering filter bag is utilized for the pumping of muddy water. Ensure the discharge hose and filter bag are placed on stabilized ground with a sufficient buffer prior to discharge from the site.

g. *Contaminated Sediment*

Contaminated soils are not expected to be encountered on this Project. However, if they should exist within the limits of construction, they will be disposed of properly per direction of the AEP Regional Environmental Coordinator (REC), Burak Ergezen (614) 582-1522.

h. *Fuel and Chemical Storage*

The mixing, pumping, transferring, storage or other handling of construction chemicals or potentially hazardous materials shall be performed and stored in an area away from any watercourse, ditch or storm sewer inlet. Vehicle and/or equipment maintenance and refueling shall be performed away from watercourse, ditches and storm sewer inlets. All chemicals or potentially hazardous materials utilized shall be approved per direction of the AEP Regional Environmental Coordinator (REC), Burak Ergezen (614) 582-1522.

5. Post-Construction Storm Water Management Requirements

Post-Construction water quality treatment is provided on the adjacent Basin 02, built and maintained by others. Water quantity detention will be provided by the offsite basin, which was designed to meet the City of Lancaster and Ohio EPA requirements.

6. Maintenance and Inspections Requirements

*All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All erosion and sediment control measures shall be inspected:

- Once every seven calendar days; and,
- After any storm event greater than one-half inch of rain per 24-hour period by the end of the next calendar day, excluding weekends and holidays unless work is scheduled.

An inspection report shall be made after each inspection. The SWP3 Inspection Form is included in Appendix 3.

*The Contractor shall select at least two qualified individuals responsible for inspections, maintenance, and repair activities, and filling out the SWP3 Inspection Form and SWP3 Amendments, Grading, and Stabilization Log in Appendix 3. Personnel selected for these responsibilities shall be knowledgeable and experienced in all inspection and maintenance practices necessary for keeping the erosion and sediment controls in good working order.

*If an inspection reveals that a control is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within three calendar days of the inspection. If an inspection reveals that a control fails to perform its intended function and that another, more appropriate control is required, the SWP3 shall be amended and the new control shall be installed within 10 calendar days of the inspection. If an inspection reveals a control has been installed inappropriately or incorrectly, the control will be replaced or modified for site conditions.

*When controls are modified, the erosion control drawings associated with the SWP3 will be updated to reflect the modifications, and the changes will be reflected using the SWP3 Amendments, Grading, and Stabilization Log in Appendix 3.

- Silt fence shall be inspected for depth of sediment, tears, and to ensure the anchor posts are firmly in the ground. Silt fence shall also be inspected to ensure they are

maintained in the appropriate positions per the plans in Appendix 2. Built up sediment shall be removed from the silt fence when it has reached one-half the height of the fence.

- Temporary and permanent seeding shall be inspected for bare spots, washouts, and healthy growth. If seed does not germinate in an area on which it was placed, the area will either be re-seeded or an alternate erosion control method will be employed.
- Locations where vehicles and equipment enter or exit the site shall be inspected for evidence of off-site tracking of sediment. Sediment being tracked onto off-site roadways shall be cleaned up promptly.
- Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean out the structure. Prefabricated systems should also utilize this criterion unless the manufacturer has alternative specifications.

*The permittee shall maintain the SWP3 Inspection Forms for three years following the submittal of a notice of termination (NOT) form. The Inspection Forms shall be signed in accordance with Part V.G of Ohio EPA General Permit OHC000005.

III. Approved State or Local Plans

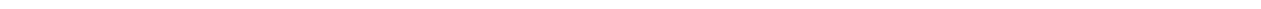
The erosion and sediment control plans were prepared in accordance with Ohio EPA Permit No. OHC000005. The site Engineering Plans have been approved by the City of Lancaster.

IV. Exceptions

There are no exceptions to the erosion and sediment control practices contained in the Ohio EPA General Permit No. OHC000005.

APPENDIX 1

Ohio EPA General Permit No. OHC000005



Issuance Date: April 23, 2018
Effective Date: April 23, 2018
Expiration Date: April 22, 2023

Ohio EPA APR 23 '18
Entered Directors Journal

OHIO ENVIRONMENTAL PROTECTION AGENCY

**GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED
WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Storm Water Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.



Craig W. Butler
Director

Total Pages: 60

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

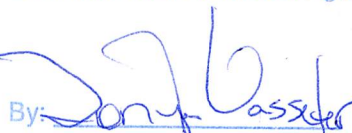
By:  Date: 4-23-18

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PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio. Appendices A and B of this permit contain additional watershed specific requirements for construction activities located partially or fully within the Big Darby Creek Watershed and portions of the Olentangy River Watershed. Projects within portions of the Olentangy River watershed shall seek coverage under this permit following the expiration of OHCO00002 (May 31, 2019).

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

Construction activities disturbing one or more acres of total land, or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land are eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
 - b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
 - c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
 - d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).
2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:

- a. Storm water discharges that originate from the site after construction activities have ceased, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;
 - b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
 - c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit;
3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
- a. Rainfall Erosivity Waiver. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001 and be found at: http://epa.ohio.gov/portals/35/permits/USEPAfact3-1_s.pdf. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or
 - b. TMDL (Total Maximum Daily Load) Waiver. Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-02. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form and Storm Water Pollution Prevention Plan (SWP3) if located within the Big Darby Creek watershed or portions of the Olentangy watershed in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

F. Notice of Intent Requirements

1. Deadlines for notification.
 - a. Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form, a completed Storm Water Pollution Prevention Plan (SWP3) for projects within the Big Darby Creek and portions of the Olentangy river watersheds and appropriate fee at least 21 days (or 45 days in the Big Darby Creek watershed and portions of the Olentangy watershed) prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit prior to engaging in construction activities. Coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.
 - b. Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.
2. Failure to notify. Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.
3. How to submit an NOI. Operators seeking coverage under this permit must submit a complete and accurate Notice of Intent (NOI) application using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <https://ebiz.epa.ohio.gov/>. Submission through the Ohio EPA eBusiness Center will

require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOI. Existing eBusiness Center account holders can access the NOI form through their existing account and submit using their existing PIN. Please see the following link for guidance:

<http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance>. Alternatively, if you are unable to access the NOI form through the agency eBusiness Center due to a demonstrated hardship, the NOI may be submitted on a paper NOI form provided by Ohio EPA. NOI information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOI form.

4. Additional notification. NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.
5. Re-notification. Existing permittees having coverage under the previous generations of this general permit shall have continuing coverage under OHC000005 with the submittal of a timely renewal application. Within 180 days from the effective date of this permit, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 180-day period.

Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations. You shall develop and implement the SWP3 in accordance with Part III of this permit to satisfy these non-numeric effluent limitations.

- A. **Erosion and Sediment Controls.** You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
 1. Control storm water volume and velocity within the site to minimize soil and stream erosion;
 2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
 3. Minimize the amount of soil exposed during construction activity;

4. Minimize the disturbance of steep slopes;
 5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
 6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and
 7. Minimize soil compaction and, unless infeasible, preserve topsoil.
- B. Soil Stabilization.** Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

- C. Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- D. Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 2. Minimize the exposure of construction materials, products, and wastes; landscape materials, fertilizers, pesticides, and herbicides; detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
 3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- E. Prohibited Discharges.** The following discharges are prohibited:
1. Wastewater from washout of concrete, unless managed by an appropriate control;
 2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
 3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
 4. Soaps or solvents used in vehicle and equipment washing or all other waste water streams which could be subject to an individual NPDES permit (Part III.G.2.g).
- F. Surface Outlets.** When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)
- G. Post-Construction Storm Water Management Controls.** So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity.

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for

subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall clearly identify all activities which are required to be authorized under Section 401 and subject to an antidegradation review. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants and impact of storm water discharges during construction and pollutants associated with the post-construction land use to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing

An acceptable SWP3 shall be completed and submitted to the applicable regulated MS4 entity (for projects constructed entirely within a regulated MS4 area) prior to the timely submittal of an NOI. Projects within the Big Darby Creek and portions of the Olentangy watersheds must submit a SWP3 with the NOI. The SWP3 shall be updated in accordance with Part III.D. Submission of a SWP3 does not constitute review and approval on the part of Ohio EPA. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

In order to continue coverage from the previous generations of this permit, the permittee shall review and update the SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under, and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement.

Examples of OHC000005 permit conditions that would be infeasible for permittees renewing coverage to comply with include:

- OHC000005 post-construction requirements, for projects that obtained NPDES construction storm water coverage and started construction activities prior to the effective date of this permit;
- OHC000005 post-construction requirements, for multi-phase development projects with an existing regional post-construction BMP issued under previous NPDES post-construction requirements. This only applies to construction sites authorized under Ohio EPA's Construction Storm Water Permits issued after April 20, 2003;
- OHC000005 post-construction requirements, for renewing or initial coverage and you have a SWP3 approved locally and you will start construction within 180 days of the effective date of this permit;

- Sediment settling pond design requirements, if the general permit coverage was obtained prior to April 21, 2013 and the sediment settling pond has been installed; or
- Case-by-case situations approved by the Director.

C. SWP3 Signature and Review.

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.
2. Plan Availability
 - a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
 - b. By written request: The permittee must provide the most recent copy of the SWP3 within 7 days upon written request by any of the following:
 - i. The director or the director's authorized representative;
 - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
 - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
 - c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.
3. Plan Revision. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the

general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

E. Duty to inform contractors and subcontractors

The permittee shall inform all contractors and subcontractors not otherwise defined as “operators” in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created, and signatures shall be obtained prior to commencement of earth disturbing activity on the construction site.

F. Total Maximum Daily Load (TMDL) allocations

If a TMDL is approved for any waterbody into which the permittee’s site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3. Specific conditions have been provided in Appendix A (for the Big Darby Creek Watershed) and Appendix B (for portions of the Olentangy river watershed).

G. SWP3 Requirements

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:
 - a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
 - b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
 - c. A measure of the impervious area and percent imperviousness created by the construction activity (existing, new and total impervious area after construction);
 - d. Storm water calculations, including the volumetric runoff coefficients for both the pre-construction and post- construction site conditions, and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3; and if applicable, explanation of the use of existing post-construction facilities. Ohio EPA recommends the use of data sheets (see Ohio’s Rainwater and Land Development manual and Ohio EPA resources for examples);
 - e. Existing data describing the soil and, if available, the quality of any discharge from the site;

- f. A description of prior land uses at the site;
- g. A description of the condition of any on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels);
- h. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities, infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- i. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed, or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;
- j. For subdivided developments, a detail drawing of individual parcels with their erosion, sediment or storm water control practices and/or a typical individual lot showing standard individual lot erosion and sediment control practices.

A typical individual lot drawing does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;
- k. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:
 - i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
 - ii. Soils types for all areas of the site, including locations of unstable or highly erodible and/or known contaminated soils;

- iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
- iv. The location of any delineated boundary for required riparian setbacks;
- v. Conservation easements or areas designated as open space, preserved vegetation or otherwise protected from earth disturbing activities. A description of any associated temporary or permanent fencing or signage;
- vi. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;
- vii. Existing and planned locations of buildings, roads, parking facilities and utilities;
- viii. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during site development;
- ix. Sediment traps and basins noting their sediment storage and dewatering (detention) volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see Ohio EPA's Rainwater and Land Development manual and website for examples) to provide data for all sediment traps and basins noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, detention volume, sedimentation volume, practice surface area, dewatering time, outlet type and dimensions;
- x. The location of permanent storm water management practices (new and existing) including pretreatment practices to be used to control pollutants in storm water after construction operations have been completed along with the location of existing and planned drainage features including catch basins, culverts, ditches, swales, surface inlets and outlet structures;
- xi. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
- xii. The location of designated construction entrances where the vehicles will access the construction site; and
- xiii. The location of any areas of proposed floodplain fill, floodplain excavation, stream restoration or known temporary or permanent stream crossings.

2. Controls. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each major construction activity identified in Part III.G.1.h: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. Preservation Methods. The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; phasing of construction operations to minimize the amount of disturbed land at any one time; and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.
- b. Erosion Control Practices. The SWP3 shall make use of erosion controls that provide cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to re-establish vegetation or suitable cover on disturbed areas after grading shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.
- i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.
- ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land

Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

- c. Runoff Control Practices. The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- d. Sediment Control Practices. The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, sediment barriers, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is stabilized with permanent cover. As construction progresses and the topography is altered, appropriate controls shall be constructed, or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
- Concentrated or collected storm water runoff (e.g., storm sewer or ditch);
 - Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers; or
 - Runoff from drainage areas that exceed the design capacity of inlet protection;

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft³) per acre of drainage (67 yd³/acre) with a minimum 48-hour drain time. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 ft³ per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

Accumulated sediment shall be removed from the sediment storage zone once it exceeds 50 percent of the minimum required sediment storage design capacity and prior to the conversion to the post-construction practice unless suitable storage is demonstrated based upon over-design. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width ($\geq 2:1$ length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. Combining multiple sediment and erosion control measures in order to maximize pollutant removal is encouraged.

- iii. **Sediment Barriers and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by sediment barriers or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. For most applications, standard silt fence may be substituted with a 12-inch diameter sediment barrier. The relationship between the maximum drainage area to sediment barrier for a particular slope range is shown in the following table:

Table 3 Sediment Barrier Maximum Drainage Area Based on Slope

Maximum drainage area (in acres) to 100 linear feet of sediment barrier	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	$\geq 2\%$ but < 20%
0.125	$\geq 20\%$ but < 50%

Placing sediment barriers in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Diversion practices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.
- vi. **Modifying Controls.** If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.
- e. Post-Construction Storm Water Management Requirements. So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it is authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: local jurisdictions may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs in the SWP3. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). Maintenance plans shall ensure that pollutants collected within structural post-construction practices are disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as

designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone document which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; (5) construction drawings or excerpts showing the plan view, profile and details of the outlet(s); and (6) a map showing all access and maintenance easements (7) for table 4a practices, provide relevant elevations and associated volumes that dictate when removal of accumulated sediments must occur. Permittees are responsible for assuring all post-construction practices meet plan specifications and intended post-construction conditions have been met (e.g., sediment removed from, and sediment storage restored to, permanent pools, sediment control outlets removed and replaced with permanent post-construction discharge structures, and all slopes and drainageways permanently stabilized), but are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., park lands), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.M.1.

For all construction activities that will disturb two or more acres of land, or will disturb less than two acres, that are a part of a larger common plan of development or sale which will disturb two or more acres of land, the post construction BMP(s) chosen shall be able to manage storm water runoff for protection of stream channels, stream stability, and water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

$$WQ_v = R_v * P * A / 12 \quad (\text{Equation 1})$$

where:

WQ_v = water quality volume in acre-feet

R_v = the volumetric runoff coefficient calculated using equation 2

P = 0.90 inch precipitation depth

A = area draining into the BMP in acres

$$R_v = 0.05 + 0.9i \quad (\text{Equation 2})$$

where i = fraction of post-construction impervious surface)

An additional volume equal to 20 percent of the WQ_v shall be incorporated into the BMP for sediment storage. Ohio EPA recommends BMPs be designed according to the methodology described in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Tables 4a and 4b below are considered standard BMPs approved for general use. However, communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the WQ_v in less than one-third of the drain time. The WQ_v is the volume of storm water runoff that must be detained by a post-construction practice as specified by the most recent edition of the Rainwater and Land Development manual.

Post-construction practices shall be sized to treat 100% of the WQ_v associated with their contributing drainage area. If there is an existing post-construction BMP that treats runoff from the disturbed area, and the BMP meets the post-construction requirements of this permit, no additional post-construction BMP will be required. A regional storm water BMP may be used to meet the post-construction requirement if 1) the BMP meets the design requirements for treating the WQ_v , and 2) a legal agreement is established through which the regional BMP owner or operator agrees to provide this service in the long term. Design information for such facilities such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3.

Table 4a Extended Detention Post-Construction Practices with Minimum Drain Times

Extended Detention Practices	Minimum Drain Time of WQ_v
Wet Extended Detention Basin ^{1,2}	24 hours
Constructed Extended Detention Wetland ^{1,2}	24 hours
Dry Extended Detention Basin ^{1,3}	48 hours
Permeable Pavement – Extended Detention ¹	24 hours
Underground Storage – Extended Detention ^{1,4}	24 hours
Sand & Other Media Filtration - Extended Detention ^{1,5}	24 hours

Notes:

1. The outlet structure shall not discharge more than the first half of the WQv in less than one-third of the drain time.
2. Provide a permanent pool with a minimum volume equal to the WQv and an extended detention volume above the permanent pool equal to 1.0 x WQv.
3. Dry basins must include a forebay and a micropool each sized at a minimum of 0.1 x WQv and a protected outlet, or include acceptable pretreatment and a protected outlet.
4. Underground storage must have pretreatment for removal of suspended sediments included in the design and documented in the SWP3. This pretreatment shall concentrate sediment in a location where it can be readily removed. For non-infiltrating, underground extended detention systems, pretreatment shall be 50% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.
5. The WQv ponding area shall completely empty between 24 and 72 hours.

Table 4b Infiltration Post-Construction Practices with Maximum Drain Times

Infiltration Practices	Maximum Drain Time of WQv
Bioretention Area/Cell ^{1,2}	24 hours
Infiltration Basin	24 hours
Infiltration Trench ²	48 hours
Permeable Pavement – Infiltration ³	48 hours
Underground Storage – Infiltration ^{3,4}	48 hours

Notes:

1. Bioretention soil media shall have a permeability of approximately 1 – 4 in/hr. Meeting the soil media specifications in the Rainwater and Land Development manual is considered compliant with this requirement. Bioretention cells must have underdrains unless in-situ conditions allow for the WQv (surface ponding) plus the bioretention soil (to a depth of 24 inches) to drain completely within 48 hours.
2. Infiltrating practices with the WQv stored aboveground (bioretention, infiltration basin) shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.
3. Subsurface practices designed to fully infiltrate the WQv (infiltration trench, permeable pavement with infiltration, underground storage with infiltration) shall empty within 48 hours to recover storage for subsequent storm events.
4. Underground storage systems with infiltration must have adequate pretreatment of suspended sediments included in the design and documented in the SWP3 in order to minimize clogging of the infiltrating surface. Pretreatment shall concentrate sediment in a location where it can be readily removed. Examples include media filters situated upstream of the storage or other suitable alternative approved by Ohio EPA. For infiltrating underground systems, pretreatment shall be 80% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.

Small Construction Activities. For all construction activities authorized under this permit which result in a disturbance less than 2 acres, a post-construction practice shall be used to treat storm water runoff for pollutants and to reduce adverse impacts on receiving waters. The applicant must provide a justification in the SWP3 why the use of table 4a and 4b practices are not feasible. The justification must address limiting factors which would prohibit the project going forward should table 4a and 4b practices be required. Please note that additional practices selected will require approval from the regulated MS4. The use of green infrastructure BMPs such as runoff reducing practices is also encouraged.

Transportation Projects. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Offsite Mitigation of Post-Construction. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Tables 4a and 4b are not feasible and the following criteria are met: (1) a maintenance agreement or policy is established to ensure operations and treatment long-term; (2) the offsite location discharges to the same HUC-12 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI application.

Previously Developed Areas - Ohio EPA encourages the redevelopment of previously graded, paved or built upon sites through a reduction of the WQv treatment requirement. For a previously developed area, one or a combination of the following two conditions shall be met:

- A 20 percent net reduction of the site's volumetric runoff coefficient through impervious area reduction with soil restoration or replacing impervious roof area with green roof area (for these purposes green roofs shall be considered pervious surface) or
- Treatment of 20 percent of the WQv for the previously developed area using a practice meeting Table 4a/5b criteria.

Where there is a combination of redeveloped areas and new development, a weighted approach shall be used with the following equation:

$$WQv = P * A * [(Rv*0.2) + (Rv2 - Rv1)] / 12 \quad (\text{Equation 3})$$

Where

P = 0.90 inches

A = Area draining into the BMP in acres

Rv1 = volumetric runoff coefficient for existing conditions (current site impervious area)

Rv2 = volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

Post-construction practices shall be located to treat impervious areas most likely to generate the highest pollutant load, such as parking lots or roadways, rather than areas predicted to be cleaner such as rooftops.

Runoff Reduction Practices. The size of structural post-construction practices used to capture and treat the WQv can be reduced by incorporating runoff

reducing practices into the design of the site's drainage system. The approach to calculate and document runoff reduction is detailed in the Rainwater and Land Development Manual. BMP-specific runoff reduction volumes are set by specifications in the Rainwater and Land Development Manual for the following practices:

- Impervious surface disconnection
- Rainwater harvesting
- Bioretention
- Infiltration basin
- Infiltration trench
- Permeable pavement with infiltration
- Underground storage with infiltration
- Grass swale
- Sheet flow to filter strip
- Sheet flow to conservation area

A runoff reduction approach may be used to meet the groundwater recharge requirements in the Big Darby Creek Watershed; the runoff reduction practices used for groundwater recharge may be used to reduce the WQv requirement, see appendix A for details on groundwater recharge requirements.

In order to promote the implementation of green infrastructure, the Director may consider the use of runoff reducing practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, e.g., sheet flow from perimeter areas such as the rear yards of residential lots, low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Use of Alternative Post-Construction BMPs. This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. Alternative post-construction BMPs shall previously have been tested to confirm storm water treatment efficacy equivalent to those BMPs listed in Tables 4a and 4b using the protocol described in this section. BMP testing may include laboratory testing, field testing, or both.

Permittees shall request approval from Ohio EPA to use alternative post-construction BMPs on a case-by-case basis. To use an alternative post-construction BMP, the permittee must demonstrate that a BMP listed in Tables 4a and 4b is not feasible and the proposed alternative post-construction BMP meets the minimum treatment criteria as described in this section. The permittee shall submit an application to Ohio EPA for any proposed alternative post-construction BMP. Where the development project is located within a regulated municipal separate storm sewer system (MS4) community, the use of an alternative practice requires pre-approval by the MS4 before submittal of the Ohio EPA permit application. Ohio EPA requires that approvals for alternative

post-construction BMPs are finalized before permittees submit an NOI for permit coverage.

In addition to meeting sediment removal criteria, the discharge rate from the proposed alternative practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. Discharge rate is considered to have a negligible impact if the permittee can demonstrate that one of the following three conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The storm water drainage system of the development discharges directly into a large river with drainage area equal to 100 square miles or larger upstream of the development site or to a lake where the development area is less than 5 percent of the watershed area, unless a TMDL has identified water quality problems into the receiving surface waters of the state.

If the conditions above that minimize the potential for hydrological impact to the receiving surface water of the state do not exist, then the alternative post-construction BMP must prevent stream erosion by reducing the flow rate from the WQ_v. In such cases, discharge of the WQ_v must be controlled. A second storm water BMP that provides extended detention of the WQ_v may be needed to meet the post-construction criteria.

Alternative Post-Construction BMP Testing Protocol. For laboratory testing, the alternative BMP shall be tested using sediment with a specific gravity of 2.65, a particle size distribution closely matching the distribution shown in Table 5, and total suspended sediment (TSS) concentrations within 10% of 200 mg/L (180 mg/L – 220 mg/L TSS). For an alternative BMP to be acceptable, the test results must demonstrate that the minimum treatment rate is 80% TSS removal at the design flow rate for the tested BMP.

Table 5 Particle Size Distribution for Testing Alternative Post-Construction BMPs

Particle Size (microns)	Percent Finer (%)
1,000	100
500	95
250	90
150	75
100	60
75	50
50	45
20	35
8	20
5	10
2	5

- For field testing, the alternative BMP shall be tested using storm water runoff from the field, not altered by adding aggregate, or subjecting to unusually high

sediment loads such as those from unstabilized construction disturbance. The storm water runoff used for field testing shall be representative of runoff from the proposed installation site for the alternative BMP after all construction activities have ceased and the ground has been stabilized. The influent and effluent TSS concentrations of storm water runoff must be collected in the field. For an alternative BMP to be acceptable, the test results must demonstrate the minimum treatment rate is 80% TSS removal for influent concentrations equal to or greater than 100 mg/L TSS. If the influent concentration to the proposed alternative BMP is less than 100 mg/L TSS in the field, then the BMP must achieve an average effluent concentration less than or equal to 20 mg/L TSS.

- Testing of alternative post-construction BMPs shall be performed or overseen by a qualified independent, third-party testing organization.
- Testing shall demonstrate the maximum flow rate at which the alternative post-construction BMP can achieve the necessary treatment efficacy, including consideration for the potential of sediment resuspension.
- Testing shall demonstrate the maximum volume of sediment and floatables that can be collected in the alternative post-construction BMP before pollutants must be removed to maintain 80% treatment efficacy.
- Testing shall indicate the recommended maintenance frequency and maintenance protocol to ensure ongoing performance of the alternative post-construction BMP.

The alternative post-construction BMP testing protocol described in this section is similar to testing requirements specified by the New Jersey Department of Environmental Protection (NJDEP) for storm water Manufactured Treatment Devices (MTD) and therefore testing results certified by NJDEP shall be accepted by Ohio EPA. For examples of BMPs that have been tested using New Jersey Department of Environmental Protection's procedures, see the website: www.njstormwater.org.

Another nationally recognized storm water product testing procedure is the Technology Assessment Protocol – Ecology (TAPE) administered by the State of Washington, Department of Ecology. The TAPE testing procedure describes testing to achieve 80% TSS removal using a sediment mix with a particle size distribution with approximately 75% of the mass of the aggregate with particle diameters less than 45 microns. Overall, this particle size distribution is finer than the distribution in Table 6. Therefore, if TAPE testing results are available for a proposed alternative post-construction BMP, those results shall be accepted by Ohio EPA. The State of Washington, Department of Ecology website is www.ecy.wa.gov.

Alternative BMPs that utilize treatment processes such as filtering or centrifugal separation, rather than a detention and settling volume, must be designed to ensure treatment of 90 percent of the average annual runoff volume. For the design of these BMPs, the water quality flow rate (WQF)

considered equivalent to the Water Quality Volume (WQv) shall be determined utilizing the Rational Method (Equation 4) with an intensity (i) appropriate for the water quality precipitation event. This intensity shall be calculated using the table given in Appendix C.

$$WQF = C * i * A \quad \text{(Equation 4)}$$

Where

WQF = Water Quality Flow Rate in cubic feet per second (cfs)
C = Rational Method Coefficient of Runoff
i = Intensity (in/hr)
A = Area draining to the BMP (acres)

Alternative post-construction BMPs may include, but are not limited to: vegetated swales, vegetated filter strips, hydrodynamic separators, high-flow media filters, cartridge filters, membrane filters, subsurface flow wetlands, multi-chamber treatment trains, road shoulder media filter drains, wetland channels, rain barrels, green roofs, and rain gardens. The Director may also consider non-structural post-construction approaches.

- f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

g. Other controls.

- i. **Non-Sediment Pollutant Controls.** In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state or an MS4. Under no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.
- ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by

open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

- iv. **Trench and ground water control.** In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:
- The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
 - Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
 - Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

- h. Maintenance. All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up-slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.
- i. Inspections. The permittee shall assign "qualified inspection personnel" to conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.g of this permit or whether additional control measures are required. At a minimum, procedures in a SWP3 shall provide that all controls on the site are inspected:

- after any storm event greater than one-half inch of rain per 24-hour period by the end of the next calendar day, excluding weekends and holidays unless work is scheduled; and
- once every seven calendar days.

The inspection frequency may be reduced to at least once every month for dormant sites if:

- the entire site is temporarily stabilized or
- runoff is unlikely due to weather conditions for extended periods of time (e.g., site is covered with snow, ice, or the ground is frozen).

The beginning and ending dates of any reduced inspection frequency shall be documented in the SWP3.

Once a definable area has achieved final stabilization, the area may be marked on the SWP3 and no further inspection requirements shall apply to that portion of the site.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;
- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.
 - ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.
 - iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.h of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.
3. Approved State or local plans. All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.
4. Exceptions. If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site-specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT.

1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance plan in place to ensure all post-construction BMPs will be maintained in perpetuity.
2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
 - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
 - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;
 - c. A maintenance plan is in place to ensure all post construction BMPs are adequately maintained in the long-term;
 - d. For non-residential developments, all elements of the storm water pollution prevention plan have been completed, the disturbed soil at the identified facility have been stabilized and temporary erosion and sediment control measures have been removed at the appropriate time, or all storm water discharges associated with construction activity from the identified facility that are authorized by the above referenced NPDES general permit have otherwise been eliminated. (i) For residential developments only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner; (ii) final stabilization has been completed and the lot, which does not include a home, has been transferred to the property owner; (iii) no stabilization has been implemented on a lot, which includes a home, and the lot has been transferred to the homeowner; or

- e. An exception has been granted under Part III.G.4.

C. How to submit an NOT.

To terminate permit coverage, the permittee shall submit a complete and accurate Notice of Termination (NOT) form using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <https://ebiz.epa.ohio.gov/>. Submission through the Ohio EPA eBusiness Center will require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOT. Existing eBusiness Center account holders can access the NOT form through their existing account and submit using their existing PIN. Please see the following link for guidance: <http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance>. Alternatively, if you are unable to access the NOT form through the agency eBusiness Center due to a demonstrated hardship, the NOT may be submitted on paper NOT forms provided by Ohio EPA. NOT information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOT form.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee

shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or
 - ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to the director.
3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following certification:

"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 gathered and evaluated 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."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

P. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

Q. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

R. Bypass

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

S. Upset

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

T. Monitoring and Records

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

U. Reporting Requirements

The provisions of 40 CFR Section 122.41(l), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

PART VI. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

- A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. "Bankfull channel" means a channel flowing at channel capacity and conveying the bankfull discharge. Delineated by the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, such as the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial or

the point at which the clearly scoured substrate of the stream ends and terrestrial vegetation begins.

- C. "Bankfull discharge" means the streamflow that fills the main channel and just begins to spill onto the floodplain; it is the discharge most effective at moving sediment and forming the channel.
- D. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- E. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- F. "Channelized stream" means the definition set forth in Section 6111.01 (M) of the ORC.
- G. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.
- H. "Concentrated storm water runoff" means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- I. "Director" means the director of the Ohio Environmental Protection Agency.
- J. "Discharge" means the addition of any pollutant to the surface waters of the state from a point source.
- K. "Disturbance" means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- L. "Drainage watershed" means for purposes of this permit the total contributing drainage area to a BMP, i.e., the "watershed" directed to the practice. This would also include any off-site drainage.
- M. "Final stabilization" means that either:
 - 1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

2. For individual lots in residential construction by either:
 - a. The homebuilder completing final stabilization as specified above or
 - b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- N. "General contractor" – for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.
- O. "Individual Lot NOI" means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).
- P. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- Q. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
 2. Designed or used for collecting or conveying solely storm water,
 3. Which is not a combined sewer and
 4. Which is not a part of a publicly owned treatment works.
- R. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

- S. “Natural channel design” means an engineering technique that uses knowledge of the natural process of a stream to create a stable stream that will maintain its form and function over time.
- T. “NOI” means notice of intent to be covered by this permit.
- U. “NOT” means notice of termination.
- V. “Operator” means any party associated with a construction project that meets either of the following two criteria:
1. The party has day-to-day operational control all activities at a project which are necessary to ensure compliance with a SWP3 for the site and all permit conditions including the ability to authorize modifications to the SWP3, construction plans and site specification to ensure compliance with the General Permit, or
 2. Property owner meets the definition of operator should the party which has day to day operational control require additional authorization from the owner for modifications to the SWP3, construction plans, and/or site specification to ensure compliance with the permit or refuses to accept all responsibilities as listed above (Part VII.V.1).
- Subcontractors generally are not considered operators for the purposes of this permit. As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.
- W. “Ordinary high water mark” means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- X. “Owner or operator” means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.
- Y. “Permanent stabilization” means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- Z. “Percent imperviousness” means the impervious area created divided by the total area of the project site.
- AA. “Point source” means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

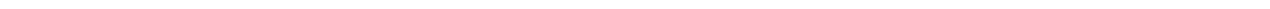
- BB. "Qualified inspection personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.
- CC. "Rainwater and Land Development" is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- DD. "Riparian area" means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- EE. "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.
- FF. "Sediment settling pond" means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- GG. "State isolated wetland permit requirements" means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- HH. "Storm water" means storm water runoff, snow melt and surface runoff and drainage.
- II. "Steep slopes" means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a "steep slope," this permit's definition automatically adopts that definition.
- JJ. "Stream edge" means the ordinary high water mark.
- KK. "Subcontractor" – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.
- LL. "Surface waters of the state" or "water bodies" means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.
- MM. "SWP3" means storm water pollution prevention plan.
- NN. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment

facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

- OO. “Temporary stabilization” means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- PP. “Water Quality Volume (WQ_v)” means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete.

APPENDIX 2

Project Location Map, Soil Erosion and Sediment Control Plan, USDA Soils Map, and Watershed (HUC-12) Map





Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648

emht.com

CITY OF LANCASTER, FAIRFIELD COUNTY, OHIO
STORMWATER POLLUTION PREVENTION PLAN
FOR
AEP SIFFORD STATION
PROJECT LOCATION MAP

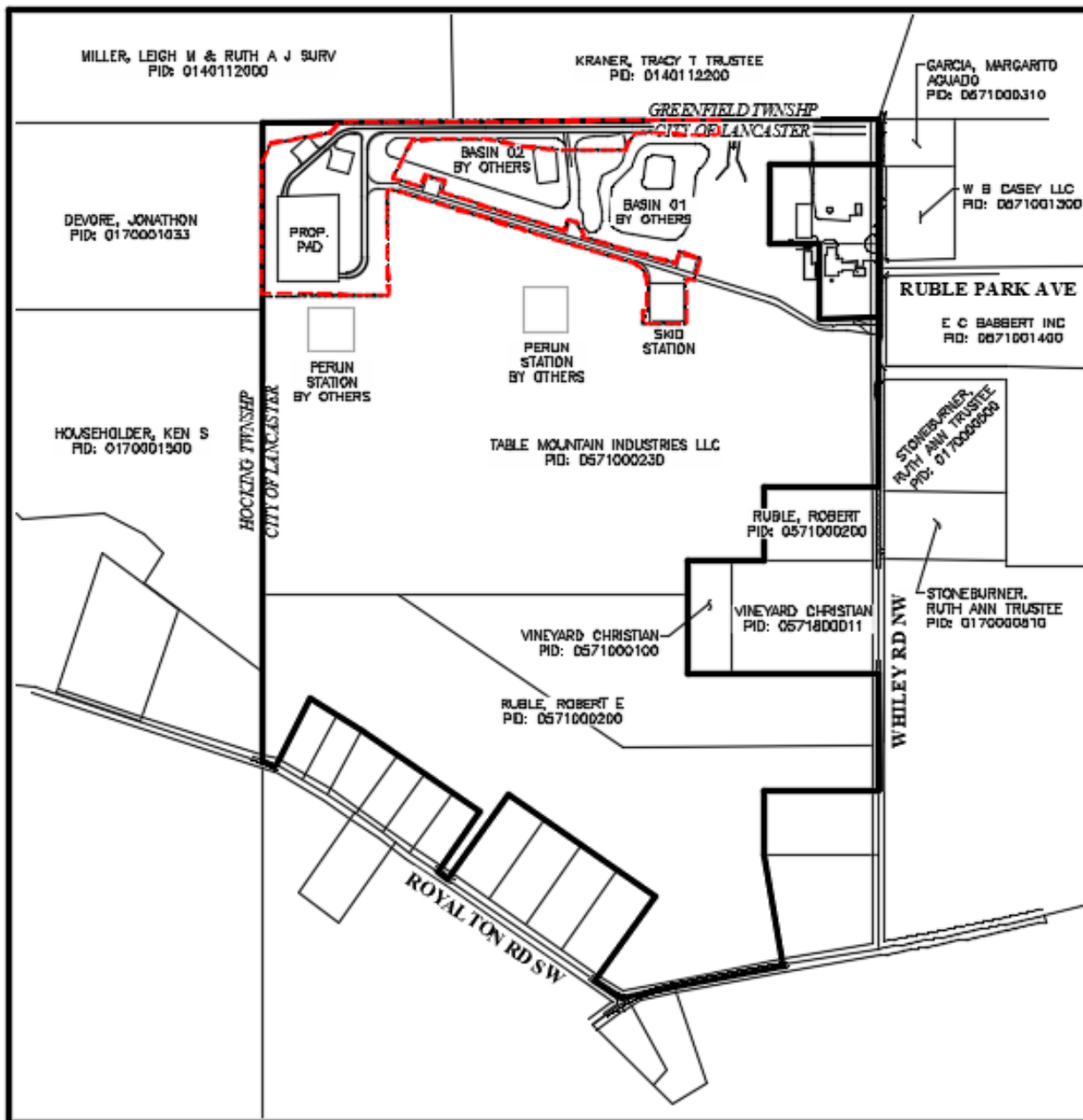
DATE: October 2021

JOB NO. 2021-0444

SCALE: NONE

Lat: 39.726975 Long: -82.691847

Limits of Disturbance: — — — — —



The current City of Lancaster, Construction and Material Specifications (CMSL), including all supplements thereto, with the requirements of the City of Lancaster current on the date of the contract, shall govern all workmanship, materials and methods of construction involved in the improvements shown on these plans, except as such specifications are modified by the following specifications or by the construction details set forth herein.

Sections of the CMSL refer to the State of Ohio, Department of Transportation Construction and Material Specifications (ODOT_CMS). The Contractor shall keep copies of the CMSL and ODOT_CMS on the project site during all construction operations.

BENCH MARKS (NAVD 1988)

BM#1	Chiseled "X" on the East flange bolt of a fire hydrant located on the west side of Whiley Road, being the second fire hydrant (575 feet) north of Ruble Park Avenue.	Elev. = 925.95
BM#2	Chiseled "X" on the east flange bolt of a fire hydrant located on the west side of Whiley Road, being the first fire hydrant (200 feet) north of Ruble Park Avenue.	Elev. = 931.37
BM#3	Chiseled "X" on the south flange bolt of a fire hydrant located at the northeast corner of the intersection of Lancaster-Circleville Road SW (State Route 188) and Whiley Road.	Elev. = 941.00
BM#4	Railroad spike in the east side of a wooden utility pole located at the west corner of the intersection of Lancaster-Circleville Road SW (State Route 188) and Royalton Road SW.	Elev. = 930.68
BM#5	Railroad spike in the west side of a wooden utility pole located on the north side of Royalton Road SW, being at the southwest corner of Residence 4976.	Elev. = 945.48

HORIZONTAL REFERENCE POINTS (OHIO SOUTH ZONE)*

POINT	DESCRIPTION	NORTHING	EASTING
▲ 206	1152 #206 IPSw/cap	629423.638	1917078.896
▲ 212	1152 #212 IPSw/cap	629588.668	1914265.471
▲ 214	1157 RTK IRSw/cap	629458.558	1915912.720
▲ 215	1157 RTK IRSw/cap	628193.935	1914315.956
▲ 216	1157 RTK IRSw/cap	628788.097	1914363.411
▲ 013	1157 #13 IRSw/cap	628024.183	1916926.640
▲ 100	1152 RTK BASE IPSw/cap	628230.947	1915325.915
▲ 207	1157 #207 IRSw/cap	628881.869	1916986.451

* HORIZONTAL REFERENCE DATUM = NAD 83 (2011)

(SEE INDEX MAP FOR REFERENCE POINT LOCATIONS)

HORIZONTAL DATUM

The coordinates shown on this map are based on the Ohio State Plane Coordinate System, South Zone, NAD 83 (2011). Said coordinates are based upon positional solutions derived from RTK GPS observations using the Ohio Department of Transportation's Ohio real time network equipment and software at traverse control points numbered 206, 207, 208, 209, 210, 211 and 212. The grid to ground combined scale factor (1.00008676835065) was applied at the location of point number 211 (n626708.048, e1914073.330) (Fieldwork completed 01/2021).

VERTICAL DATUM

The elevations shown on this map are based on the North American Vertical Datum of 1988. Said elevations are based upon positional solutions derived from RTK GPS observations using the Ohio department of transportation's ohio real time network equipment and software and the national Geodetic Survey's Geoid18 model at traverse control points numbered 206, 207, 208, 209, 210, 211 and 212. Elevations from said traverse control points were then transferred by conventional leveling procedures to the permanent benchmarks listed hereon. (Fieldwork completed 01/2021).

FEMA NOTE:

According to the Federal Emergency Management Agency's Flood Insurance Rate Map (dated 01/06/2012), the subject parcel shown hereon lie within Zone "X", Community Panel No. 39045C0231G & 39045C0230G.

NOTE:

This information is voluntarily submitted to a public office in expectation of protection from disclosure as provided by Section 149.433 of the revised code and is subject to a nondisclosure agreement. It includes infrastructure records under ORC Section 149.433 and confidential trade secrets and is not subject to disclosure under Ohio public records laws.

STANDARD CONSTRUCTION DRAWINGS

THE STANDARD DRAWINGS LISTED ON THESE PLANS SHALL BE CONSIDERED A PART THEREOF:

DRAWING NO.	DESCRIPTION
D-1	DRAIN TILE REPLACEMENT
D-3	PRECAST PIPE HEADWALL 8" TO 36" DIAMETER
S-1	TYPE 1 BEDDING FOR SEWER PIPE
S-2	STONE FOUNDATION
S-3	TYPE 1 BEDDING FOR SEWER PIPE
S-5	TYPICAL TRENCH DETAIL FOR STORM SEWERS OUTSIDE R/W WITH COVER 30" OR LESS
S-6	MANHOLE STANDARD NO. 1 PRECAST BASE 8"-27" PIPE
S-12	STANDARD DIMENSION FO MANHOLE FRAM & COVER CASTING (STORM SEWERS)
S-13	TYPICAL MANHOLE STEP
S-15	MISCELLANEOUS ITEMS-PRECAST MANHOLES
S-16	TYPICAL ASSEMBLY COMBINATIONS FOR PRECAST MANHOLES

AMERICAN ELECTRIC POWER

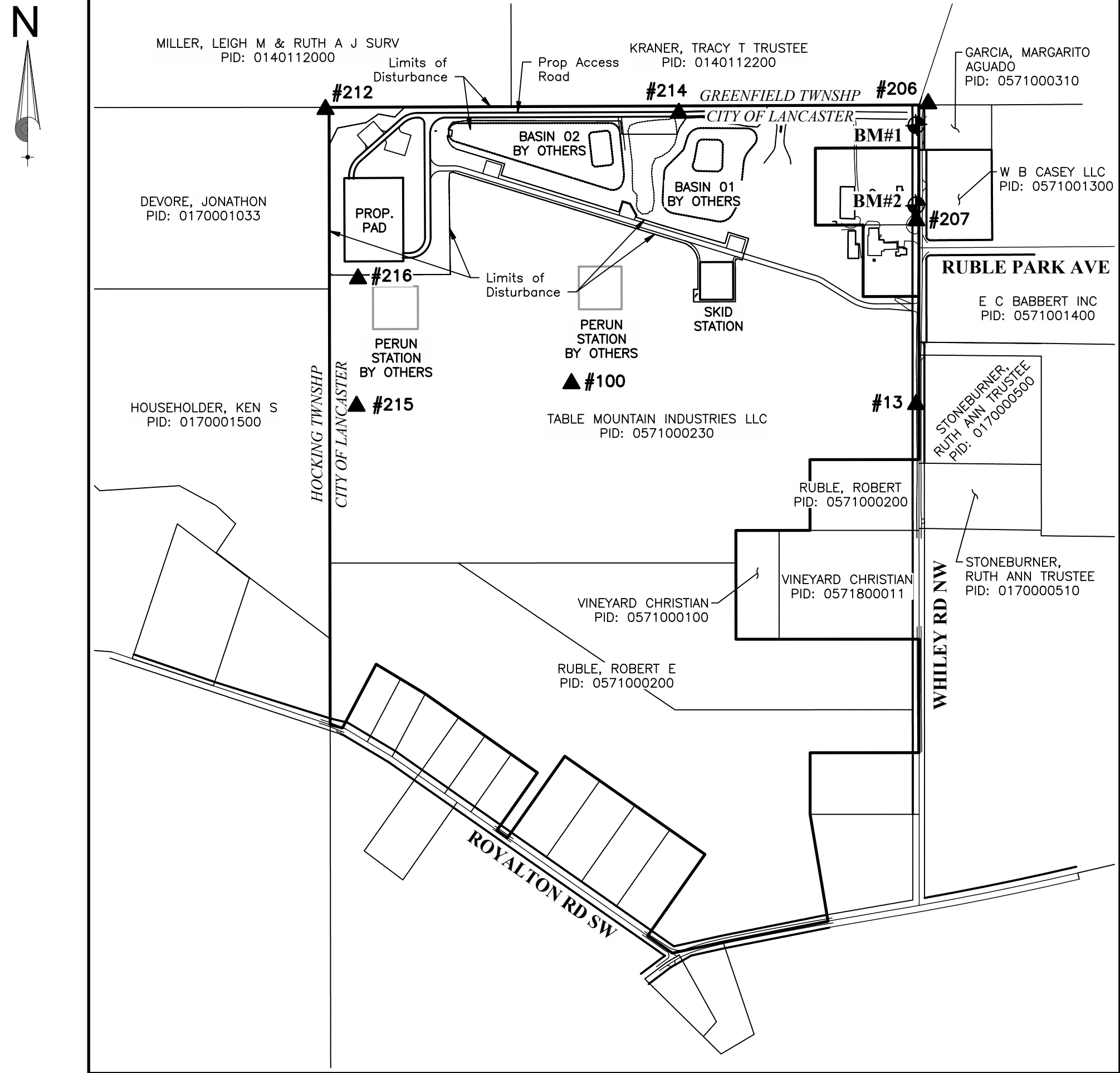
FOR OHIO POWER COMPANY

SIFFORD STATION

WHILEY ROAD

LANCASTER, OHIO 43130

LAT: N 39.726975° LONG: W 82.691847°



INDEX MAP
Not to Scale

DEVELOPER'S STATEMENT OF INTENT

Table Mountain Industries LLC
Jill Tangeman, Authorized Signatory
c/o Vorys, Sater, Seymour and Pease
52 East Gay Street Columbus, OH 43215
Phone: 614-464-5608

I hereby state that these plans have been prepared with my knowledge and concurrence and represent my intent and interests.

Jill Tangeman, Authorized Signatory Date

STATION ADDRESS

WHILEY ROAD
LANCASTER, OH, 43130
SITE COORDINATES: 39.726975, -82.691847

A.E.P. CONTACTS

ANDREA J. KING - CIVIL ENGINEER (614) 933-2048
DENISE BINFORD - PROJECT MANAGER (614) 202-0579
DAVID SAMS - TCR (614) 698-9445

Ohio Utilities Protection Service

Call 811
before you dig

NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#

SCALE: AS NOTED
DR: LAM
WOF: T10299228
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

ENGINEER

EMH&T Inc.
5500 NEW ALBANY ROAD
COLUMBUS, OHIO 43054
TEL: (614) 775-4500
FAX: (614) 775-4800
JAMES PELTIER

OWNER / APPLICANT:
AMERICAN ELECTRIC POWER
OHIO POWER COMPANY

SURVEY CONSULTANT:
CLIENT PROVIDED DATA

FLOOD INFORMATION:
THE PROPERTY DOES NOT LIE IN
A SPECIAL FLOOD HAZARD AREA.

SITE DATA TABLE

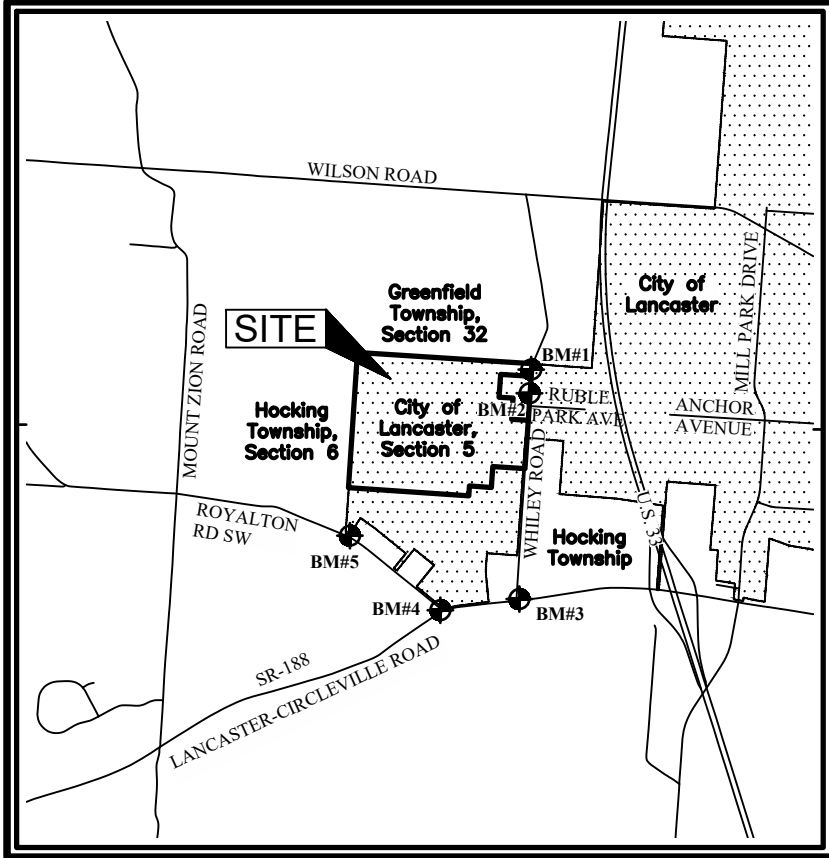
Site Total:	128.32 Ac
Disturbed Area:	20.00 Ac
Pre-Developed Impervious:	0 Ac
Post-Developed Impervious:	12.11 Ac

OLD DWG #: STD DWG #:
THIS DRAWING IS THE PROPERTY OF AMERICAN ELECTRIC POWER AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE COPIED, REPRODUCED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF AMERICAN ELECTRIC POWER, OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.

SIFFORD STATION

COVER SHEET

SCALE: AS NOTED	DR: LAM	ENG: AJK	CH: BJB
WOF: T10299228	APPD: IRV	DATE: 10/22/2021	DWG NO: E-1220
1 RIVERSIDE PLAZA COLUMBUS, OH 43215			R 0



VICINITY MAP
Not to Scale

CITY OF LANCASTER APPROVALS

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

PAUL MARTIN, SERVICE-SAFETY DIRECTOR DATE

GREG HINTZ, SUPT., DIVISION OF TRANSPORTATION DATE

MIKE NIXON, SUPT., DIVISION OF WATER POLLUTION CONTROL DATE

DAVID WARD, CHIEF, DIVISION OF FIRE DATE

MITCH NOLAND, P.E., CITY ENGINEER DATE

KURT WAITE, GENERAL MANAGER, MUNICIPAL GAS DATE

ANDY GUNDELFINGER, DISTR. SUPV., DIVISION OF WATER DATE

SEAN FOWLER, SUPT., SANITATION DEPARTMENT DATE

PREPARED BY:

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

1221-E

ON

OWG

GENERAL NOTES

001

UTILITY OWNERS: The following utilities and owners are located within the work limits of the project:

WATER:

City of Lancaster
Division of Water
225 N. Memorial Dr.
Lancaster, OH 43130
ATTN: Andy Gundelfinger
740-687-6631

SEWERS: SANITARY
City of Lancaster
Water Pollution Control
800 Lawrence St.
Lancaster, OH 43130
ATTN: Mike Nixon
740-687-6664

ELECTRIC:
AEP of Ohio
1 Riverside Plaza
Columbus, OH 43215
ATTN: Michael Trout
740-689-4713
ATTN: Robbie Shields
740-501-8030

STORM

City of Lancaster
Transportation Department
815 Lawrence St.
Lancaster, OH 43130
ATTN: Greg Hintz
740-687-6668

TELECOMMUNICATIONS AND SIGNALS:

AT&T
140 W. Wheeling St.
Lancaster, OH 43130
ATTN: Christopher Morris
614-302-1197
ATTN: Charles Johnson
740-532-9943

City of Lancaster
Transportation Department
815 Lawrence St.
Lancaster, OH 43130
ATTN: Tim Deltz
740-687-6668

City of Lancaster
Information Technology Department
121 E. Chestnut St., Suite 50
Lancaster, Ohio 43130
ATTN: Mark Starr
614-352-3765
740-687-6645

NATURAL GAS:

City of Lancaster
Municipal Gas
1424 Camp Ground Rd.
Lancaster, OH 43130
ATTN: Hank Topf
740-687-6670

CABLE TV:

Charter Communications (Spectrum)
400 Atlantic Street, 10th Floor
Stamford, CT 06901
ATTN: Brian Amende
Brian.Amende@charter.com

002

UTILITY LOCATIONS AND NOTIFICATION: The locations of the underground utilities shown on the plans are as obtained from the owners of utilities as required by the Ohio Revised Code, Section 153.64. Locations and elevations of existing underground utilities and structures shown in the plans are approximate only. It shall be the responsibility of the Contractor to determine their exact location and elevation when working in their vicinity.

Construction, support, protection, and restoration of all utility lines, services, and appurtenances, whether shown on these plans or not, shall be the responsibility of the Contractor. Where potential grade conflicts might occur with existing utilities, the Contractor shall uncover such utilities sufficiently in advance of location in order that the exact elevation may be determined and the necessary adjustments made. Cost of the above work shall be included with the price bid for the pertinent item, unless otherwise noted on the plans. Estimated quantities shown on the plans for water and sanitary sewer relocations are for those items actually called for and shown on the plans.

At least forty-eight (48) hours prior to commencing any construction operations involving any excavating, auguring, boring, or other earth disturbing activity, or the demolition of any structures, the Contractor shall notify the registered utility protection service, Ohio Utility Protection Service (OUPS) (1, 800, 362, 2764) and the owners of each utility facility shown in the plans. The Contractor is responsible for making a separate contact with all non-OUPS registered utilities with facilities in the project area. Throughout the term of the project, the Contractor shall make additional contact with OUPS and non-registered utilities as required by the Ohio Revised Code, Section 153.64.

Any existing utility or appurtenance damaged by the Contractor shall be repaired by the Contractor, or at the Contractor's expense.

003

SURVEYS: The Contractor shall be responsible for performing all detail surveys needed for construction. The City of Lancaster has established benchmarks and control points from which this work may be performed.

004

MODIFICATIONS: Any modifications or changes to the work, as shown on the drawings, must have prior written approval by the City Engineer, City of Lancaster, or his designee.

005

SAFETY: The Contractor shall solely be responsible for complying with all federal, state, and City safety requirements, together with exercising precautions at all times for the protection of persons, including employees and property. It is also the Contractor's sole responsibility to initiate, maintain, and supervise all safety requirements, precautions, and programs in connection with the work.

The Contractor shall be solely responsible for securing the project site from the general public both during and after his working hours. The Contractor shall provide, erect and maintain all lights, signs, fences or any other safety devices to prevent unauthorized personnel from hazardous or dangerous conditions on the project site. The cost of such work shall be included in the various items bid for furnishing and installing materials on this project.

006

REVIEW OF PROJECT SITE: Prior to bidding the Contractor shall, by personal examination, satisfy himself as to the location of the proposed work and to acquaint himself thoroughly with the existing conditions and the difficulties that are likely to be encountered in the performance of the proposed work.

007

PROTECTION OF SURVEY MONUMENTS: The Contractor shall carefully preserve benchmarks, property corners, reference points, and any other survey monuments or markers. If the actions of the Contractor, his employees, or his sub-contractors result in destruction of or damage to any of the above items, those items shall be accurately restored by a licensed surveyor at the Contractor's expense.

008

NOTIFICATION OF CONSTRUCTION: A minimum of ten (10) business days prior to commencing construction activities, the Contractor shall meet with and submit a construction schedule to the City Engineer, secure all necessary licenses and permits, and pay all inspection fees. Taps or connections into any City owned line (sanitary sewer, storm sewer, water line and/or gas line) shall not be made until the required tap permit has been issued.

The Contractor shall notify the City of Lancaster, City Engineer's Office a minimum of two (2) days before beginning work, holidays and weekends excluded. When the contractor suspends operations for two (2) or more working days, he shall notify the City Engineer a minimum of twenty_four (24) hours before resuming work.

009

010

EXCAVATION: All excavation on this project is unclassified. The Contractor shall make all excavation of whatever nature necessary for construction of and sewers and their appurtenant structures included in this project.

011

DELIVERIES TO JOB SITE - HAUL ROUTES: Deliveries of materials and equipment to and from the job site shall be routed to maximize the use of state and federal routes and to minimize the use of City streets. No less than two (2) weeks prior to commencement of construction, the Contractor shall submit for approval a Haul Route letter to the City Engineer designating those routes to be used. If any changes are needed to the approved route, the Contractor shall submit a revision to the Haul Route letter a minimum of two (2) working days prior to the delivery date. The Engineer shall have the right to limit the route of delivery, total tonnage per vehicle per delivery, or the hours such deliveries may be made.

012

013

OPERATION OF FIRE HYDRANTS AND WATER VALVES: The Contractor shall not operate, open, close, or otherwise use any City owned fire hydrant or water line valve without the written authorization of the Superintendent, Division of Water. Any unauthorized taking of water from the City distribution system will result in prosecution for the theft of a public utility. Any damage caused to the fire hydrants or water valves as a result of the Contractor's operations will be repaired by Division of Water forces at the Contractor's expense.

The Contractor is hereby notified that the use of fire hydrants will not be permitted on this project. The Division of Water will provide the Contractor potable water at the Miller Park Water Treatment Plant, 225 North Memorial Drive, in bulk at a rate of \$0.015 per gallon. The Contractor may make arrangements for obtaining water at 740-687-6631.

The cost of obtaining and/or providing water shall be included in the Contractor's various prices bid for associated items in the Project unless otherwise provided for as a separate bid item.

014

015

DISPOSAL OF EXCESS EXCAVATED MATERIAL: The Contractor shall be responsible for locating a site for the disposal of excess excavated material. Before disposing any such material, the Contractor shall have the disposal site approved by the City Engineer.

The Contractor is notified that the City's Flood Damage Prevention Ordinance regulates the placement of fill in special flood hazard areas, as delineated on the current Federal Emergency Management Agency Flood Insurance Rate Maps for the City of Lancaster. The Contractor shall first obtain a Development Permit

from the Engineering Department before disposing any excess excavated materials within any designated special flood hazard area. In disposing of excess excavated materials in areas of special flood hazard, the Contractor shall comply with the City's Flood Damage Prevention Ordinance. If excess excavated materials are deposited in a special flood hazard area without a permit, the Contractor shall promptly remove the material from the special flood hazard area. The cost of this work shall be borne by the Contractor.

FEMA FIRM maps are available for inspection in the Engineering Department's office in the Municipal Annex, 121 East Chestnut Street, Suite 100, Lancaster, Mondays through Fridays between 7:30 AM and 4:00 PM.

016

WEEKEND AND HOLIDAY WORK: No work that requires City of Lancaster inspection shall be permitted on weekends or on City of Lancaster holidays without the prior, written approval of the City Engineer. If the Contractor needs to perform work that requires City of Lancaster inspection on a weekend day or a holiday, he shall submit his request stating the reasons for working those days to the City Engineer a minimum of forty_eight (48) hours in advance of that weekend or holiday.

017

ESTIMATED QUANTITIES: The quantities listed in the "Summary of Estimated Quantities" are approximate only, and shall be used in determining the total amounts of bids for the purpose of determining the lowest and best bidder. The quantities may be increased or diminished at the option of the Engineer.

018

SEEDING AND MULCHING: Unless otherwise specified in the construction drawings or contract documents, the seeding mixture used on this project shall be Type 1 Lawn Mixture for all areas except for permanent channels and slopes 3:1 or greater, then the seeding mixture used shall be Type 3B. These mixtures are specified in Table 659.09-1 of the ODOT CMS. All work shall be performed in accordance with CMSL Item 659.

019

SHOP DRAWINGS AND MATERIAL CERTIFICATIONS: Twenty (20) business days prior to beginning work, the Contractor shall submit the sources for all materials to be incorporated into the Project to the City Engineer. When required in CMSL or by plan note, the Contractor shall also provide material supplier's certification that the materials he/she supplies for the Project meet the pertinent material specification. The Contractor shall also submit shop drawings on all precast items or other items constructed or fabricated wholly or in part off the job-site that will be incorporated into the Work. No materials shall be installed until the City Engineer has approved the source, the material certification and/or the shop drawings for it.

020

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022

PAVEMENT CLEANING: The Contractor is hereby notified that it is his/her responsibility to keep streets and roads clear of all mud, dirt, gravel, and/or stones of any kind deposited as a result of his/her operations. Pavements shall be cleaned at the end of each work day and at any other time as the Engineer directs. Failure to comply with this note may result in the Contractor's prosecution under L.C.O. 902.06, 902.08, and/or 902.09. In addition, upon the Contractor's failure to adequately clean the pavement upon notice from the Engineer, the City may clean the pavement and charge the Contractor for the cost of this work.

023

WORK LIMITS: The Contractor shall confine his activities to the Project Site under development, the existing right_of_ ways, and/or applicable construction/permanent easements. The Contractor shall not trespass upon other private property without the written consent of the owner. All damage to private properties shall be repaired by the Contractor to the Engineer's satisfaction. The Contractor shall bear the cost of this Work.

024

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026

MISCELLANEOUS WORK: All items of work called for on the plans for which no specific method of payment is provided shall be performed by the Contractor and the cost of same shall be included in the price bid for the various related items.

027

FINAL CLEAN UP: The Contractor shall clean up all debris and materials resulting from his/her operations. It is also the responsibility of the Contractor to restore all public and private surfaces, structures, and/or properties that were disturbed during his/her operations to their original or better condition. The Contractor shall also restore any disturbed stream channels, swales, and/or ditches to their original or better condition. This restoration work shall include the removal of all deposits of sediment, sand, gravel, or dirt in any waterways, and any subsequent reseeded or sodding of those waterways using Type A seed mixture in conformity with ODOT CMS Item 659, as deemed necessary by the Engineer. The Contractor shall perform this Work at his/her expense, and shall not be due any extra payment.

028

CONSTRUCTION NOISE: Activities and land uses adjacent to the Project may be adversely affected by construction noise. In order to minimize the construction noise impacts, any power-operated equipment or construction-type device shall not be operated between the hours of 9:00 PM and 7:00 AM. This time restriction does not apply for generators used to maintain overnight bypass pumping and/or dewatering operations. In addition, any such equipment shall not be operated at any time in such manner that the noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment.

029

RECORD DOCUMENTS: The Contractor shall maintain in a safe place at the site two record copies of Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show both changes made during construction and the location/extent of any unforeseen conditions or obstructions. The record conditions shall be shown in red and any plan changes shall be outlined. These record documents, together with all approved Samples, will be available to the Engineer and his representatives for reference. Upon completion of the Work, the Contractor shall deliver these record documents to the Engineer.

030

INDEMNIFICATION: The contractor will indemnify and hold harmless the CITY and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property, including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, and SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

In any and all claims against the City or the Engineer, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under Workers' Compensation acts, disability benefit acts, or other employee benefit acts.

The obligation of the Contractor under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, PLANS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

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DEWATERING: Any well, well point, or other device installed for the purpose of lowering the ground water to facilitate construction of this project shall be properly abandoned in accordance with the provisions of Section 3745-9-10 of the Ohio Administrative Code or in accordance with the provisions of this plan and the written approval of the City Engineer.

Any contractor installing any well, well point, pit, or other device used for the purpose of removing ground water from an aquifer shall complete and file a well log and drilling report form with the Ohio Department of Natural Resources, Division of Water Resources, within 30 days of the well completion in accordance with the Ohio Revised Code, Section 1521.05. If the water removal device is capable of withdrawing more than 100,000 gallons per days (equivalent to 70 gallons per minute), the contractor shall file a Water Withdrawal Facility Registration form with the Ohio Department of Natural Resources, Division of Water Resources in accordance with the Ohio Revised Code, Section 1521.16.

For copies of the necessary well log, drilling report, or registration forms, please contact:

Ohio Department of Natural Resources
Division of Water Resources
2045 Morse Road, Building B-3
Columbus, Ohio 43229-6893
(614) 265-6620

The contractor shall be solely responsible to the O.D.N.R. for the registry, maintenance, and abandonment of any withdrawal device used in the construction of this project.

041

WORK IN PUBLIC RIGHTS-OF-WAY: No work shall begin within the public right-of-way until an approved Right_of_Way Construction Occupancy Permit has been obtained from the City. The Contractor shall include with his permit application his traffic control plan for working in the right-of-way. This restriction includes, but is not limited to, the closure of any street or street lanes, the closure of any sidewalks, and the placement of construction equipment, material, trailers and/or debris.

042

BACKFILL: All backfill of trenches within the pavement influence lines, as specified by Standard Construction Drawing P-27, shall be compacted granular material per CMSL Item 912, unless otherwise specified. All other trench backfill shall be Compacted Backfill per CMSL Item 911.

043

CONSTRUCTION ENTRANCE: A minimum of five (5) days prior to beginning work or moving equipment and/or materials onto the site, the Contractor shall submit to the Engineering Department an Application for a Curb Cut or Driveway Permit for his construction entrance, if applicable. All deliveries and access to the site shall be restricted to the approved construction entrance. At the time the application is reviewed, the existing curbing will be inspected and any cracks or breaks will be noted. Any curbing damaged during the project will be replaced by the Contractor at his expense.

The construction entrance shall be constructed in accordance with Standard Construction Drawing D-7 to minimize the tracking of mud, dirt, stones, and other debris from the project site onto the public street. Existing curbing removed for the project shall be replaced per City specifications. Drive entrances onto the public street shall be constructed in conformity with standards and specifications of the City.

044

INSPECTIONS: Various items of work on this project will require inspections by City personnel. Inspections will be required on, but not limited to, curb cuts and drive approaches, gas taps and line, water taps and lines, sanitary sewer taps and line, storm sewer taps and line, Stormwater detention or retention facilities, and dumpster pads and enclosures. Inspections shall be requested no less than 48 hours in advance. Inspections will only be performed Monday through Friday, excluding holidays, between 7:30 A.M. and 3:30 P.M. Failure to obtain a required inspection shall be cause for the City to deny service to the facility.

045

GENERAL NOTES

SERIES 100:

GENERAL NOTES ON EROSION CONTROL

101

102

EROSION AND SEDIMENTATION CONTROL: The Contractor is responsible for controlling soil erosion, silting and sedimentation resulting from his/her operations. It shall be the objective of the Contractor to contain erosion, silting and sedimentation to the project site insofar as practical. The location and timing of all erosion and sediment control items shall be field adjusted to prevent significant impacts on receiving waters and/or adjoining properties. Implementation of the Storm Water Pollution Prevention Plan shall continue throughout the duration of the Project or until such time that the disturbed areas have been stabilized. The Engineer may require additional activities when and where the work as set forth in the Storm Water Pollution Prevention Plan is not sufficient to control the effects of erosion, silting, and/or sedimentation in conformance with the National Pollution Discharge Elimination System Construction Storm Water General Permit.

All reasonable attempts should be made to minimize the total area of disturbed land.

Each sediment and erosion control measure shall be inspected after each rainfall and at least daily during prolonged rainfalls to determine if the measure is functioning as required. Any necessary repairs shall be made immediately.

Field adjustment for location and dimension of sediment control devices may be made as required with the approval of the City's Stormwater Inspector. The City of Lancaster also reserves the right to require additions or alterations to the sediment control devices shown in the plans when they are deemed inadequate by the City's Stormwater Inspector.

Erosion control devices removed during grading operations shall be put back in place at the end of the day or during inclement weather.

Topsoil should be removed and stockpiled from all work areas prior to the commencement of construction. Immediately after construction of ditches and/or base paving of streets, topsoil from the stockpile shall be spread over the exposed areas and graded as required to prepare areas for permanent seeding. Application of permanent seeding, agricultural line, fertilizer, and mulching material shall be as per the pertinent 659 items.

If shown on this plan, energy dissipation devices or erosion control measures at the outfall of the storm sewer system shall be installed at the time of the construction of the outfall.

Areas within fifty (50) feet of a stream shall not be disturbed unless specifically permitted in the plans. No soil, rock, debris or any other such material shall be dumped or placed into a water resource, or into such proximity that it may readily slough, slip, or erode into a water resource, unless such dumping or placing is authorized by the City Engineer and, when applicable, the U.S. Army Corps of Engineers for such purposes as, but not limited to, the construction of bridges, culverts, and erosion control structures.

Seeding should be applied the same day that grading operations are complete. All constructed slopes and cuts shall be seeded as each vertical interval of no more than ten (10) feet is completed. The Contractor shall irrigate or water as necessary to establish a healthy, erosion resistant cover crop or grass stand.

When grading operations shall cease for a period of fourteen (14) calendar days or more, temporary seeding and mulching per 659 shall be immediately applied. If an unforeseen delay is encountered, the Contractor shall begin seeding and mulching immediately when recognized.

If construction takes place from October 1 to February 28, all exposed areas are to be temporarily mulched until March 1 and then permanently seeded as previously specified. Mulching shall be applied at a rate of 100 pounds per 1000 square feet. It shall be anchored with liquid asphalt rapid curing (R.C. 70, 250 or 800) at a rate of 0.04 gallons per square yard. When applied during freezing weather it shall be cut back with a kerosene-like product. In areas where runoff water is concentrated, mulch nettings of jute, bio_degradable synthetic materials or light_weight paper shall be used to hold the mulch in place. Substitute anchoring methods may be used such as straight disk or notched disk to tuck the straw into the seeded three (3) inches horizontal to the slope.

In addition to the above described work, the construction drawings or contract documents may contain other notes, contingency quantities or construction and material specification that set forth other erosion control work to be performed on the Project. In such cases, the other work shall be performed in addition to the work described above.

The above work, where not specifically itemized in the quantities, shall be considered incidental to the earthwork and seeding work as set forth in the plans and the cost of materials, labor and equipment shall be included in the unit prices bid for earthwork and seeding and mulching.

All erosion and sediment control practices shall be removed and disposed of within thirty (30) days after final site stabilization is achieved or after the temporary practices are no longer needed. Trapped sediment shall be permanently stabilized to prevent further erosion.

All erosion control practices shall be in accordance with the Ohio Department of Natural Resource's Rainwater and Land Development manual, latest edition in force at the time of the bid opening.

103

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105

DUST CONTROL: The contractor is advised that his work will be in close proximity to occupied residences and businesses and shall make all reasonable efforts to perform the earthwork operations in a manner to minimize dust. When, in the Engineer's determination, dust is a problem, the contractor shall apply a dust palliative per item 616.

GENERAL NOTES ON DRAINAGE

601

SPRING DRAINS AND DRAIN TILE: Any springs or existing drain tile encountered during construction activities shall be reported to the City Engineer. All springs shall be drained to an outlet approved by the City Engineer. Any existing drain tile broken during excavation shall be replaced to its original or better condition, connected either to curb underdrain or storm sewer system, or be directed to an unobstructed outlet with the installation of new underdrain, as approved by the City Engineer. The City Engineer may require, at his option, to connect any/all existing or proposed drain tile found on this project to other tile, a storm sewer, or to an unobstructed outlet. In no case shall the drain be connected to a sanitary sewer or allowed to flow onto a public street.

The Contractor shall perform this work only as directed by the City Engineer. The Contractor shall not order materials for this work until directed by the City Engineer, and in the event no springs or existing drain tile are encountered, the item shall be non_performed.

EARTHWORK TRENCHING NOTES

1) Satisfactory soil materials: ASTM D 2487 "cohesive" soil classification groups having a plasticity index between 10 to 23. Free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation & other deleterious matter.

2) Unsatisfactory soil materials: ASTM D 2487 soil classification group, CH.

3) Engineered backfill & structural fill materials: satisfactory sand and/or gravel materials conforming to the requirements of ODOT Dense Aggregate Base (DGA). Specifications, well-graded and generally meet unified soil classification system. Designation: GW,SW,GW-GM, or SW-SM.

4) Provide erosion control measures to prevent erosion or displacement of soils & discharge of soil-bearing water runoff or airborne dust to adjacent dust to adjacent properties.

5) Prevent surface water & subsurface or ground water from entering any excavations, from ponding on prepared subgrades & from flooding project site & surrounding area. Protect subgrades & foundation soils from softening & damage by rain or water accumulation.

6) Excavate and install underdrains to indicated slopes, lines, depths & invert elevations as indicated on the grading plan.

7) Stockpile excavated materials acceptable for backfill along with approved fill soil materials. stockpile soil materials in designated area. place, grade & shape stockpiles to drain surface water.

8) Place and compact initial backfill of satisfactory soil material to final grade as indicated on the drawings. Carefully compact material at the bottom of the drainage swales and bring backfill evenly up on both sides and along the full length of drainage swale.

9) Place and compact final backfill of satisfactory soil material to final subgrade.

10) Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by appropriate compaction equipment and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

11) Disposal: remove surplus waste material, including trash and debris and dispose of it in soil disposal area on-site, unless otherwise authorized by tcr.

SITE/CIVIL GENERAL NOTES

1) All work and materials shall conform to the latest edition of the American Electric Power Company Document No. SS-160102, "Technical Specification for Substation and Switching Station Construction". Here in after known as the "Specification" or this site grading package, whichever is most stringent.

2) The boundary and topographic surveys were provided by the Client, for use in design of the AEP Electrical Substation in accordance with overall site development rules/regulations. The electrical substation property lines have been set w/1/2" dia. iron pins and the coordinates have been verified through NAD-83 - Ohio South Zone Datum. The vertical elevation have also be verified through NAVD-88 Datum.

3) The earthwork quantities shown are based on stripping to a depth of 6" below finished grade. Stripping quantity may be reduced based upon actual site soil conditions. However earthwork stripping shall be a minimum of 6" below finished grade. All existing gravel, topsoil and organic shall be thoroughly stripped and replaced with suitable fill material compacted in accordance with above referenced specification.

4) Elevations shown on the grading drawing are top of subgrade elevations. The existing contour interval is one (1") foot. the proposed contour interval is one (1") foot, however, elevations shown on the grading drawing for the 24' access roads to the station are to top of finished roadway surface course.

5) All disturbed areas that are not stoned shall be re-seeded in accordance with the ODOT Construction Manual, latest edition. The application rates for seeding, mulching, fertilizer and lime shall be in accordance with this specification.

6) Under all roadways, a tri-axle geogrid material (or approved equivalent) shall be installed on the prepared subgrade and fastened in accordance with manufacturer's recommendations.

7) The driveway shall be stoned with 9" of washed, crushed limestone aggregate ASTM C33, size No. 2 / No. 411 atop compacted subgrade.

8) Contractor shall contact OUPS (or similar locator service) to confirm utility locations before beginning construction, contractor shall verify locations and / or presence of existing utilities.

9) Soil material is be stockpiled and spread on the remainder of the site, disked to optimum moisture, placed, spread & compacted as suitable fill material to achieve design finished subgrade elevations.

10) Contractor is responsible for implementing and maintaining temporary & permanent drainage & erosion and sediment control measures in accordance with the SWPPP.

11) Fuels, oils and other bulk material shall not be stored at the site for longer than a 24 hour period.

12) The property does not lie within a special flood hazard area.

CM 1 2 3 4 5 6 7

3/8" INCH 4 8 12 16

TENTHS 10 20 30

INCHES 1 2 3

COVER SHEET

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STATION ENGINEERING

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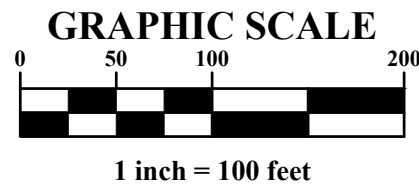
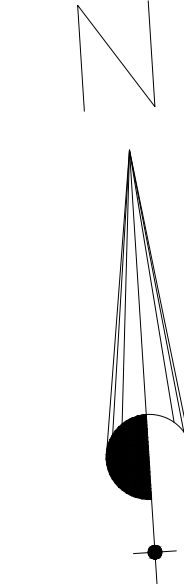
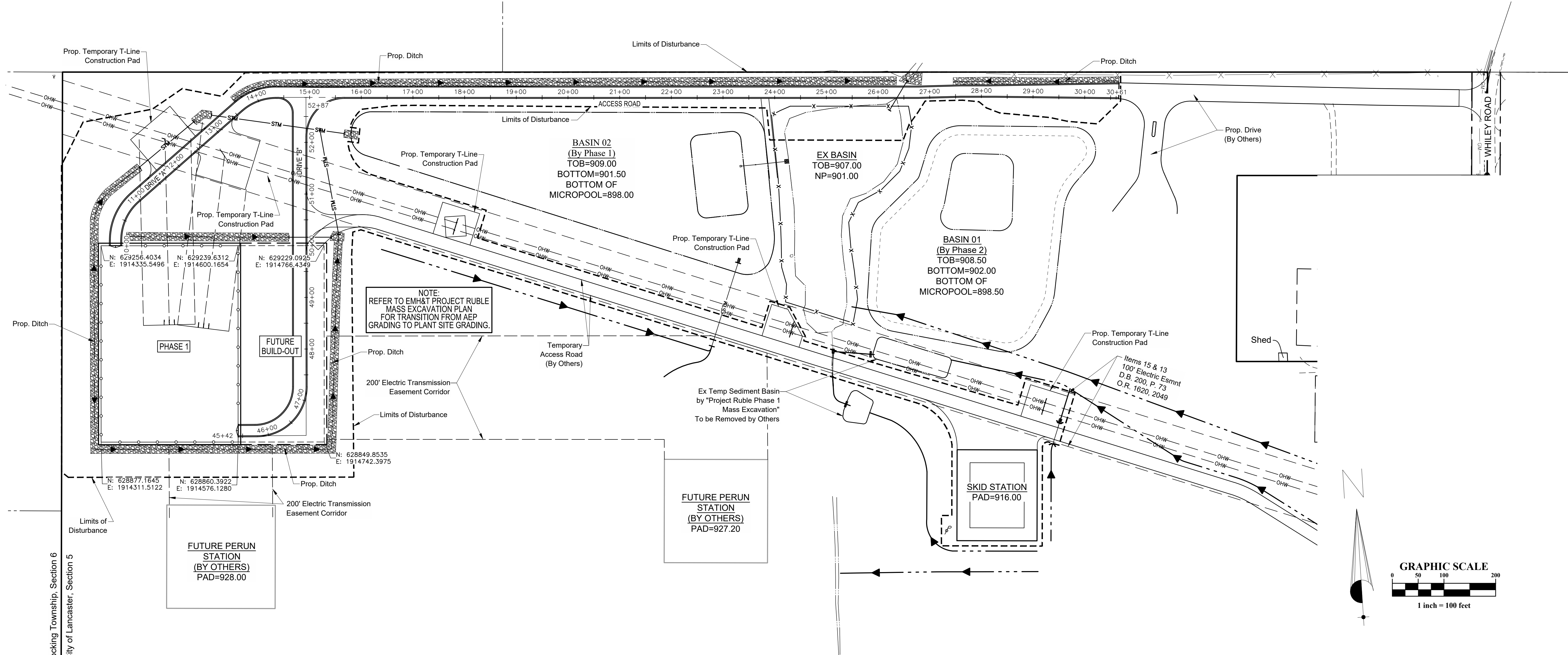
AEP G 03 X 48)

CADFILEPATH

KEN S. HOUSEHOLDER AND JANET
S. HYME-HOUSEHOLDER
62.757 AC. (DEED)
O.R. 1762, P. 929

Hocking Township, Section 6
City of Lancaster, Section 5

N03°47'31"E 2887.82'



NOTE:

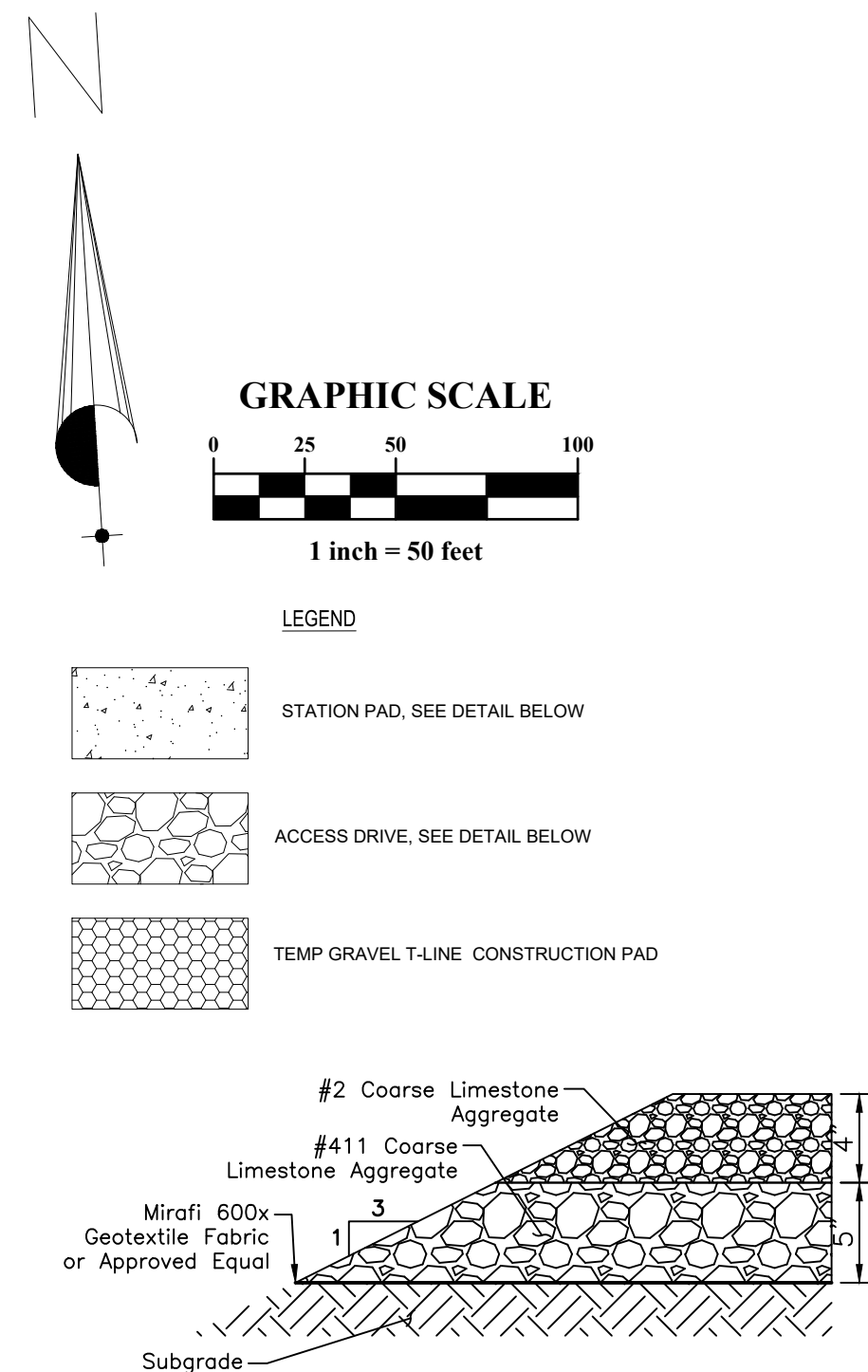
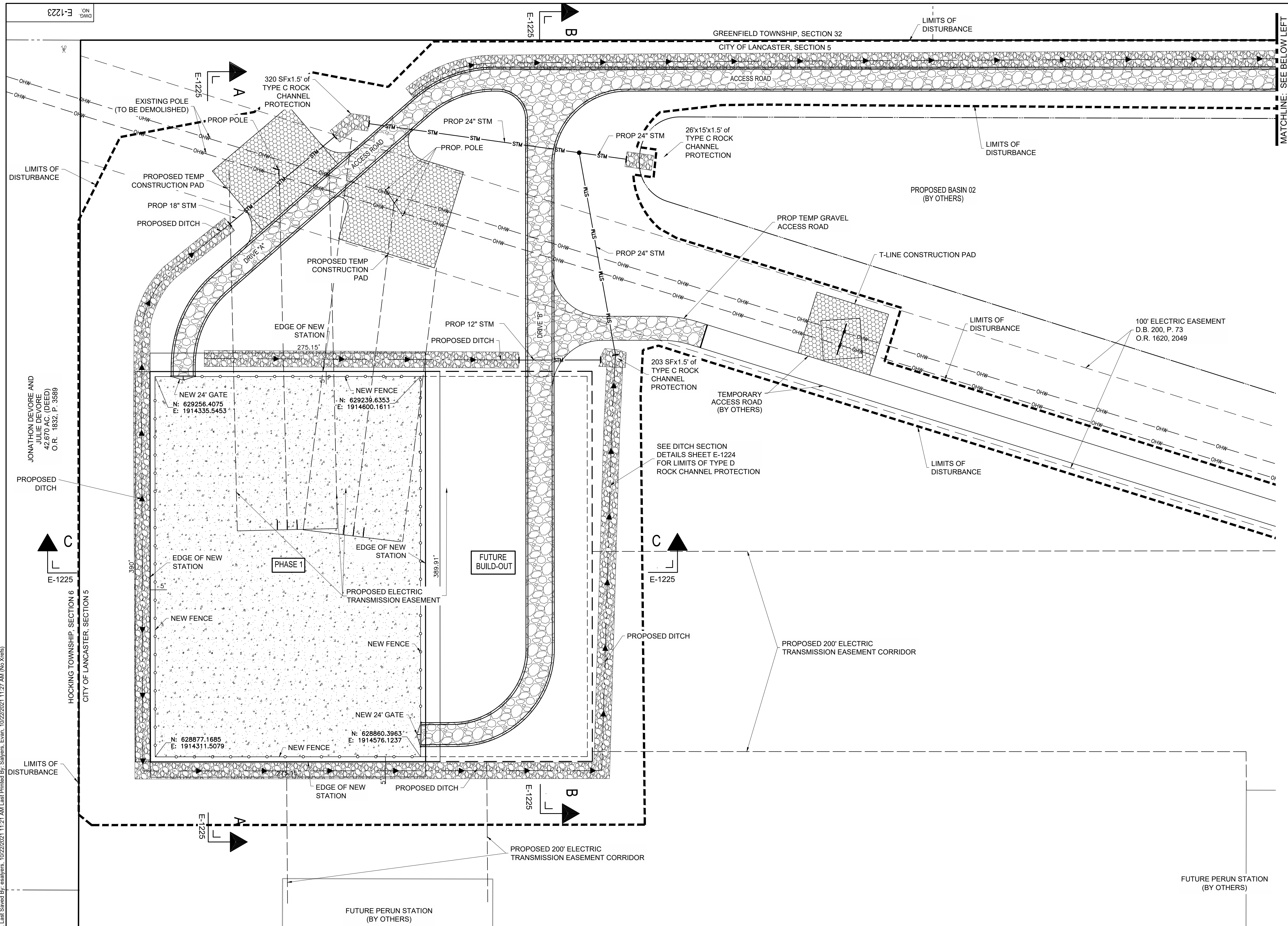
Existing information represent Post-Phase 1 Mass Grading (By Separate Plan). Anticipated sequence of work by the various projects:

1. Project Ruble - Phase 1 Mass Excavation (By Separate Plan)
2. AEP Sifford Substation Infrastructure & Mass Grading
3. Project Ruble - Phase 2 Mass Excavation (By Separate Plan)

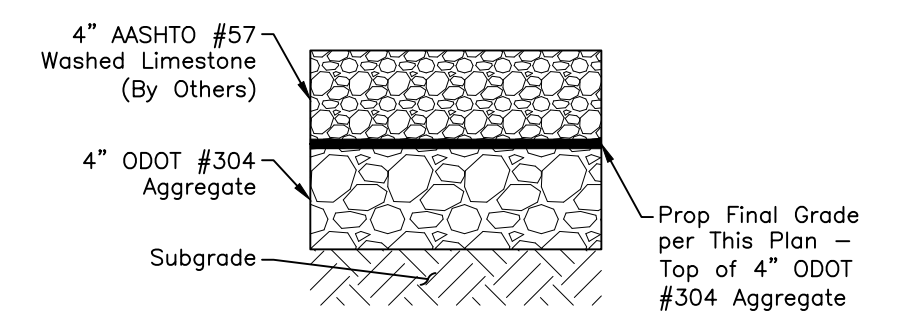
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OHIO POWER COMPANY			
SIFFORD STATION			
OHIO			
KEY PLAN			
SCALE: 1" = 100'		DR: LAM	ENG: AJK
WD#: 42669269		APPD: IRV	CH: BJL
1 RIVERSIDE PLAZA COLUMBUS, OH 43215		DWG. NO. E-1222	DATE: 10/22/2021
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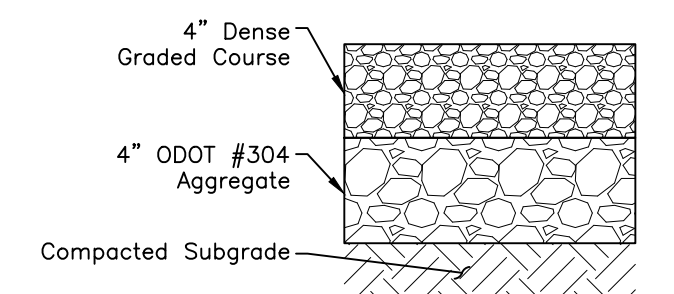




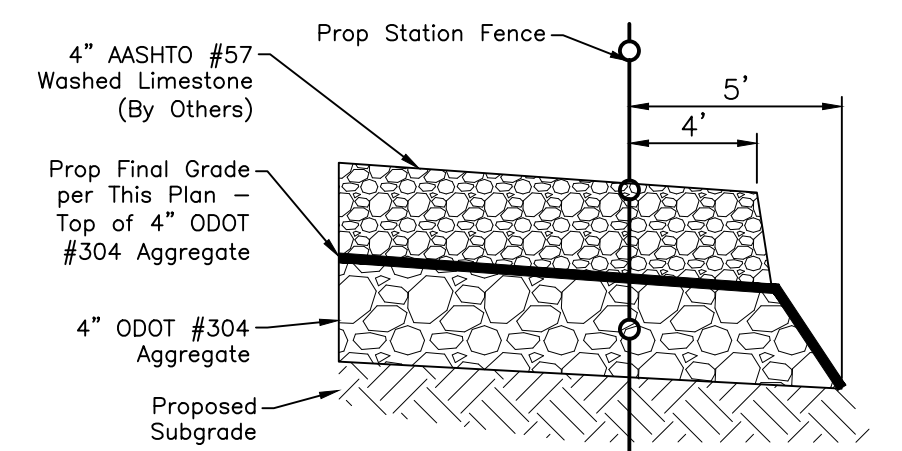
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STATION PAD DETAIL
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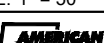


TEMPORARY WORK PAD DETAIL
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TYPICAL EDGE OF STATION PAD DETAIL
Not to Scale

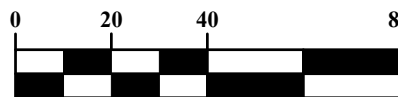
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OHIO POWER COMPANY			
SIFFORD STATION			
MT. STERLING		OHIO	
STATION LAYOUT PLAN			
SCALE: 1" = 50'	DR: LAM AWEI: 4568269	ENG: AJK CHKD: IRV	CH: BJB DATE: 10/22/2011
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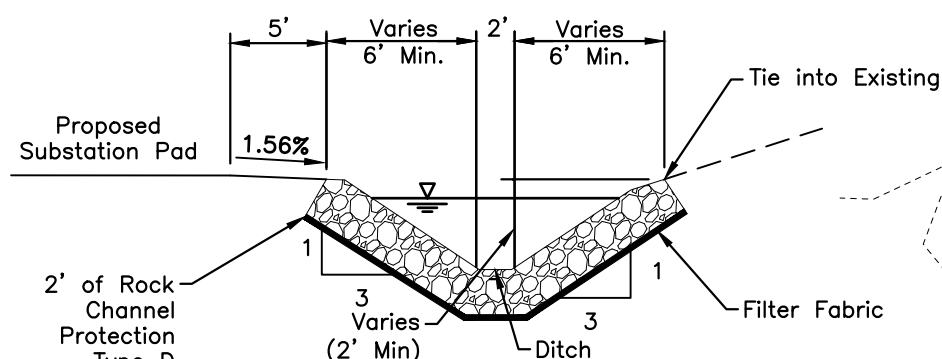
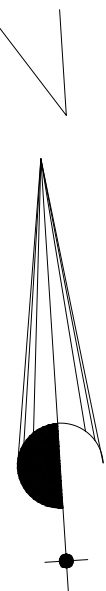
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GN
E-1224

GRAPHIC SCALE



1 inch = 40 feet

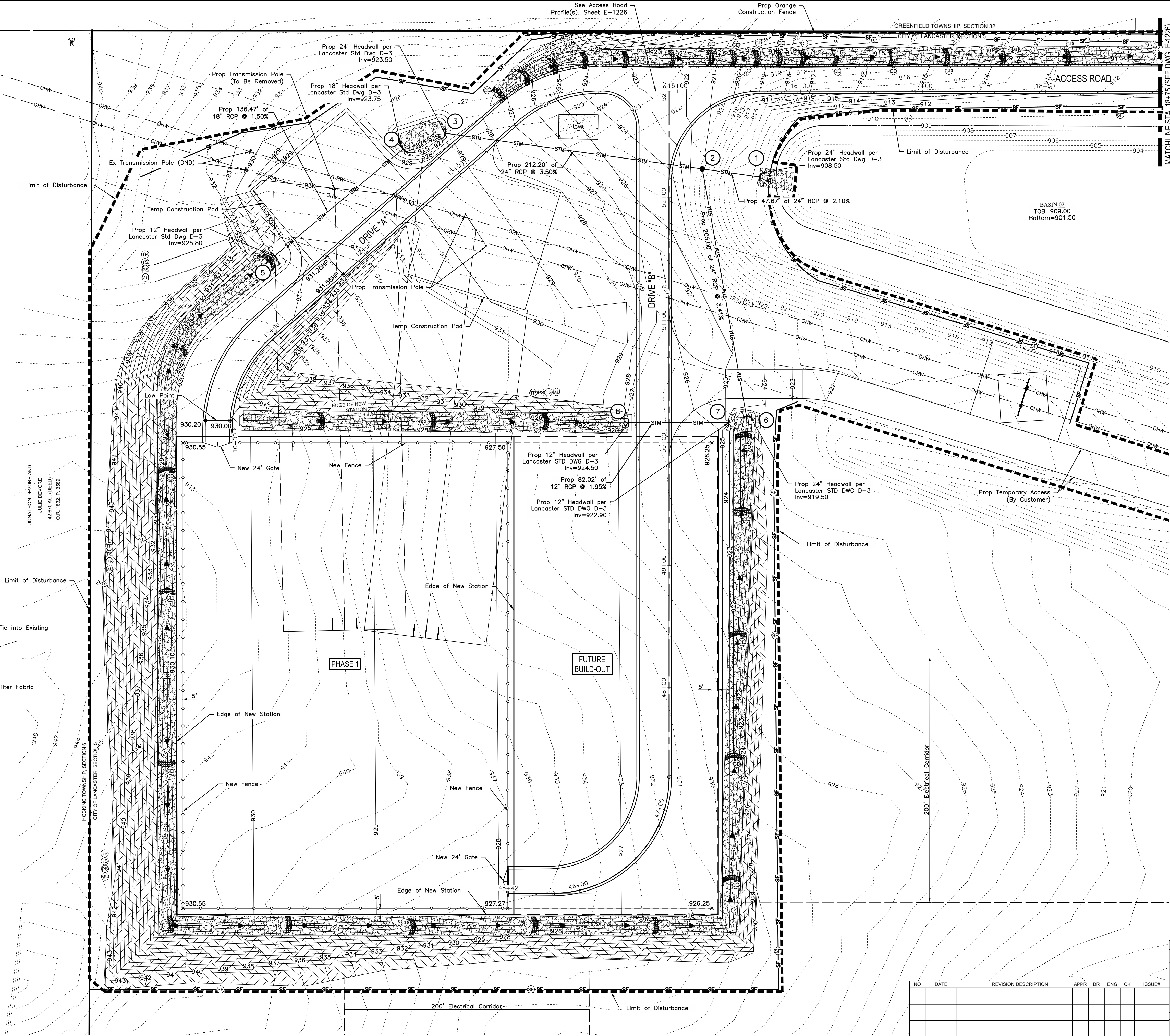


TYPICAL DITCH SECTION
Not to Scale

LEGEND

- CONSTRUCTION ENTRANCE. SEE DETAIL SHEET E-1228
- SILT FENCE. SEE DETAIL SHEET E-1228
- CONCRETE WASH-OUT AREA. SEE DETAIL SHEET E-1228
- ROCK CHECK DAM. SEE DETAIL SHEET E-1228
- 3" TOPSOIL RESPREAD
- PERMANENT SEEDING. SEE DETAIL SHEET E-1228
- MULCHING

EROSION CONTROL MATTING,
TYPE E PER ODOT ITEM 671



NOTE:

Existing information represent Post-Phase 1 Mass Grading (By Separate Plan). Anticipated sequence of work by the various projects:

1. Project Ruble - Phase 1 Mass Excavation (By Separate Plan)
2. AEP Sifford Substation Infrastructure & Mass Grading
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STANDARD DWG #:
SIFORD STATION
OHIO

GRADING PLAN

SCALE: 1" = 40'

DR: LAM
WO#: 42669269
ENG: AJK
APPD: IRV
CH: BJL
DATE: 10/22/2021

1 RIVERSIDE PLAZA
COLUMBUS, OH 43215
DWG. NO. E-1224
REV. 0

NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#

STATION ENGINEERING
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NO. 1224A E-1224A

EX. JURISDICTIONAL POND
TOB=909.00
Bottom=901.00

Temp T-line Construction Pad,
See Detail Sheet E-1223

Prop Orange
Barrier Fence

Temp T-line Construction Pad,
See Detail Sheet E-1223

Ex T-line Pole

Ex Temp Sediment Basin by "Project
Ruble Phase 1 Mass Excavation"
To be Removed by Others

ACCESS ROAD (BY CUSTOMER)

100' Electric Easement
D.B. 200, P. 23
O.R. 1620, 2049

SKID STATION
(GRADING BY OTHERS)
TO BE MODIFIED BY AEP
PAD=927.20

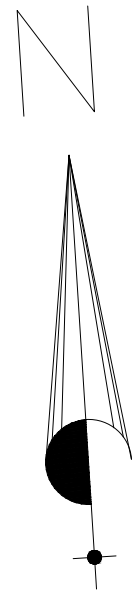
Prop Silt Fence

Limits of Disturbance
Per this Plan

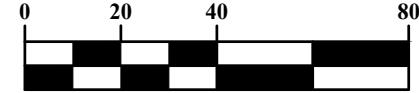
Edge of New Station

Prop Temp Metering Pole

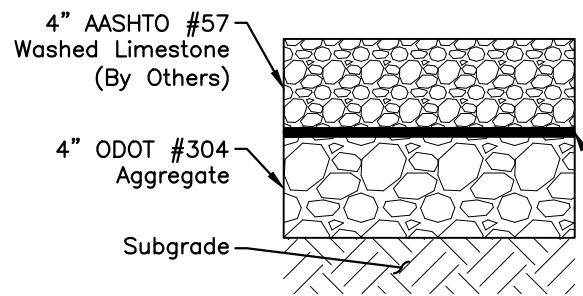
Limits of Disturbance
per this Plan



GRAPHIC SCALE



1 inch = 40 feet




STATION PAD DETAIL

Not to Scale

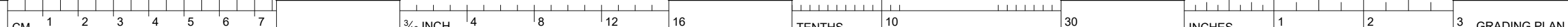
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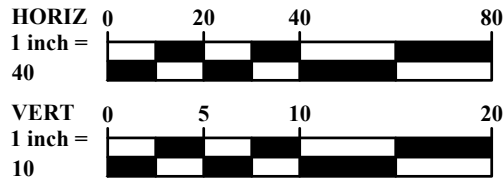
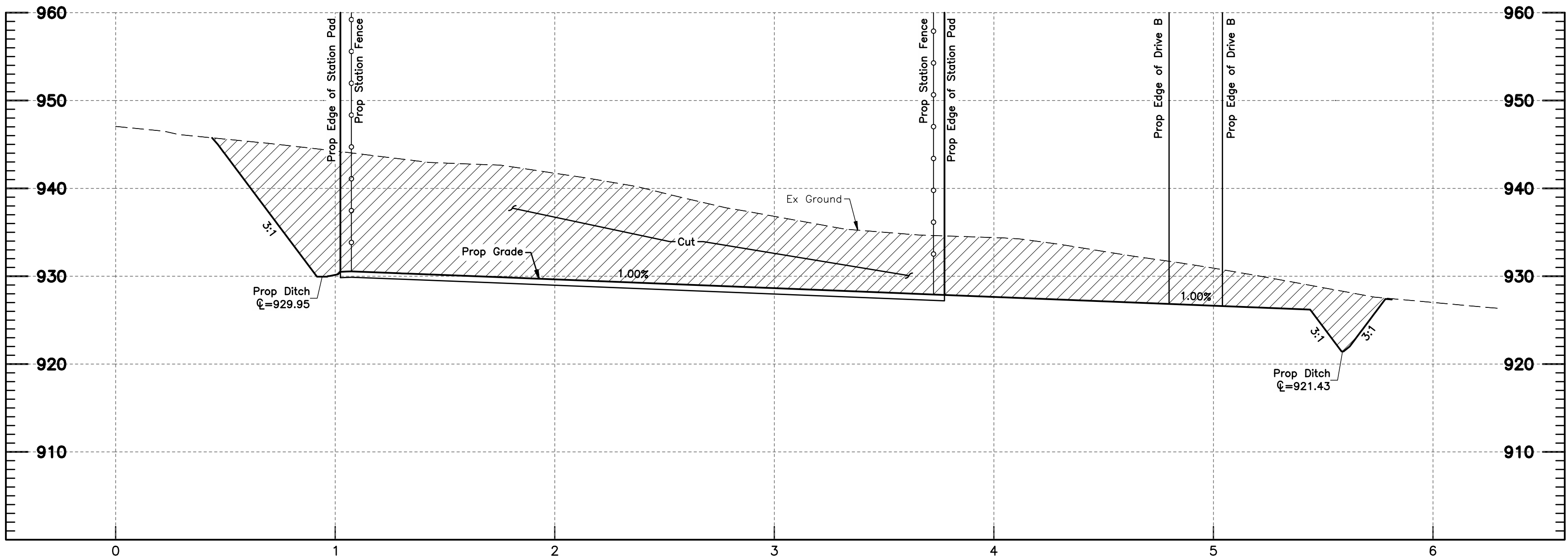
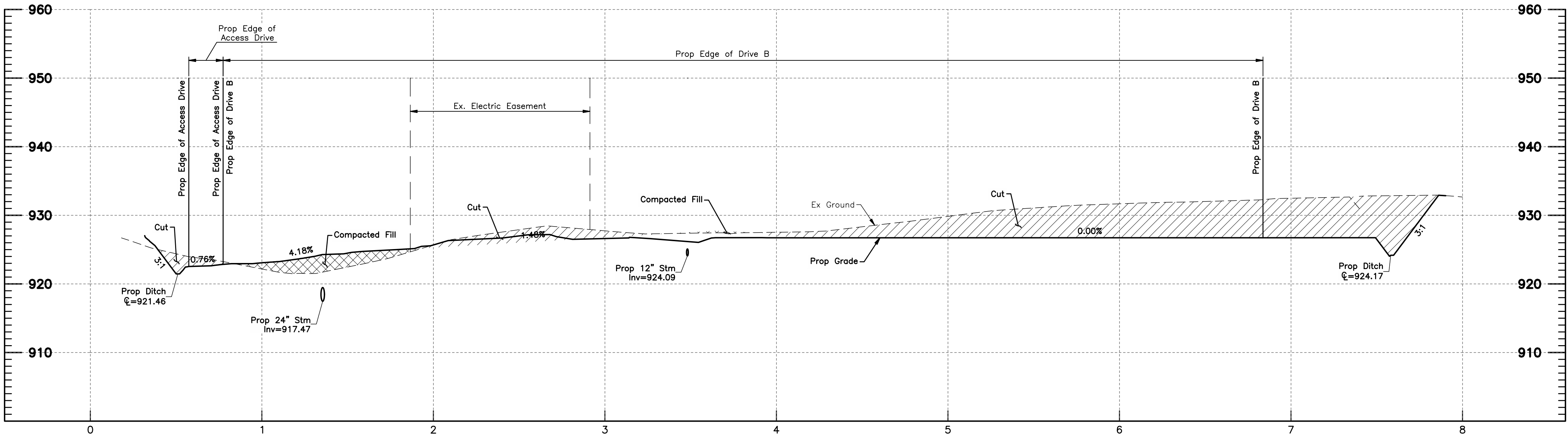
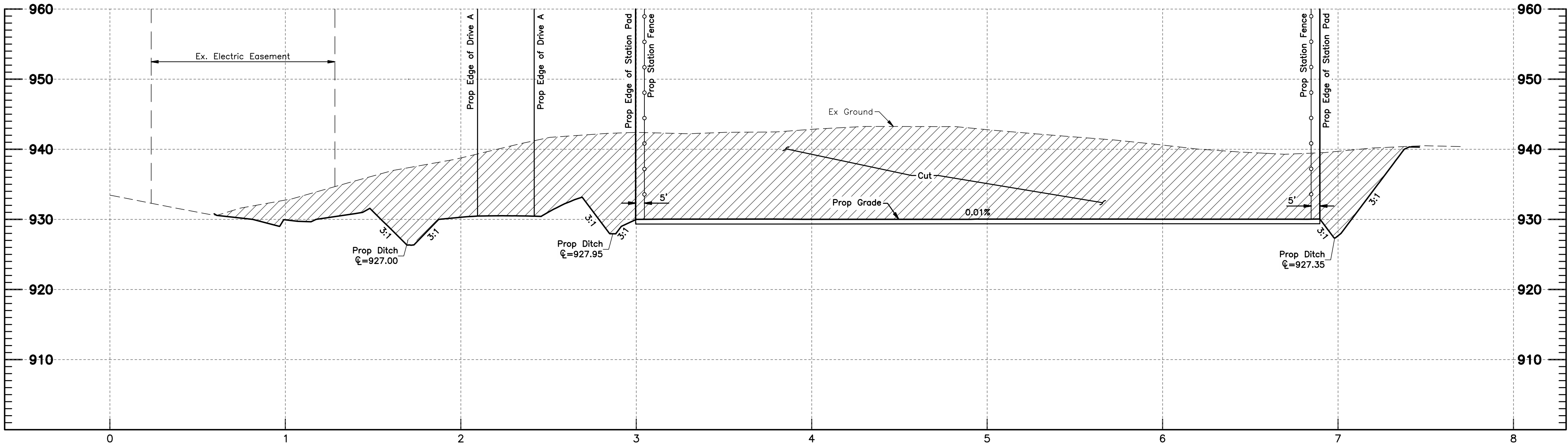
Existing information represent Post-Phase 1 Mass Grading (By Separate Plan). Anticipated sequence of work by the various projects:

1. Project Ruble - Phase 1 Mass Excavation (By Separate Plan)
2. AEP Sifford Substation Infrastructure & Mass Grading
3. Project Ruble - Phase 2 Mass Excavation (By Separate Plan)

OLD DWG #:		STD DWG #:	
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OHIO POWER COMPANY			
SIFFORD STATION			
MT. STERLING		OHIO	
GRADING PLAN - SKID STATION			
SCALE: 1" = 40'			
	DR: LAM	ENG: AJK	CH: BJB
	WO#: 42669269	APPD: IRV	DATE: 10/22/2021
	1 RIVERSIDE PLAZA COLUMBUS, OH 43215	DWG. NO. E-1224A	R V 0

NO.	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#
NO.	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#



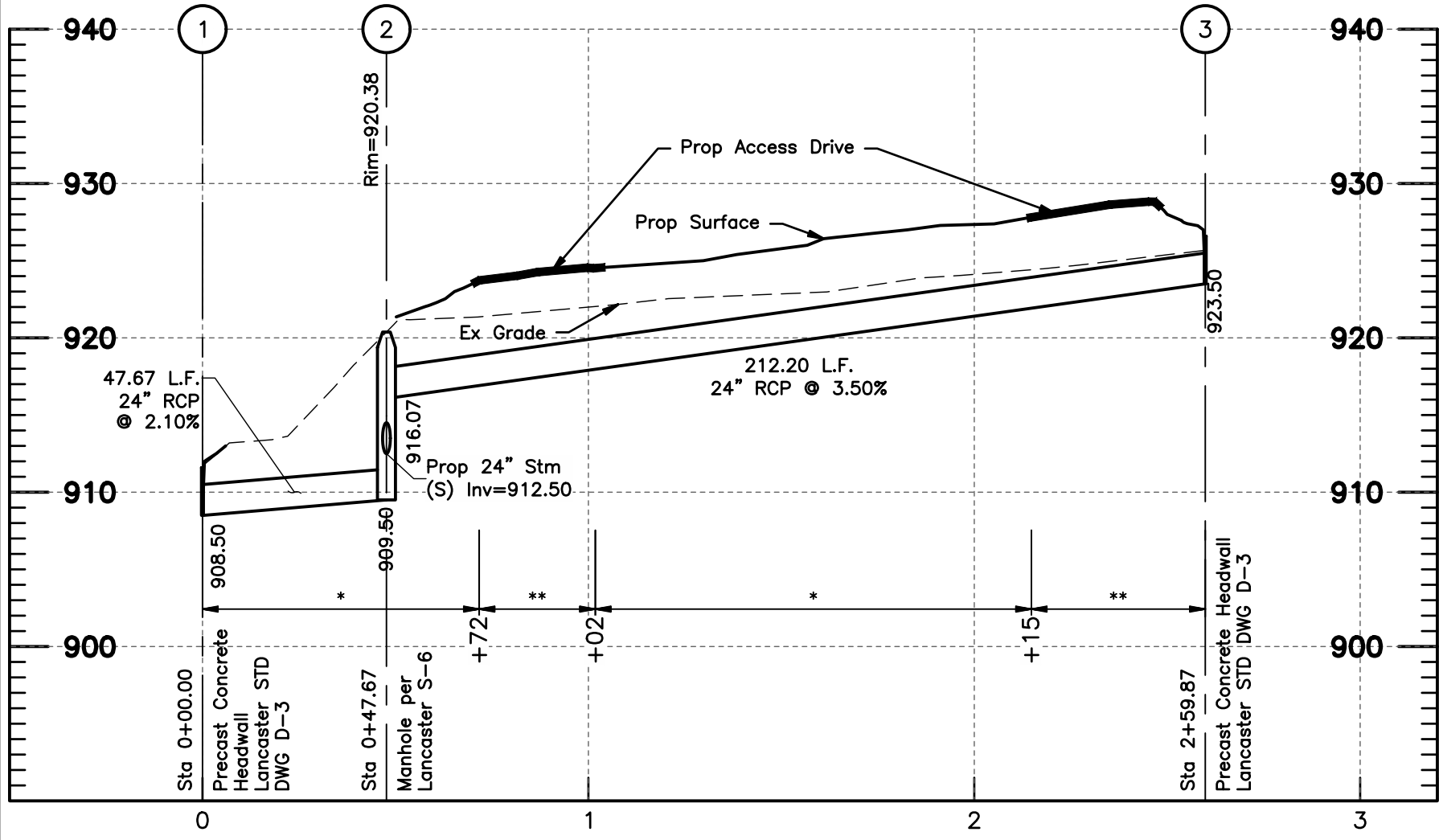


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NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#

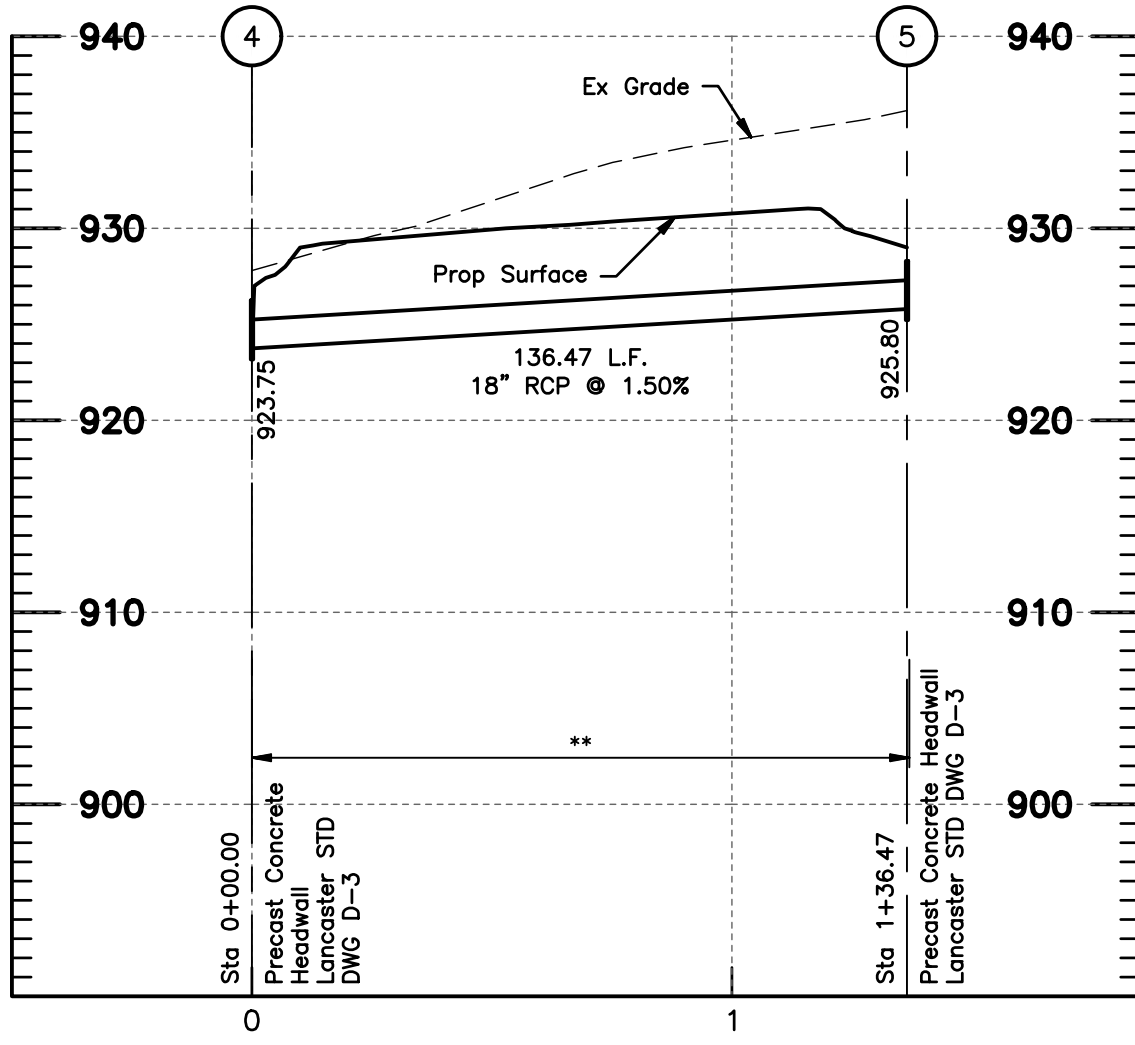
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PROJECT: SIFFORD STATION			
LOCATION: LANCASTER, OHIO			
SCALE: HORIZ: 1" = 40' VERT: 1" = 10'			
DR: LAM		ENG: AJK	
WD#: T10299228002		APPD: IRV	
1 RIVERSIDE PLAZA COLUMBUS, OH 43215		DWG. NO. E-1225	
		R V 0	

J:\2021\04\04\DWG\04Sewer\site construction\E-1225A.dwg, Last Saved By: esayers, 10/22/2021 9:43 AM Last Printed By: Sayers, Evan, 10/22/2021 11:28 AM (No Xrefs)

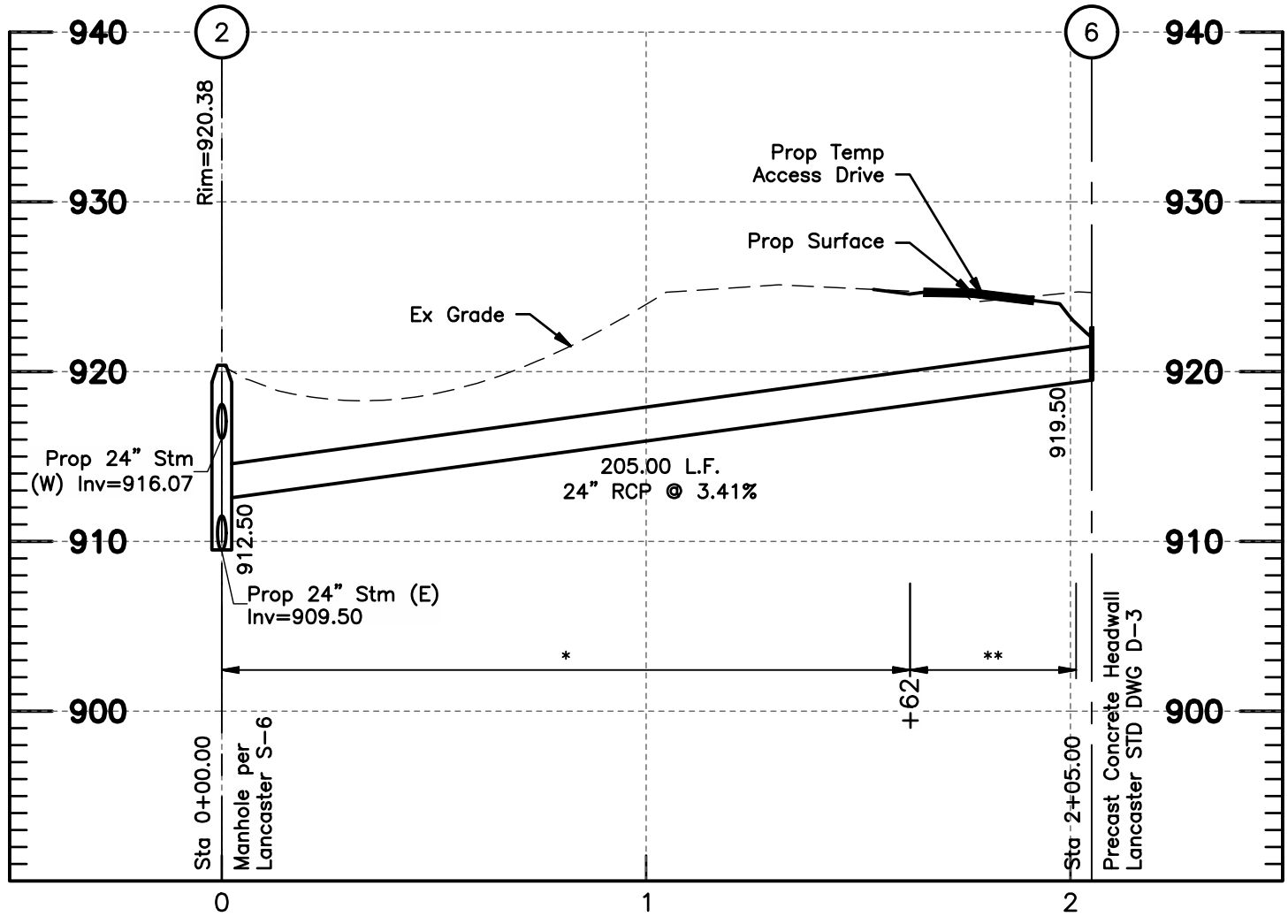
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DWG:



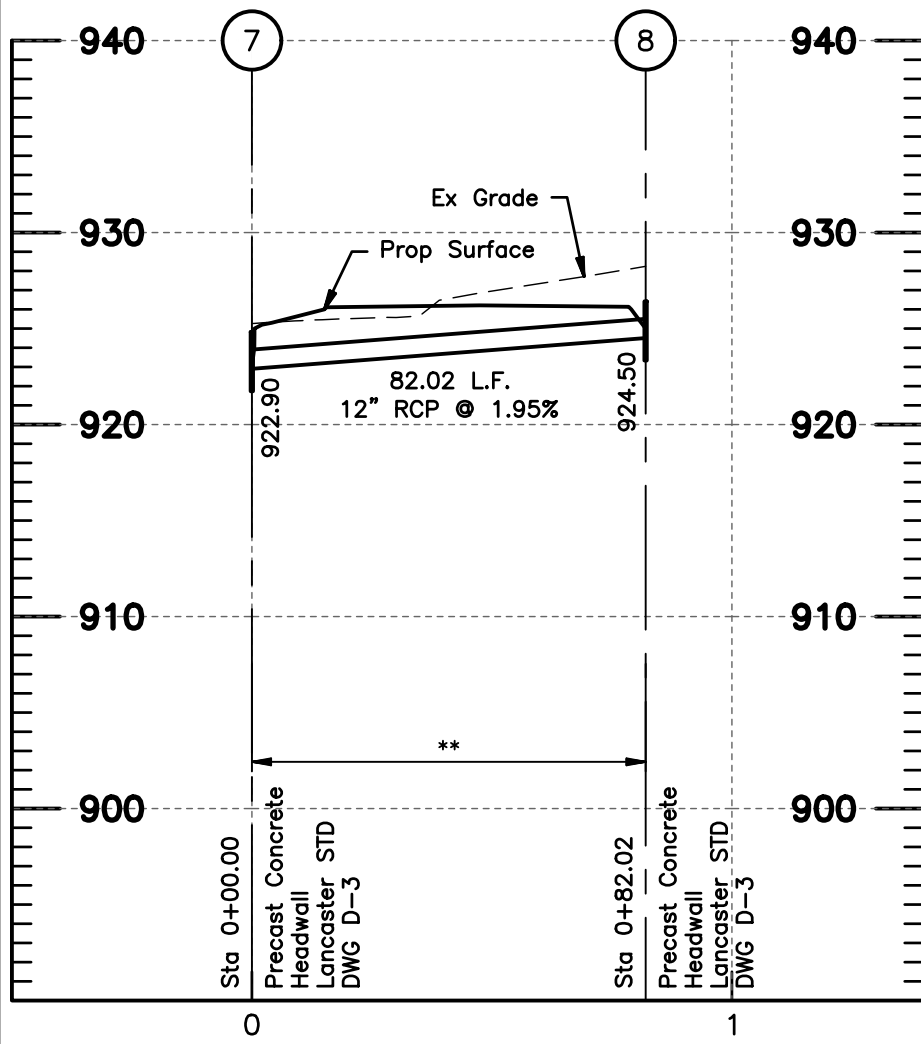
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Vert. 1"=5'



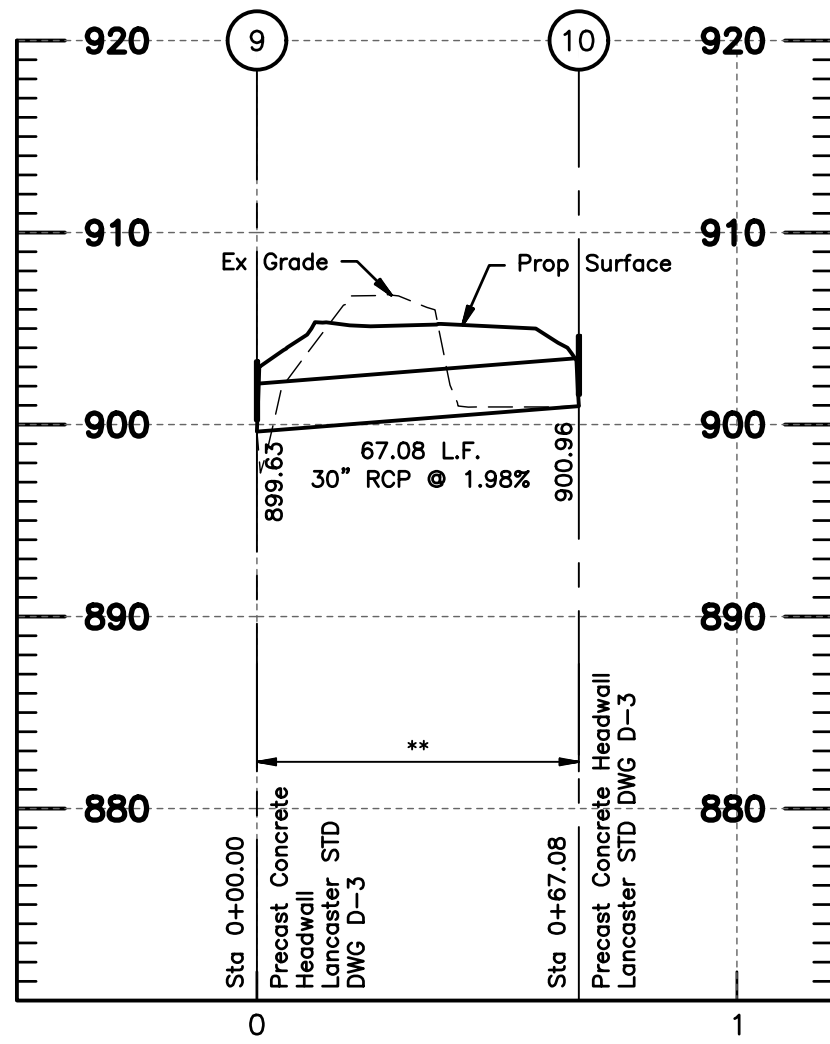
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Vert. 1"=5'



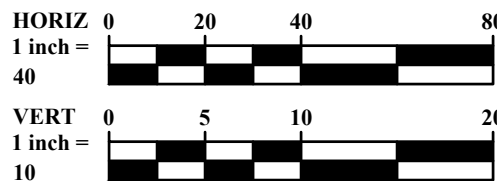
Scale: Horiz. 1"=30'
Vert. 1"=5'



Scale: Horiz. 1"=30'
Vert. 1"=5'



Scale: Horiz. 1"=30'
Vert. 1"=5'



NOTES:

- * Compacted Backfill per ODOT Item 203
- ** Compacted Granular Backfill per ODOT Item 611 & 703.11

NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#
NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#

OLD DWG #: OLD DWG		STD DWG #: STD DWG	
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SIFORD STATION			
LANCASTER OHIO			
138KV			
STORM SEWER PROFILES			
SCALE: HORIZ. 1" = 40'			
VERT. 1" = 10'			
GRADING SECTIONS		DATE: 10/22/2021	
DR: NAV	ENG: AJK	CH: BJL	
WO#: T10299228002	APPD: IRV		
1 RIVERSIDE PLAZA COLUMBUS, OH 43215		DWG. NO. E-1225A	R V 0



CADFILEPATH

AEP G (30 X 40)

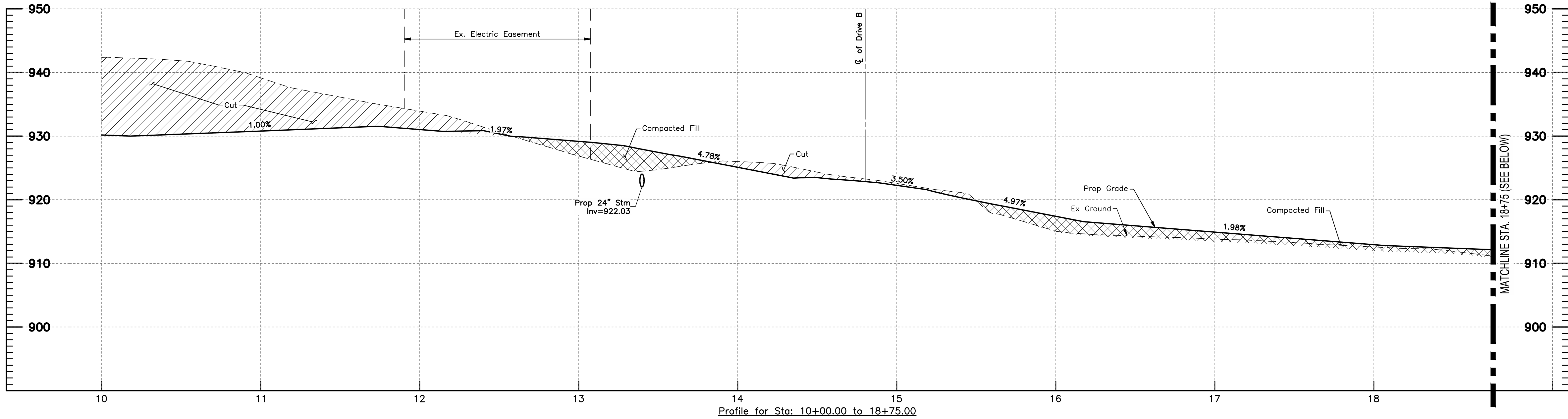
AT 11:MM

STATION ENGINEERING

ON DDMMYY

SUBSERS

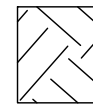
PLOTTED BY



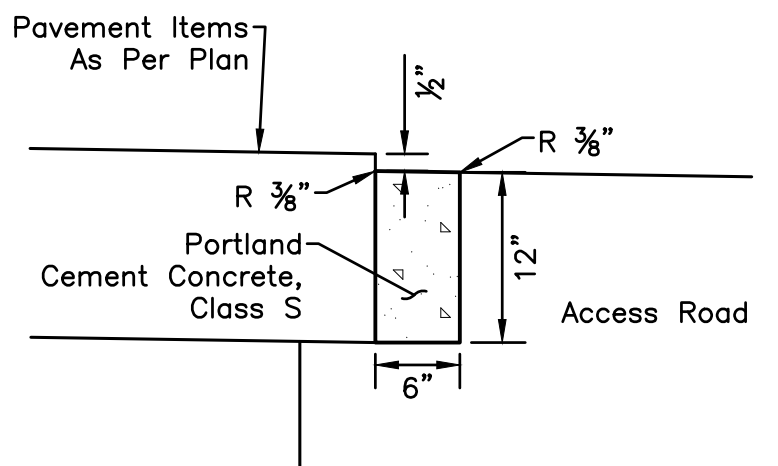
NOTE:

Existing information represent Post-Phase 1 Mass Grading (By Separate Plan). Anticipated sequence of work by the various projects:

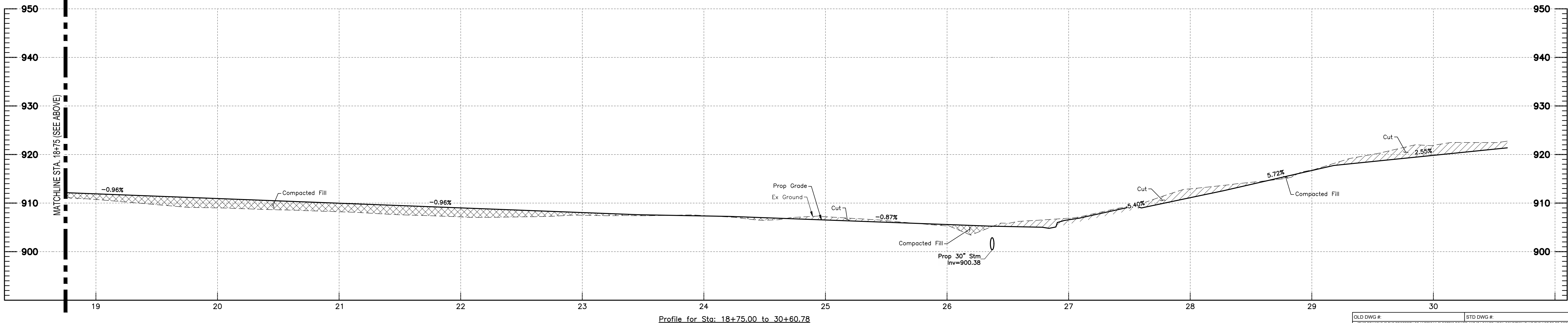
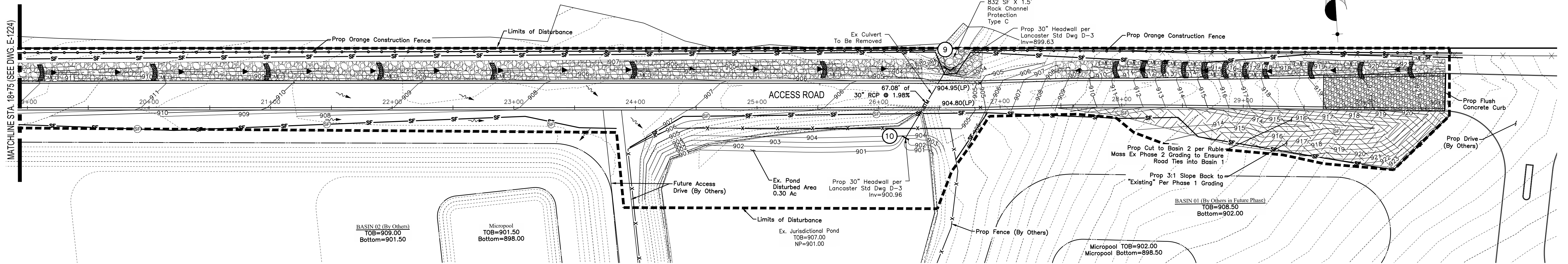
1. Project Ruble - Phase 1 Mass Excavation (By Separate Plan)
2. AEP Sifford Substation Infrastructure & Mass Grading
3. Project Ruble - Phase 2 Mass Excavation (By Separate Plan)



EROSION CONTROL MATTING, TYPE E PER ODOT ITEM 671



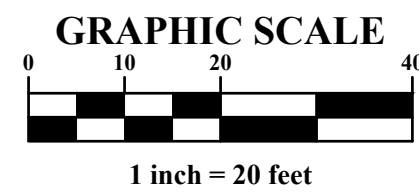
FLUSH CONCRETE CURB
Not To Scale




NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#

NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#

OLD DWG #:		STD DWG #:	
SIFFORD STATION			
OHIO			
ACCESS ROAD PLAN & PROFILE			
SCALE: HORIZ 1" = 40'			
DR: LAM	ENG: AJK	CH: BJL	DATE: 10/22/2021
WO#: 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	DWG. NO. E-1226	APPD: IRV	R 0



OLD DWG #:		STD DWG #:	
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OHIO POWER COMPANY			
SIFORD STATION			
COLUMBUS, OH 43215			
			OHIO
CULVERT AND BASIN OUTLET DETAILS			
SCALE: AS NOTED	DR: LAM	ENG: AJK	CH: BJB
	WORK: 10/26/92	APPD: IRV	DATE: 10/22/2021
		1 RIVERSIDE PLAZA COLUMBUS, OH 43215	
		DWG. NO.	E-1227
		REV.	0

GENERAL NOTES

- The height of a silt fence shall not exceed 16--inches (higher fences may impound volumes of water sufficient to cause failure of the structure).
- The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum of a 6 inch overlap, and securely sealed.
- Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches).
- A trench shall be excavated approximately 4 inches wide and 6 inches deep along the line of posts and upslope from the barrier.
- The standard strength filter fabric shall be stapled or wired to the fence, and 8 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 16 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
- The trench shall be backfilled and soil compacted over the filter fabric.
- Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

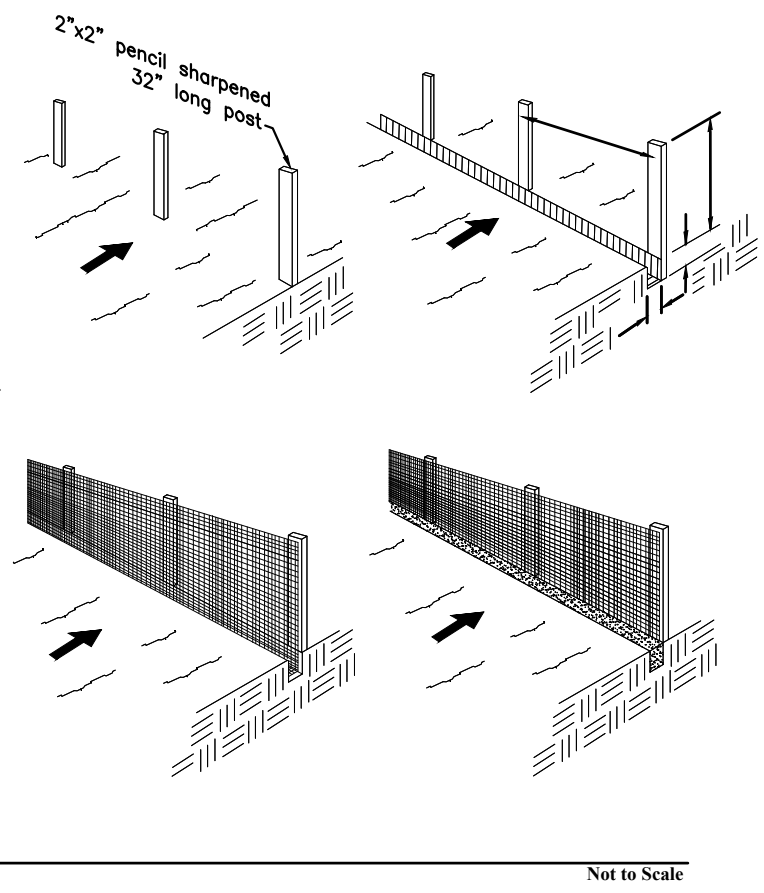
MAINTENANCE NOTES

- Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.
- Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

NOTES

- The use of straw wattles has proven to be a versatile and effective ESC BMP, especially in residential settings. Straw wattles may be substituted for silt fence. Additionally, the use of compost filter socks and compost blankets are gaining wider acceptance nationwide. They are now approved for use on all Columbus SWPPP plans and construction sites.

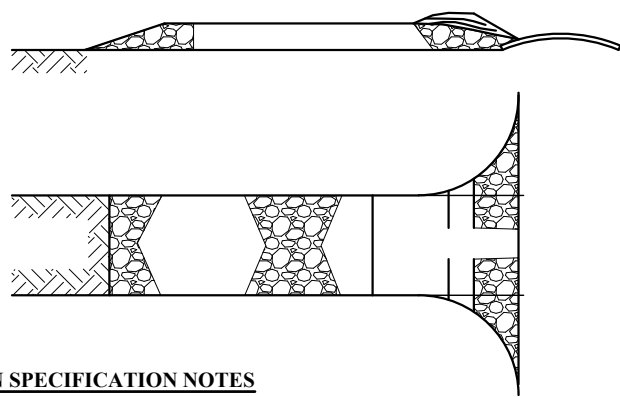
DETAIL
SEDIMENT FENCE



CONSTRUCTION SPECIFICATION NOTES

- Stone Size -- Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length -- One-Hundred (100) foot minimum.
- Thickness -- Not less than ten (10) inches.
- Width -- Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.
- Geotextile -- will be placed over the entire area prior to placing of stone.
- Surface Water -- All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted. Cost of pipe shall be included in the price bid for the Stabilized Construction Entrance.
- Maintenance -- The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing -- Wheels shall be cleaned to remove sediment prior to entrance onto public right-of-ways. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. The Contractor's bid shall include costs associated with manning and operating the wheel wash station.
- Periodic inspection and needed maintenance shall be provided after each rain.

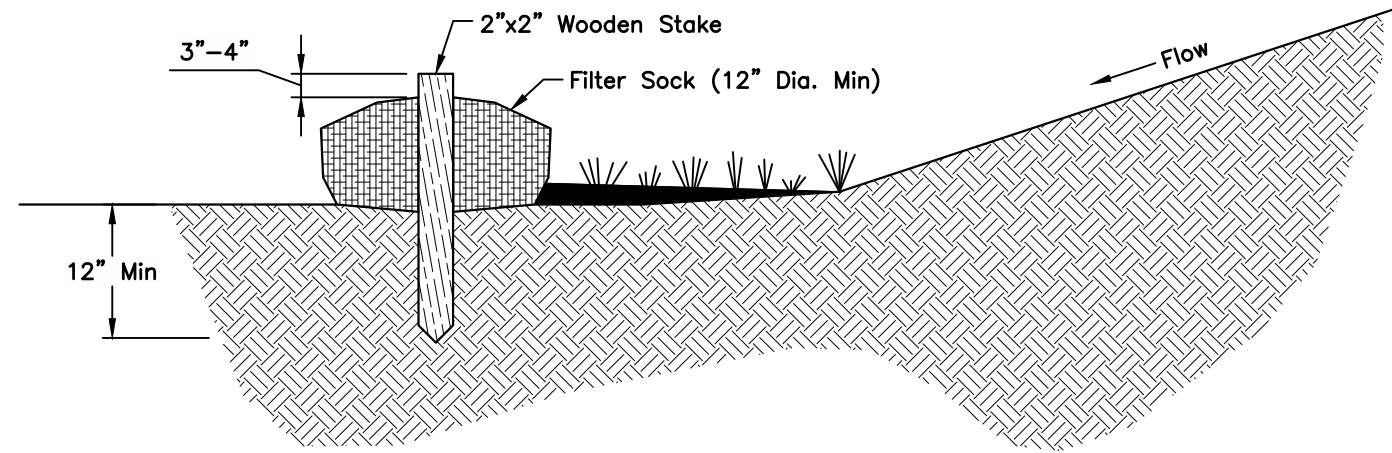
DETAIL
STABILIZED CONSTRUCTION ENTRANCE



PERMANENT SEEDING TABLE

VARIETY OF SEED	TABLE 652.5-SEED MIXTURES				
	TYPE B	TYPE C		TYPE D	TYPE L
MEDIANS, SHOULDERS (DITCH SLOPE), WATERWAYS, AND MOWABLE AREAS OF INTERCHANGE	COARSE LAWN GRASS (PERMANENT)	C-1	C-2	FINE LAWN GRASS (PERMANENT)	CUT AND FILL SLOPES (PERMANENT)
		FOR USE IN URBAN AND REST AREA LOCATIONS	FOR USE WHERE A FINE LAWN IS DESIRED		(INCLUDING BENCHES AND BIFURCATED MEDIAN)
LB PER ACRE (KG PER ha)	LB PER ACRE (KG PER ha)	LB PER ACRE (KG PER ha)	LB PER ACRE (KG PER ha)	LB PER ACRE (KG PER ha)	
KENTUCKY 31 FESCUE	65 (72.9)	45 (50.4)		20 (22.4)	
RED FESCUE (PENNLAWN)	20 (22.4)	20 (22.4)	20 (22.4)	20 (22.4)	41 (45.0)
KENTUCKY BLUEGRASS		25 (28.0)	40 (44.8)		
MERION BLUEGRASS			30 (33.6)		
HARD FESCUE MIXTURE***					63 (70.6)
WHITE DUTCH CLOVER	3 (3.4)				
ANNUAL RYEGRASS AUGUST 1 TO MAY 15 OR WEEPING LOVEGRASS MAY 15 TO AUGUST 1	7 (7.8)	7 (7.8)	7 (7.8)	7 (7.8)	12 (13.5)
	3 (3.4)	3 (3.4)		3 (3.4)	5 (5.6)

* AREAS WILL BE CONSIDERED MOWABLE WHEN SLOPES ARE 3 TO 1 OR FLATTER. TYPE C-1 SEED MIXTURE SHALL BE USED.



MATERIALS:

- Compost used for filter socks shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. They shall be derived from a well-decomposed source of organic matter and consist of a particles ranging from 3/8" to 2".
- Filter socks shall be 3 or 5 mil continuous, tubular, hdpe 3/8" knitted mesh netting material, filled with compost passing the above specifications for compost products.

INSTALLATION:

- Filter socks will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. on slopes approaching 2:1, additional socks shall be provided at the top and as needed midslope.
- Filter socks are not to be used in concentrated flow situations or in runoff channels.

MAINTENANCE:

- Routinely inspect filter socks after each 0.5" rainfall event, maintaining filter socks in a functional condition at all times.
- Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
- Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.

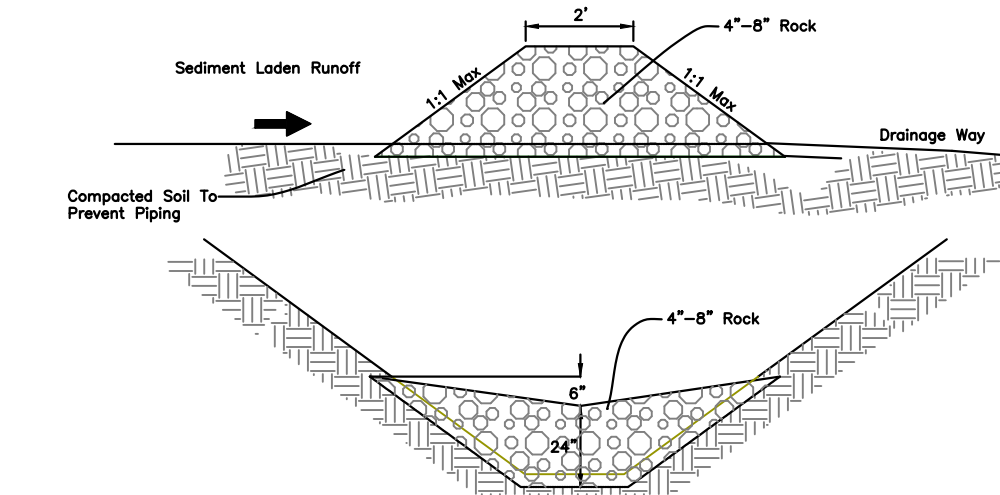
REMOVAL:

- Filter socks will be dispersed on site when no longer required in such as way as to facilitate and not obstruct seedings.

NOTE: Sediment Fence is an approved equal.

COMPOST FILTER SOCK DETAIL

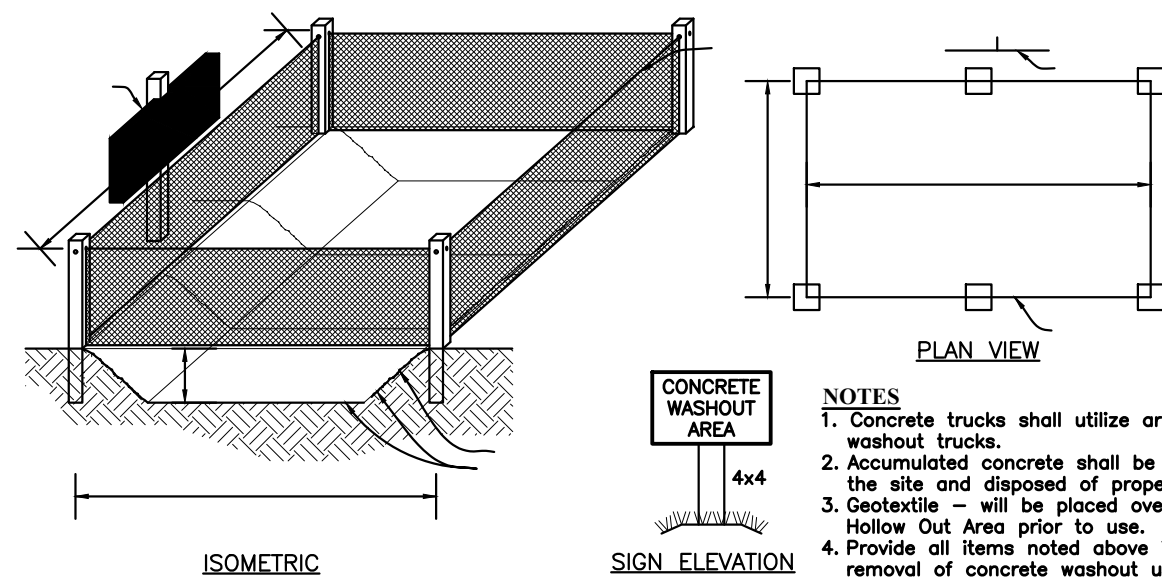
Not to Scale



Maintenance:

Aggregate check dams shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Close attention shall be paid to the repair of damaged check dams, end runs and undercutting beneath dams. Necessary repairs to check dams shall be accomplished promptly. Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier. Sediment deposits should be removed after each storm event. They must be removed when the deposition reaches approximately one-half the height of the barrier. Any sediment deposits remaining in place after the aggregate is no longer required shall be dressed to conform with the existing grade, prepared and seeded.


DETAIL
ROCK CHECK DAM



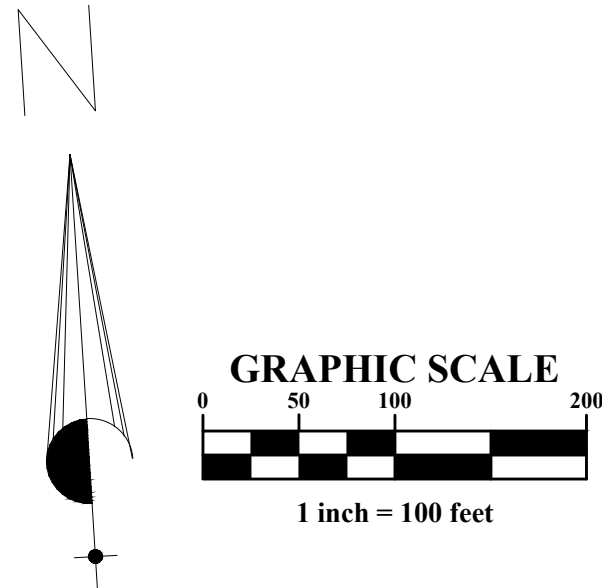
DETAIL
CONCRETE WASHOUT AREA

NOTES

- Concrete trucks shall utilize areas to washout trucks.
- Accumulated concrete shall be removed from the site and disposed of properly.
- Geotextile -- will be placed over the entire Hollow Out Area prior to use.
- Provide all items noted above including removal of concrete washout upon completion of the project in item 207 Concrete Washout, as Per Plan.

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ORPCO			
LANCASTER		OHIO	
SIFFORD STATION			
GRADING DETAILS			
GRADING AND EROSION CONTROL DETAILS			
SCALE: NONE	DR: LAM	ENG: AJK	CH: BJL
	WO#: T10299228002	APPD: IRV	DATE: 10/22/2021
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
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NO	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#



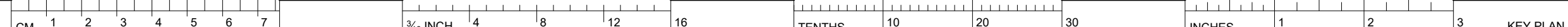
KEN S. HOUSEHOLDER AND JUANET S. HYME-HOUSEHOLDER
62.757 AC. (DEED)
O.R. 1762, P. 929

Hocking Township, Section 6
City of Lancaster, Section 5

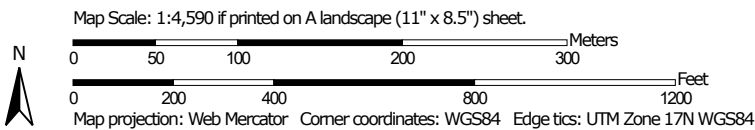
N03°47'31"E 2887.82'

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OHIO POWER COMPANY			
SIFFORD STATION			
OHIO			
KEY PLAN			
SCALE: 1" = 100'	DR: LAM	ENG: AJK	CH: BLJ
	WO#: 42669269	APPD: IRV	DATE: 7/7/2021
	1 RIVERSIDE PLAZA COLUMBUS, OH 43215	DWG. NO. E-1222	REV 0

NO.	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#
NO.	DATE	REVISION DESCRIPTION	APPR	DR	ENG	CK	ISSUE#



Soil Map—Fairfield County, Ohio



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

8/16/2021
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Fairfield County, Ohio

Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 5, 2012—Mar 7, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmB	Amanda silt loam, 2 to 6 percent slopes	0.4	1.3%
Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	16.3	57.8%
Ma	Marengo clay loam	11.5	40.9%
Totals for Area of Interest		28.2	100.0%



Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648

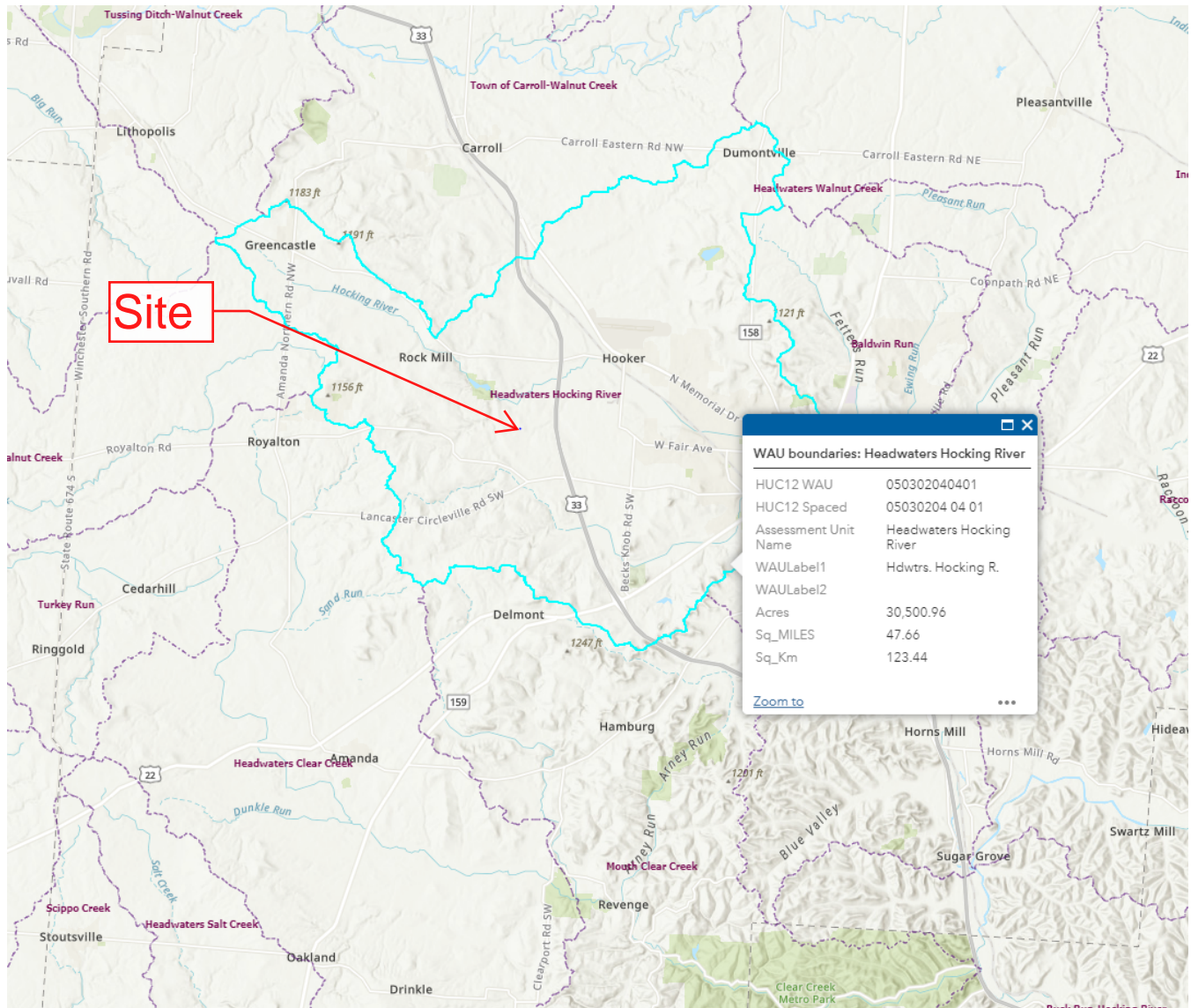
emht.com

CITY OF LANCASTER, FAIRFIELD COUNTY, OHIO
STORMWATER POLLUTION PREVENTION PLAN
FOR
AEP SIFFORD STATION
HUC 12 MAP

DATE: August 2021

JOB NO. 2021-0444

SCALE: NONE



APPENDIX 3

SWP3 Inspection Forms and SWP3 Amendments, Grading, and
Stabilization Log

AEP OHIO TRANSMISSION COMPANY, INC.
SIFFORD STATION PROJECT
STORM WATER POLLUTION PREVENTION PLAN (SWP3) INSPECTION FORM

Date: _____ Inspector's Name/Title: _____

Inspector's Company: _____

Inspector Qualified in accordance with Part VII.BB of Permit: ☐ Yes ☐ No (Document Qualifications in Appendix 3 of SWP3)

Inspection Type: ☐ Weekly (once every seven calendar days)

☐ Storm Event (0.5 inch or greater) Date: _____ Amount: _____ Duration: _____

Rain Event(s) Since Last Inspection:

Date: _____ Amount: _____ Duration: _____	Date: _____ Amount: _____ Duration: _____
Date: _____ Amount: _____ Duration: _____	Date: _____ Amount: _____ Duration: _____

Did any discharges occur during these events? ☐ No ☐ Yes, Location: _____

Current Weather: ☐ Clear ☐ Cloudy ☐ Fog ☐ Rain ☐ Snow ☐ Sleet ☐ High Winds ☐ Other: _____ Temp: _____

Current Discharges: ☐ No ☐ Yes, Location: _____

Evidence of Sediment/Pollutants Leaving the Site? ☐ No ☐ Yes, Location: _____

Has Seeding Taken Place? ☐ No ☐ Yes, Location/Seed tag photo included: _____

Erosion and Sediment Control Features / BMPs Inspected:

☐ **Silt Fence (Mark which one applies)**

Location(s) (Structure # (STR#)): _____

Properly anchored/installed: ☐ Yes ☐ No Repairs Needed: ☐ Yes ☐ No

Sediment Removal Required (Sediment one-half height for fence & one-third height for sock): ☐ Yes ☐ No

Action Required/Taken/Location(s): _____

☐ **Construction Entrance**

Location(s) (Reference intersection of road and nearest STR#): _____

Entrance Stabilized: ☐ Yes ☐ No Evidence of mud tracked on roadway: ☐ Yes ☐ No

Action Required/Taken/Location(s): _____

☐ **Material Storage Areas (Including waste containers, fuel areas)**

Material Storage Areas located on site and shown on the SWP3: ☐ Yes ☐ No

Materials properly contained and labeled: ☐ Yes ☐ No Evidence of spills or releases: ☐ Yes ☐ No

Action Required/Taken/Location(s): _____

☐ **Concrete Washouts**

Location(s) (Access Road / STR#): _____

Properly installed and located at least 50 feet from wetlands/streams/ditches/storm drains: ☐ Yes ☐ No

Replacement needed (concrete reaches 50 percent of the system): ☐ Yes ☐ No

Action Required/Taken/Location(s): _____

Comments / Additional Control Measures Recommended: _____

If BMP modifications are made, you must update the SWP3 drawings and document changes on the SWP3 amendment log.

Inspector's Signature: _____ Date: _____

**AEP OHIO TRANSMISSION COMPANY, INC.
SIFFORD STATION PROJECT**

**STORM WATER POLLUTION PREVENTION PLAN
AMENDMENTS, GRADING, AND STABILIZATION LOG**

Date: _____ Inspector's Name/Title: _____

Location and Description of Grading and Stabilization Activities

Amendments to SWP3:

Date: _____ Inspector's Name/Title: _____

Location and Description of Grading and Stabilization Activities

Amendments to SWP3:

Date: _____ Inspector's Name/Title: _____

Location and Description of Grading and Stabilization Activities

Amendments to SWP3:

AEP OHIO TRANSMISSION COMPANY, INC. SIFFORD STATION PROJECT

SUMMARY SWP3 INSPECTION RECORDS – FOR TCRs

I have completed a review of the SWP3 inspections completed on the project for the period of _____ to _____.

The following major observations were made relating to the implementation of the SWP3 and review of the inspection log.

Inspector Qualifications:

- ☐ The inspections were performed by “qualified inspection personnel” knowledgeable in the principles of erosion and sediment control and skilled in assessing the effectiveness of control measures.
- ☐ The inspections were NOT performed by “qualified inspection personnel” knowledgeable in the principles of erosion and sediment control and skilled in assessing the effectiveness of control measures.
- ☐ Corrective Measures were taken on _____ to provide “qualified inspection personnel” at the site.

Permit Compliance Observations:

- ☐ The project was in compliance with the SWP3 and permit during the review period.
- ☐ The project was NOT in compliance with the SWP3 and permit during the review period as noted below:
 - ☐ Non-compliance issues included:

- ☐ Corrective Measures were taken on _____ to correct the above non-compliance issues.

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 gathered and evaluated 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.

Name: _____

Title: _____

Signature: _____

Date: _____

APPENDIX 4

Duty to Inform Contractors and Subcontractors Signature Form

AEP OHIO TRANSMISSION COMPANY, INC. SIFFORD STATION PROJECT

DUTY TO INFORM CONTRACTORS AND SUBCONTRACTORS SIGNATURE FORM

By signing below, I acknowledge that I have been informed of the terms and conditions of the Ohio Environmental Protection Agency's General NPDES Permit for Storm Water Associated with Construction Activity, and have reviewed and understand the conditions and responsibilities of the Storm Water Pollution Prevention Plan for the AEP Ohio Transmission Company, Inc. SIFFORD STATION Project. I understand that Inspectors shall meet the qualifications outlined in Part VII.BB. of Ohio EPA Permit No.: OHC000005.

[illegible]

APPENDIX 5

United States Army Corps of Engineers

Natonwide Permit



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

September 2, 2021

Regulatory Division
North Branch
LRH-2021-599-HOC-Unnamed Tributary Hocking River

NATIONWIDE PERMIT NO. 57 VERIFICATION

C/O Mr. Rob Milligan
Table Mountain Industries, LLC
5500 New Albany Road
Columbus, Ohio 43054

Dear Mr. Milligan:

I refer to the pre-construction notification (PCN) received in this office on July 19, 2021, concerning the American Electric Power (AEP) Sifford Station Project. The proposed project is located along Whiley Road NW in the City of Lancaster, Fairfield County, Ohio (39.727725 latitude, -82.687519 longitude). We have assigned the following file number to your PCN: LRH-2021-599-HOC-Unnamed Tributary Hocking River. Please reference this file number on all future correspondence related to this subject proposal.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328, including the amendments to 33 CFR 328.3 (85 Federal Register 22250), and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a DA permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The proposed project, as described in the submitted information, has been reviewed in accordance with Section 404 and Section 10. Based on your description of the proposed work, it has been determined that this project would involve the discharge of dredged and/or fill material into waters of the United States and is subject to the requirements of Section 404.

In the submitted PCN materials received in this office on July 19, 2021, you have requested a DA authorization to discharge dredged and/or fill material into 0.42 acre of open-water pond (Pond 1) and 0.03 acre of emergent wetland (Wetland Fringe A) in conjunction with the construction of a substation pad, an access drive, and a security fence. All work will be conducted in accordance with the PCN received in this office on July 19, 2021.

Based on your description of the proposed work, and other information available to us, it has been determined the proposed discharge of dredged and/or fill material into waters of the United States in conjunction with the proposed project meets the criteria for Nationwide Permit (NWP) No. 57 (enclosed) under the January 13, 2021 Federal Register, Reissuance of NWPs (86

FR 2744) provided you comply with all terms and conditions of the enclosed material and the enclosed special conditions.

Please be aware this NWP verification does not obviate the requirement to obtain any other federal, state, or local assent required by law for the activities. This letter does not grant any property rights or exclusive privileges or authorize any injury to the property or rights of others. In addition, this NWP verification must be transferred to the appropriate applicant responsible for project implementation prior to conducting the proposed work within waters of the United States.

This verification is valid until the expiration date of the NWPs, unless the NWP authorization is modified, suspended, or revoked. The verification will remain valid if the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization. The 2021 NWPs published January 13, 2021 in the Federal Register (86 FR 2744), are scheduled to be modified, reissued, or revoked on March 14, 2026. Prior to this date, it is not necessary to contact this office for re-verification of your project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence this activity before March 14, 2026, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of the NWPs and this verification letter must be kept at the site during construction. Upon completion of the activities authorized by this NWP verification, the enclosed certification must be signed and returned to this office. If you have any questions concerning the above, please contact Ms. Katie Samples of the North Branch at 304-399-6933, by mail at the above address, or by email at katie.e.samples@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew J. Wendt', with a stylized flourish at the end.

Andrew J. Wendt
Regulatory Project Manager
North Branch

Enclosures

Cc (by email):

Mr. Pat Hoyng (EMH&T)

**SPECIAL CONDITIONS FOR NATIONWIDE PERMIT 57 VERIFICATION
AMERICAN ELECTRIC POWER (AEP) SIFFORD STATION PROJECT
LRH-2021-599-HOC-UNNAMED TRIBUTARY HOCKING RIVER
PAGE 1 OF 1**

1. All work will be conducted in accordance with the submitted pre-construction notification for the AEP Sifford Station Project received in the office on July 19, 2021.
2. Enclosed is a copy of Nationwide Permit 57, which will be kept at the site during construction. A copy of the nationwide permit verification, special conditions, and the submitted construction plans must be kept at the site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.
3. Work activities will be performed during low flow conditions to the greatest extent practicable. Additionally, appropriate site specific best management practices for sediment and erosion control will be fully implemented during construction activities at the site.
4. No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.
5. Should new information regarding the scope and/or impacts of the project become available that was not submitted to this office during our review of the proposal, the permittee will submit written information concerning proposed modification(s) to this office for review and evaluation, as soon as practicable.
6. In the event any previously unknown historic or archaeological sites or human remains are uncovered while accomplishing the activity authorized by this nationwide permit authorization, the permittee must cease all work in waters of the United States immediately and contact local, state and county law enforcement offices (only contact law enforcement on findings of human remains), the Corps at 304-399-5210 and Ohio State Historic Preservation Office at 614-298-2000. The Corps will initiate the Federal, state and tribal coordination required to comply with the National Historic Preservation Act and applicable state and local laws and regulations. Federally recognized tribes are afforded a government-to-government status as sovereign nations and consultation is required under Executive Order 13175 and 36 CFR Part 800.
7. Section 7 obligations under Endangered Species Act must be reconsidered if new information reveals impacts of the project that may affect federally listed species or critical habitat in a manner not previously considered, the proposed project is subsequently modified to include activities which were not considered during Section 7 consultation with the United States Fish and Wildlife Service, or new species are listed or critical habitat designated that might be affected by the subject project.

APPENDIX 6

Long-term Maintenance Plan

LONG-TERM MAINTENANCE PLAN

AEP OHIO TRANSMISSION COMPANY SIFFORD STATION

The Storm Water Pollution Prevention Plan (SWPPP) prepared for construction of the Sifford Station includes Best Management Practices (BMPs) for storm water management. As a condition of Part III.G.2.e of the General Permit (OHC000005), a maintenance plan is required for all post-construction BMPs to ensure that permanent storm water management systems continue to function as designed and constructed. For this Project, BMPs that will remain in place following the Notice of Termination (NOT) to Ohio EPA include the dry extended detention basin (see Grading Plan and Details).

INSPECTION AND MAINTENANCE RESPONSIBILITIES

Following construction, the Sifford Station will be operated and maintained by AEP. As part of routine and periodic maintenance activities, a representative from AEP's Transmission Field Services (TFS) will inspect the BMPs according to the schedule outlined in Table 1 below.

INSPECTION AND MAINTENANCE ACTIVITIES FOR BMPs	
ACTIVITY	SCHEDULE
Diversion Channels: <ul style="list-style-type: none">▪ Check for sediment accumulation▪ Inspect and correct slope erosion problems▪ Remove vegetative growth from within the channel	Annually
Culverts: <ul style="list-style-type: none">▪ Ensure pipe is intact and functioning correctly▪ Ensure inlet/outlet is clear of debris	Annually

Post-Construction Storm Water Quality is provided by the Existing Basin 02, built and maintained per Project Ruble.

APPENDIX 7

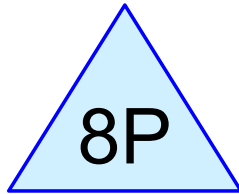
Stormwater Calculations



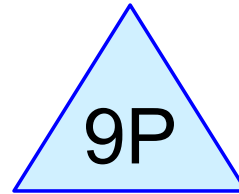
A legacy of **experience**. A reputation for **excellence**.

PROJECT RUBLE

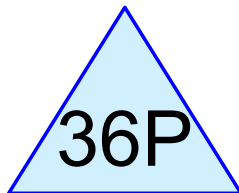
SEDIMENT BASIN CALCULATIONS							
BMP	Tributary Area (acres)	Disturbed Area (acres)	Required Dewatering Volume (67 CY/Tributary Acre) (ac-ft)	Provided Dewatering Volume (ac-ft)	Dewatering Volume Elevation (feet)	Required Sediment Storage Volume (37 CY/Disturbed Acre) (ac-ft)	Provided Sediment Storage Volume (ac-ft)
Basin 01	45.95	30.16	1.908	1.988	903.42	0.692	1.280
Basin 02	103.44	67.73	4.296	4.278	904.41	1.553	2.080



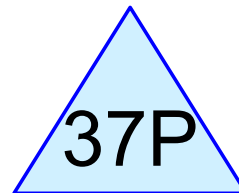
Basin 02 Skimmer
Dewatering @ 904.41



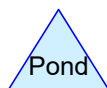
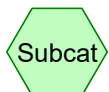
Basin 01 Skimmer
Dewatering @ 903.42



Basin 02 Sediment
Storage Volume



Basin 01 Sediment
Storage Volume



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	25 yr	Type II 24-hr		Default	24.00	1	4.30	2

Summary for Pond 8P: Basin 02 Skimmer Dewatering @ 904.41

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1.29 cfs @ 0.00 hrs, Volume= 4.296 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.29 cfs @ 0.00 hrs, Volume= 4.296 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Starting Elev= 904.41' Surf.Area= 2.785 ac Storage= 4.297 af

Peak Elev= 904.41' @ 0.00 hrs Surf.Area= 2.785 ac Storage= 4.297 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
--------	--------	---------------	---------------------

#1	902.50'	19.435 af	Custom Stage Data (Conic) Listed below (Recalc)
----	---------	-----------	--

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
902.50	1.534	0.000	0.000	1.534
903.00	1.992	0.879	0.879	1.992
904.00	2.637	2.307	3.186	2.638
905.00	3.004	2.819	6.004	3.006
906.00	3.177	3.090	9.095	3.181
907.00	3.352	3.264	12.359	3.359
908.00	3.540	3.446	15.804	3.550
909.00	3.723	3.631	19.435	3.735

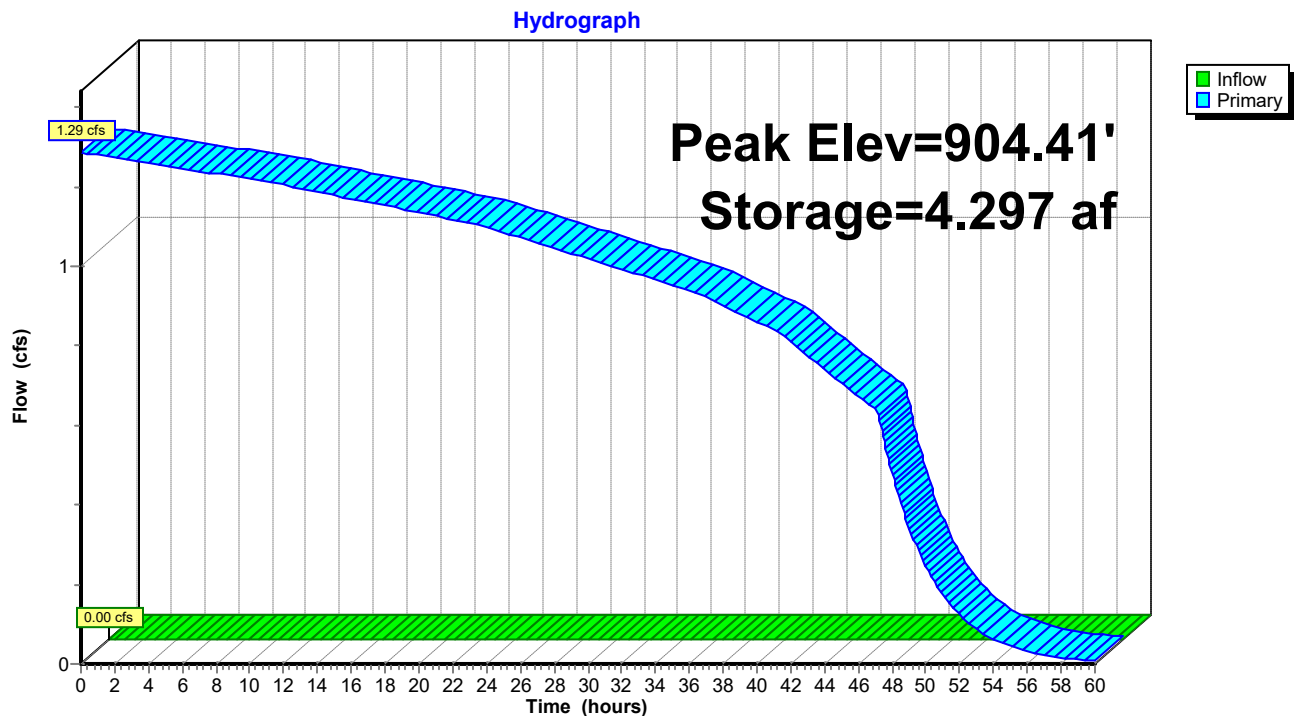
Device	Routing	Invert	Outlet Devices
--------	---------	--------	----------------

#1	Primary	902.50'	Marlee Float 8 in - 8 in orifice
----	---------	---------	---

Primary OutFlow Max=1.29 cfs @ 0.00 hrs HW=904.41' (Free Discharge)

↑1=Marlee Float 8 in - 8 in orifice (Custom Controls 1.29 cfs)

Pond 8P: Basin 02 Skimmer Dewatering @ 904.41



Hydrograph for Pond 8P: Basin 02 Skimmer Dewatering @ 904.41

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	4.297	904.41	1.29
2.00	0.00	4.085	904.33	1.28
4.00	0.00	3.876	904.26	1.26
6.00	0.00	3.668	904.18	1.25
8.00	0.00	3.463	904.10	1.24
10.00	0.00	3.260	904.03	1.22
12.00	0.00	3.059	903.95	1.21
14.00	0.00	2.861	903.87	1.19
16.00	0.00	2.666	903.80	1.17
18.00	0.00	2.474	903.72	1.15
20.00	0.00	2.284	903.64	1.14
22.00	0.00	2.098	903.56	1.12
24.00	0.00	1.914	903.48	1.10
26.00	0.00	1.735	903.40	1.07
28.00	0.00	1.559	903.33	1.05
30.00	0.00	1.388	903.25	1.02
32.00	0.00	1.222	903.17	0.99
34.00	0.00	1.060	903.09	0.97
36.00	0.00	0.902	903.01	0.94
38.00	0.00	0.749	902.93	0.90
40.00	0.00	0.603	902.86	0.86
42.00	0.00	0.465	902.78	0.81
44.00	0.00	0.336	902.71	0.74
46.00	0.00	0.219	902.64	0.68
48.00	0.00	0.118	902.58	0.48
50.00	0.00	0.060	902.54	0.25
52.00	0.00	0.030	902.52	0.12
54.00	0.00	0.015	902.51	0.06
56.00	0.00	0.008	902.50	0.03
58.00	0.00	0.004	902.50	0.02
60.00	0.00	0.002	902.50	0.01

Summary for Pond 9P: Basin 01 Skimmer Dewatering @ 903.42

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.47 cfs @ 0.00 hrs, Volume= 1.988 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.47 cfs @ 0.00 hrs, Volume= 1.988 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Starting Elev= 903.42' Surf.Area= 2.084 ac Storage= 1.988 af

Peak Elev= 903.42' @ 0.00 hrs Surf.Area= 2.084 ac Storage= 1.988 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
--------	--------	---------------	---------------------

#1	902.00'	14.311 af	Custom Stage Data (Conic) Listed below (Recalc)
----	---------	-----------	--

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
902.00	0.420	0.000	0.000	0.420
903.00	2.030	1.124	1.124	2.030
904.00	2.160	2.095	3.219	2.162
905.00	2.290	2.225	5.444	2.295
906.00	2.420	2.355	7.799	2.427
907.00	2.540	2.480	10.278	2.550
908.00	2.670	2.605	12.883	2.683
908.30	2.820	0.823	13.706	2.833
908.50	3.230	0.605	14.311	3.244

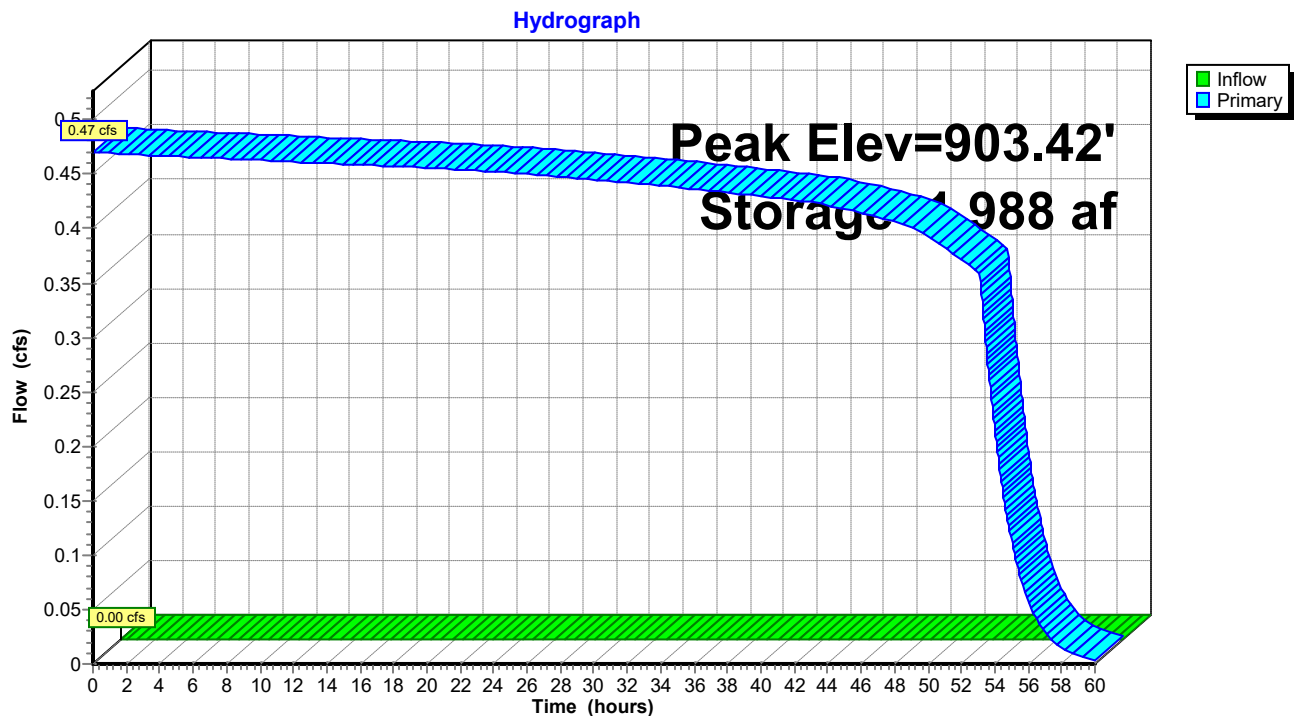
Device	Routing	Invert	Outlet Devices
--------	---------	--------	----------------

#1	Primary	902.00'	Marlee Float 6 in - 5 in orifice
----	---------	---------	---

Primary OutFlow Max=0.47 cfs @ 0.00 hrs HW=903.42' (Free Discharge)

↑1=Marlee Float 6 in - 5 in orifice (Custom Controls 0.47 cfs)

Pond 9P: Basin 01 Skimmer Dewatering @ 903.42



Hydrograph for Pond 9P: Basin 01 Skimmer Dewatering @ 903.42

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	1.988	903.42	0.47
2.00	0.00	1.911	903.38	0.47
4.00	0.00	1.834	903.35	0.47
6.00	0.00	1.756	903.31	0.47
8.00	0.00	1.680	903.27	0.46
10.00	0.00	1.603	903.23	0.46
12.00	0.00	1.527	903.20	0.46
14.00	0.00	1.450	903.16	0.46
16.00	0.00	1.374	903.12	0.46
18.00	0.00	1.299	903.09	0.46
20.00	0.00	1.223	903.05	0.46
22.00	0.00	1.148	903.01	0.45
24.00	0.00	1.073	902.97	0.45
26.00	0.00	0.999	902.94	0.45
28.00	0.00	0.924	902.90	0.45
30.00	0.00	0.851	902.85	0.44
32.00	0.00	0.777	902.81	0.44
34.00	0.00	0.704	902.76	0.44
36.00	0.00	0.632	902.72	0.44
38.00	0.00	0.560	902.66	0.43
40.00	0.00	0.489	902.61	0.43
42.00	0.00	0.418	902.55	0.43
44.00	0.00	0.348	902.49	0.42
46.00	0.00	0.279	902.42	0.41
48.00	0.00	0.211	902.34	0.41
50.00	0.00	0.145	902.26	0.39
52.00	0.00	0.081	902.16	0.37
54.00	0.00	0.027	902.06	0.22
56.00	0.00	0.007	902.02	0.06
58.00	0.00	0.002	902.00	0.01
60.00	0.00	0.000	902.00	0.00

Summary for Pond 36P: Basin 02 Sediment Storage Volume

Routing by Dyn-Stor-Ind method

Peak Elev= 0.00' @ 0.00 hrs Storage= 0.000 af

Plug-Flow detention time= (not calculated)

Center-of-Mass det. time= (not calculated)

Volume	Invert	Avail.Storage	Storage Description		
#1	898.00'	2.078 af	Custom Stage Data (Conic) Listed below (Recalc)		
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)	
898.00	0.250	0.000	0.000	0.250	
899.00	0.280	0.265	0.265	0.281	
900.00	0.310	0.295	0.560	0.313	
901.00	0.340	0.325	0.885	0.344	
901.50	0.360	0.175	1.060	0.365	
902.00	1.130	0.355	1.414	1.135	
902.50	1.534	0.663	2.078	1.539	

Summary for Pond 37P: Basin 01 Sediment Storage Volume

Routing by Dyn-Stor-Ind method

Peak Elev= 0.00' @ 0.00 hrs Storage= 0.000 af

Plug-Flow detention time= (not calculated)

Center-of-Mass det. time= (not calculated)

Volume	Invert	Avail.Storage	Storage Description		
#1	898.50'	1.277 af	Custom Stage Data (Conic) Listed below (Recalc)		
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)	
898.50	0.310	0.000	0.000	0.310	
899.00	0.320	0.157	0.157	0.321	
900.00	0.360	0.340	0.497	0.362	
901.00	0.390	0.375	0.872	0.394	
902.00	0.420	0.405	1.277	0.426	

Events for Pond 8P: Basin 02 Skimmer Dewatering @ 904.41

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
25 yr	0.00	1.29	904.41	4.297

Events for Pond 9P: Basin 01 Skimmer Dewatering @ 903.42

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
25 yr	0.00	0.47	903.42	1.988

Events for Pond 36P: Basin 02 Sediment Storage Volume

Event	Elevation (feet)	Storage (acre-feet)
25 yr	0.00	0.000

Events for Pond 37P: Basin 01 Sediment Storage Volume

Event	Elevation (feet)	Storage (acre-feet)
25 yr	0.00	0.000

TABLE OF CONTENTS

Project Reports

- 1 Routing Diagram
- 2 Rainfall Events Listing (selected events)

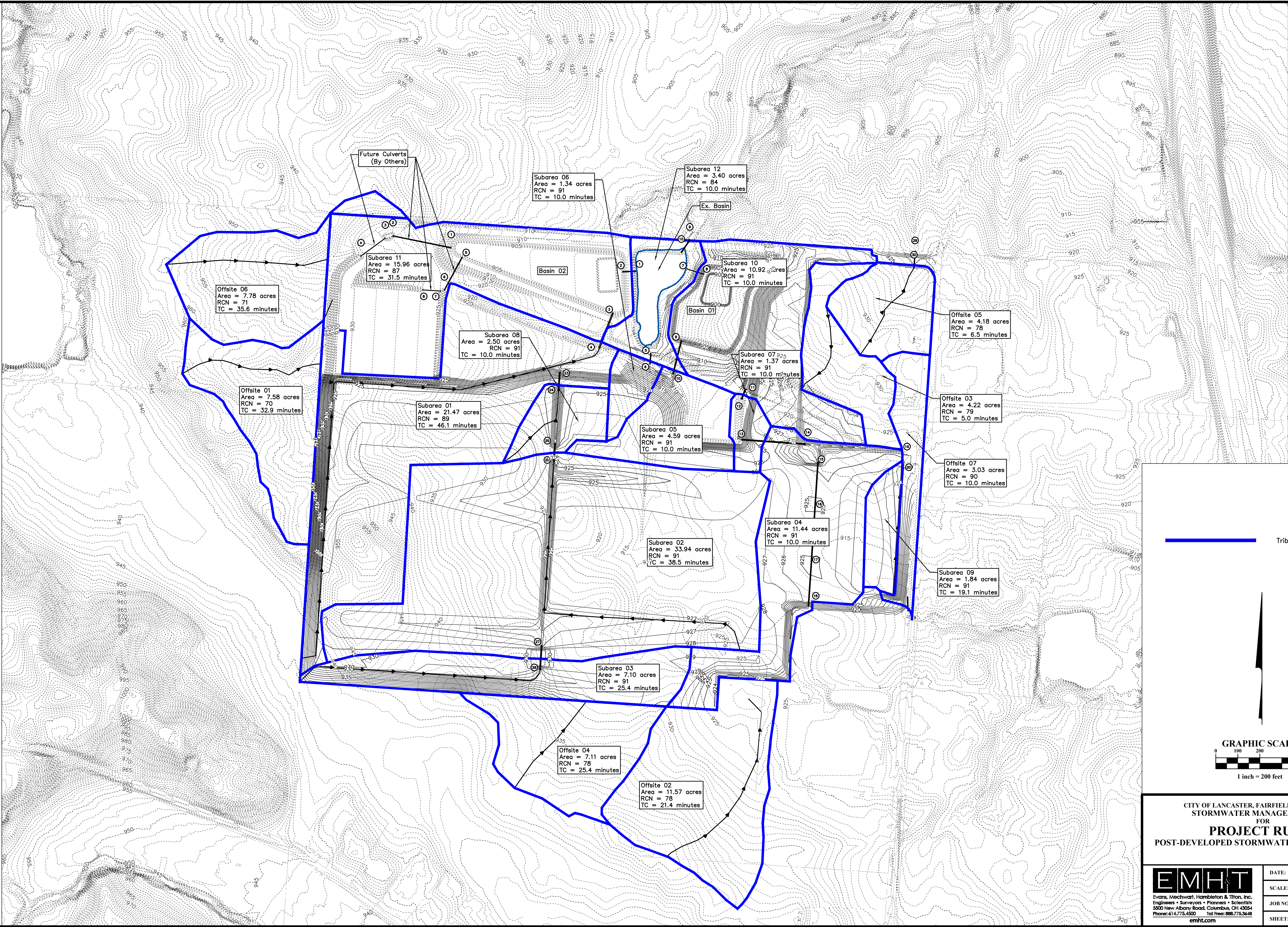
25 yr Event

- 3 Pond 8P: Basin 02 Skimmer Dewatering @ 904.41
- 6 Pond 9P: Basin 01 Skimmer Dewatering @ 903.42
- 9 Pond 36P: Basin 02 Sediment Storage Volume
- 10 Pond 37P: Basin 01 Sediment Storage Volume

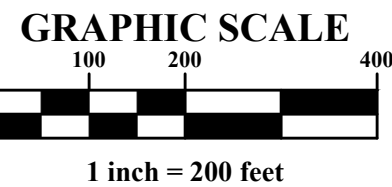
Multi-Event Tables

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- 12 Pond 9P: Basin 01 Skimmer Dewatering @ 903.42
- 13 Pond 36P: Basin 02 Sediment Storage Volume
- 14 Pond 37P: Basin 01 Sediment Storage Volume

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Tributary Boundaries



CITY OF LANCASTER, FAIRFIELD COUNTY, OHIO
STORMWATER MANAGEMENT PLAN
FOR
PROJECT RUBLE
POST-DEVELOPED STORMWATER TRIBUTARY MAP



DATE:	October 6, 2021
SCALE:	1" = 200'
JOB NO.:	2020-1096
SHEET:	1 of 1



A legacy of **experience**. A reputation for **excellence**.

PROJECT RUBLE

WATER QUALITY VOLUME CALCULATIONS

BMP	Subarea Identifier	Area (acres)	Percent Impervious (%)	Rv	Water Quality Volume (ac-ft)	Water Quality Volume Elevation (feet)
Basin 02	Subarea 01	67.65	73%	0.71	3.587	-
	Offsite 01	17.37	0%	0.05	0.065	-
	Offsite 04	7.11	0%	0.05	0.027	-
	Total	92.13	54%	0.53	3.679	903.86

Required Micropool/Forbay Volume (Each) =

16025

cu-ft

Provided Micropool/Forbay Volume (Each) =

46174

cu-ft

Water Quality Volume calculated using the Ohio EPA formula:

$$WQ_v = \frac{R_v \times P \times A}{12}$$

where:

A = area draining into the BMP (acres)

P = 0.90" precipitation depth

Rv = the volumetric runoff coefficient

Rv = 0.05+0.9i

Where i = fraction of post-construction impervious surface

SEDIMENT BASIN CALCULATIONS

BMP	Tributary Area (acres)	Disturbed Area (acres)	Required Dewatering Volume (67 CY/Tributary Acre) (ac-ft)	Dewatering Volume Elevation (feet)	Required Sediment Storage Volume (37 CY/Disturbed Acre) (ac-ft)
Basin 02	92.13	67.65	3.83	904.25	1.55



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PROJECT RUBLE

WATER QUALITY VOLUME CALCULATIONS

BMP	Subarea Identifier	Area (acres)	Percent Impervious (%)	Rv	Water Quality Volume (ac-ft)	Water Quality Volume Elevation (feet)
Basin 01	Subarea 02	36.16	64%	0.63	1.698	-
	Offsite 02	11.73	0%	0.05	0.044	-
	Offsite 03	5.33	24%	0.27	0.106	-
	Total	53.22	46%	0.46	1.848	903.36

Required Micropool/Forbay Volume (Each) =

8050

cu-ft

Provided Micropool/Forbay Volume (Each) =

55626

cu-ft

Water Quality Volume calculated using the Ohio EPA formula:

$$WQ_v = \frac{R_v \times P \times A}{12}$$

where:

A = area draining into the BMP (acres)

P = 0.90" precipitation depth

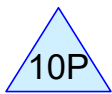
Rv = the volumetric runoff coefficient

Rv = 0.05+0.9i

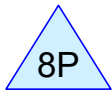
Where i = fraction of post-construction impervious surface

SEDIMENT BASIN CALCULATIONS

BMP	Tributary Area (acres)	Disturbed Area (acres)	Required Dewatering Volume (67 CY/Tributary Acre) (ac-ft)	Dewatering Volume Elevation (feet)	Required Sediment Storage Volume (37 CY/Disturbed Acre) (ac-ft)
Basin 01	53.22	36.16	2.21	903.53	0.83



Basin 02 WQ



Basin 02 Skimmer



Basin 02 Temp. Raised
Micropool/Forebay



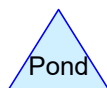
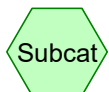
Basin 01 WQ



Basin 01 Skimmer



Basin 01
Micropool/Forebay



Routing Diagram for 2020-1096 - rev

Prepared by EMH&T, Printed 11/2/2021

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1 yr	Type II 24-hr		Default	24.00	1	2.30	2

Summary for Pond 8P: Basin 02 Skimmer

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1.26 cfs @ 0.00 hrs, Volume= 3.843 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.26 cfs @ 0.00 hrs, Volume= 3.843 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Starting Elev= 904.25' Surf.Area= 2.727 ac Storage= 3.856 af

Peak Elev= 904.25' @ 0.00 hrs Surf.Area= 2.727 ac Storage= 3.856 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description	
#1	902.50'	19.435 af	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
902.50	1.534	0.000	0.000	1.534
903.00	1.992	0.879	0.879	1.992
904.00	2.637	2.307	3.186	2.638
905.00	3.004	2.819	6.004	3.006
906.00	3.177	3.090	9.095	3.181
907.00	3.352	3.264	12.359	3.359
908.00	3.540	3.446	15.804	3.550
909.00	3.723	3.631	19.435	3.735

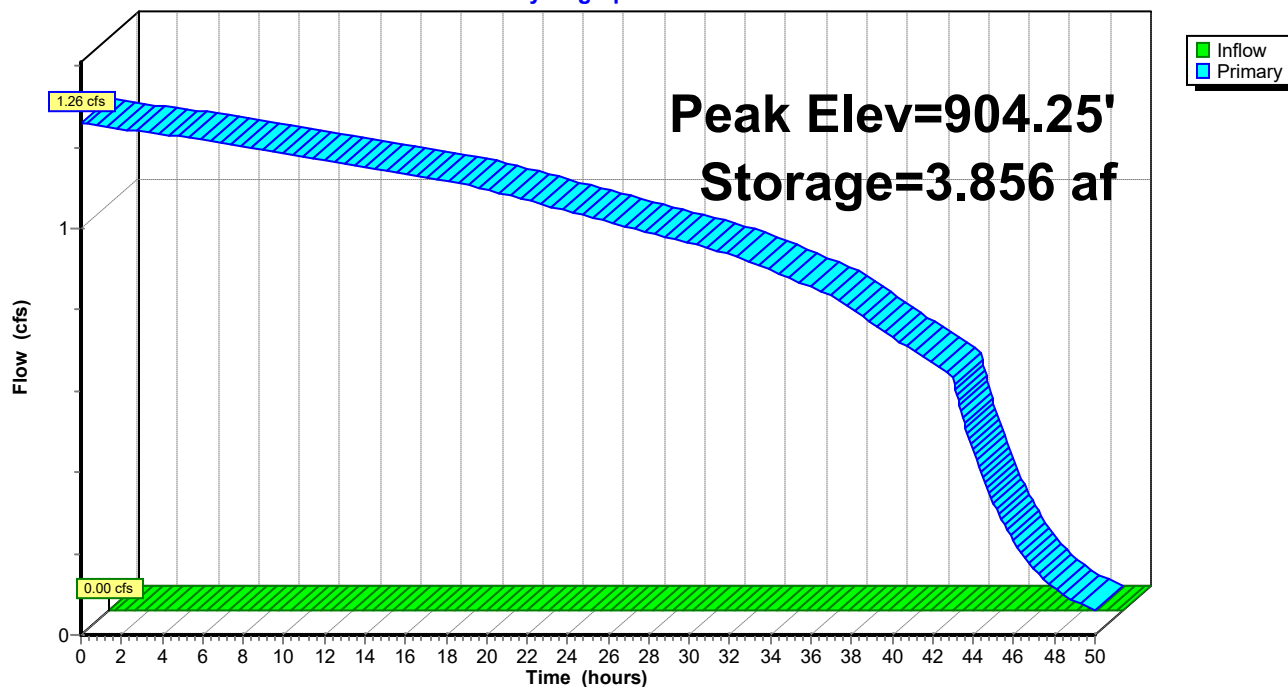
Device	Routing	Invert	Outlet Devices
#1	Primary	902.50'	Marlee Float 8 in - 8 in orifice

Primary OutFlow Max=1.26 cfs @ 0.00 hrs HW=904.25' (Free Discharge)

↑1=Marlee Float 8 in - 8 in orifice (Custom Controls 1.26 cfs)

Pond 8P: Basin 02 Skimmer

Hydrograph



Hydrograph for Pond 8P: Basin 02 Skimmer

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	3.856	904.25	1.26
1.00	0.00	3.752	904.21	1.25
2.00	0.00	3.649	904.17	1.25
3.00	0.00	3.546	904.14	1.24
4.00	0.00	3.444	904.10	1.23
5.00	0.00	3.342	904.06	1.23
6.00	0.00	3.241	904.02	1.22
7.00	0.00	3.141	903.98	1.21
8.00	0.00	3.041	903.94	1.20
9.00	0.00	2.942	903.91	1.20
10.00	0.00	2.843	903.87	1.19
11.00	0.00	2.745	903.83	1.18
12.00	0.00	2.648	903.79	1.17
13.00	0.00	2.552	903.75	1.16
14.00	0.00	2.456	903.71	1.15
15.00	0.00	2.361	903.67	1.14
16.00	0.00	2.267	903.63	1.14
17.00	0.00	2.173	903.59	1.13
18.00	0.00	2.081	903.56	1.12
19.00	0.00	1.989	903.52	1.11
20.00	0.00	1.897	903.48	1.10
21.00	0.00	1.807	903.44	1.08
22.00	0.00	1.718	903.40	1.07
23.00	0.00	1.630	903.36	1.06
24.00	0.00	1.543	903.32	1.04
25.00	0.00	1.457	903.28	1.03
26.00	0.00	1.373	903.24	1.02
27.00	0.00	1.289	903.20	1.01
28.00	0.00	1.206	903.16	0.99
29.00	0.00	1.125	903.12	0.98
30.00	0.00	1.045	903.08	0.97
31.00	0.00	0.965	903.04	0.95
32.00	0.00	0.887	903.00	0.94
33.00	0.00	0.810	902.97	0.92
34.00	0.00	0.735	902.93	0.90
35.00	0.00	0.662	902.89	0.88
36.00	0.00	0.590	902.85	0.86
37.00	0.00	0.520	902.81	0.84
38.00	0.00	0.452	902.77	0.81
39.00	0.00	0.387	902.74	0.77
40.00	0.00	0.325	902.70	0.74
41.00	0.00	0.265	902.67	0.70
42.00	0.00	0.209	902.63	0.67
43.00	0.00	0.155	902.60	0.63
44.00	0.00	0.110	902.57	0.45
45.00	0.00	0.079	902.55	0.32
46.00	0.00	0.056	902.54	0.23
47.00	0.00	0.040	902.53	0.16
48.00	0.00	0.028	902.52	0.12
49.00	0.00	0.020	902.51	0.08
50.00	0.00	0.014	902.51	0.06

Summary for Pond 9P: Basin 02 Temp. Raised Micropool/Forebay

Routing by Dyn-Stor-Ind method

Peak Elev= 0.00' @ 0.00 hrs Storage= 0.000 af

Plug-Flow detention time= (not calculated)

Center-of-Mass det. time= (not calculated)

Volume	Invert	Avail.Storage	Storage Description
#1	898.00'	1.504 af	Custom Stage Data (Conic) Listed below (Recalc)
#2	898.00'	0.404 af	Custom Stage Data (Conic) Listed below (Recalc)
		1.908 af	Total Available Storage

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
898.00	0.110	0.000	0.000	0.110
899.00	0.130	0.120	0.120	0.131
900.00	0.150	0.140	0.260	0.152
901.00	0.180	0.165	0.425	0.183
901.50	0.190	0.092	0.517	0.193
902.00	1.120	0.295	0.812	1.123
902.50	1.664	0.692	1.504	1.667

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
898.00	0.070	0.000	0.000	0.070
899.00	0.080	0.075	0.075	0.081
900.00	0.100	0.090	0.165	0.102
901.00	0.120	0.110	0.275	0.122
902.00	0.140	0.130	0.404	0.143

Summary for Pond 10P: Basin 02 WQ

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1.37 cfs @ 0.00 hrs, Volume= 3.543 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.37 cfs @ 0.00 hrs, Volume= 3.543 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Starting Elev= 903.86' Surf.Area= 2.541 ac Storage= 3.578 af

Peak Elev= 903.86' @ 0.00 hrs Surf.Area= 2.541 ac Storage= 3.578 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

Volume Invert Avail.Storage Storage Description

#1 901.50' 20.190 af **Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
901.50	0.190	0.000	0.000	0.190
902.50	1.534	0.755	0.755	1.534
903.00	1.992	0.879	1.634	1.992
904.00	2.637	2.307	3.941	2.638
905.00	3.004	2.819	6.759	3.006
906.00	3.177	3.090	9.849	3.181
907.00	3.352	3.264	13.113	3.359
908.00	3.540	3.446	16.559	3.550
909.00	3.723	3.631	20.190	3.736

Device Routing Invert Outlet Devices

#1	Primary	901.50'	24.0" Round Culvert L= 63.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 901.50' / 901.22' S= 0.0044 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 3.14 sf
#2	Device 1	901.50'	6.0" Vert. WQ Orifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	904.20'	36.0" W x 12.0" H Vert. Window C= 0.600 Limited to weir flow at low heads
#4	Device 1	907.00'	1.5" x 5.0" Horiz. Grate X 9.00 columns X 4 rows C= 0.600 in 27.5" x 27.5" Grate (36% open area) Limited to weir flow at low heads
#5	Secondary	908.00'	250.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.37 cfs @ 0.00 hrs HW=903.86' (Free Discharge)

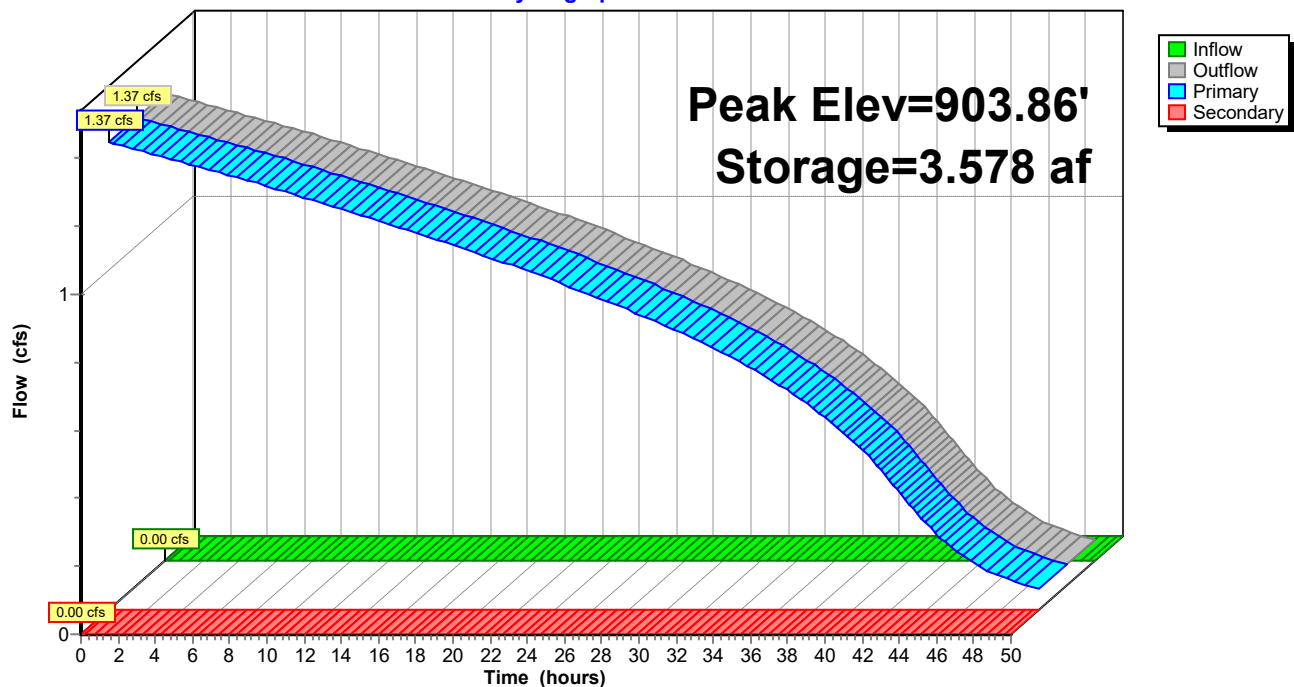
- 1=Culvert (Passes 1.37 cfs of 15.14 cfs potential flow)
- 2=WQ Orifice (Orifice Controls 1.37 cfs @ 6.99 fps)
- 3=Window (Controls 0.00 cfs)
- 4=Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=903.86' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 10P: Basin 02 WQ

Hydrograph



Hydrograph for Pond 10P: Basin 02 WQ

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	3.578	903.86	1.37	1.37	0.00
1.00	0.00	3.465	903.82	1.36	1.36	0.00
2.00	0.00	3.354	903.77	1.34	1.34	0.00
3.00	0.00	3.243	903.73	1.33	1.33	0.00
4.00	0.00	3.134	903.68	1.31	1.31	0.00
5.00	0.00	3.026	903.64	1.30	1.30	0.00
6.00	0.00	2.919	903.59	1.28	1.28	0.00
7.00	0.00	2.814	903.55	1.27	1.27	0.00
8.00	0.00	2.710	903.50	1.25	1.25	0.00
9.00	0.00	2.607	903.46	1.24	1.24	0.00
10.00	0.00	2.506	903.41	1.22	1.22	0.00
11.00	0.00	2.406	903.37	1.20	1.20	0.00
12.00	0.00	2.307	903.32	1.19	1.19	0.00
13.00	0.00	2.210	903.28	1.17	1.17	0.00
14.00	0.00	2.114	903.23	1.15	1.15	0.00
15.00	0.00	2.019	903.19	1.13	1.13	0.00
16.00	0.00	1.927	903.14	1.12	1.12	0.00
17.00	0.00	1.835	903.10	1.10	1.10	0.00
18.00	0.00	1.745	903.06	1.08	1.08	0.00
19.00	0.00	1.656	903.01	1.06	1.06	0.00
20.00	0.00	1.569	902.97	1.04	1.04	0.00
21.00	0.00	1.484	902.92	1.02	1.02	0.00
22.00	0.00	1.400	902.88	1.00	1.00	0.00
23.00	0.00	1.318	902.83	0.98	0.98	0.00
24.00	0.00	1.237	902.79	0.96	0.96	0.00
25.00	0.00	1.159	902.75	0.94	0.94	0.00
26.00	0.00	1.082	902.70	0.92	0.92	0.00
27.00	0.00	1.006	902.66	0.90	0.90	0.00
28.00	0.00	0.933	902.61	0.88	0.88	0.00
29.00	0.00	0.861	902.57	0.86	0.86	0.00
30.00	0.00	0.791	902.52	0.83	0.83	0.00
31.00	0.00	0.724	902.48	0.81	0.81	0.00
32.00	0.00	0.658	902.43	0.78	0.78	0.00
33.00	0.00	0.594	902.39	0.75	0.75	0.00
34.00	0.00	0.533	902.34	0.73	0.73	0.00
35.00	0.00	0.474	902.29	0.69	0.69	0.00
36.00	0.00	0.418	902.24	0.66	0.66	0.00
37.00	0.00	0.365	902.19	0.62	0.62	0.00
38.00	0.00	0.315	902.13	0.59	0.59	0.00
39.00	0.00	0.269	902.08	0.54	0.54	0.00
40.00	0.00	0.226	902.02	0.49	0.49	0.00
41.00	0.00	0.187	901.97	0.44	0.44	0.00
42.00	0.00	0.153	901.91	0.38	0.38	0.00
43.00	0.00	0.124	901.86	0.31	0.31	0.00
44.00	0.00	0.101	901.82	0.25	0.25	0.00
45.00	0.00	0.083	901.77	0.20	0.20	0.00
46.00	0.00	0.069	901.74	0.15	0.15	0.00
47.00	0.00	0.057	901.71	0.12	0.12	0.00
48.00	0.00	0.048	901.68	0.10	0.10	0.00
49.00	0.00	0.041	901.66	0.08	0.08	0.00
50.00	0.00	0.035	901.64	0.06	0.06	0.00

Summary for Pond 37P: Basin 01 Micropool/Forebay

Routing by Dyn-Stor-Ind method

Peak Elev= 0.00' @ 0.00 hrs Storage= 0.000 af

Plug-Flow detention time= (not calculated)

Center-of-Mass det. time= (not calculated)

Volume	Invert	Avail.Storage	Storage Description
#1	898.00'	0.725 af	Custom Stage Data (Conic) Listed below (Recalc)
#2	900.00'	0.135 af	Custom Stage Data (Conic) Listed below (Recalc)
#3	900.00'	0.614 af	Custom Stage Data (Conic) Listed below (Recalc)
		1.474 af	Total Available Storage

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
898.00	0.140	0.000	0.000	0.140
899.00	0.160	0.150	0.150	0.161
900.00	0.180	0.170	0.320	0.182
901.00	0.200	0.190	0.510	0.204
902.00	0.230	0.215	0.725	0.235

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
900.00	0.030	0.000	0.000	0.030
901.00	0.040	0.035	0.035	0.040
902.00	0.050	0.045	0.080	0.051
903.00	0.060	0.055	0.135	0.062

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
900.00	0.160	0.000	0.000	0.160
901.00	0.190	0.175	0.175	0.191
902.00	0.220	0.205	0.380	0.222
903.00	0.250	0.235	0.614	0.253

Summary for Pond 46P: Basin 01 WQ

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.70 cfs @ 0.00 hrs, Volume= 1.690 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.70 cfs @ 0.00 hrs, Volume= 1.690 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Starting Elev= 903.36' Surf.Area= 2.076 ac Storage= 1.720 af

Peak Elev= 903.36' @ 0.00 hrs Surf.Area= 2.076 ac Storage= 1.720 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

Volume Invert Avail.Storage Storage Description

#1 902.00' 14.168 af **Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
902.00	0.230	0.000	0.000	0.230
903.00	2.030	0.981	0.981	2.030
904.00	2.160	2.095	3.076	2.162
905.00	2.290	2.225	5.300	2.295
906.00	2.420	2.355	7.655	2.427
907.00	2.540	2.480	10.135	2.550
908.00	2.670	2.605	12.740	2.683
908.30	2.820	0.823	13.563	2.833
908.50	3.230	0.605	14.168	3.243

Device Routing Invert Outlet Devices

#1	Primary	902.00'	18.0" Round RCP_Round 18" L= 30.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 902.00' / 901.85' S= 0.0050 ' S= 0.0050 ' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Device 1	902.00'	5.0" Vert. WQ Orifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	903.40'	12.0" W x 6.0" H Vert. Window C= 0.600 Limited to weir flow at low heads
#4	Device 1	905.00'	1.5" x 5.0" Horiz. Grate X 9.00 columns X 4 rows C= 0.600 in 27.5" x 27.5" Grate (36% open area) Limited to weir flow at low heads
#5	Secondary	907.00'	90.0' long x 8.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.70 cfs @ 0.00 hrs HW=903.36' (Free Discharge)

1=RCP_Round 18" (Passes 0.70 cfs of 5.16 cfs potential flow)

2=WQ Orifice (Orifice Controls 0.70 cfs @ 5.17 fps)

3=Window (Controls 0.00 cfs)

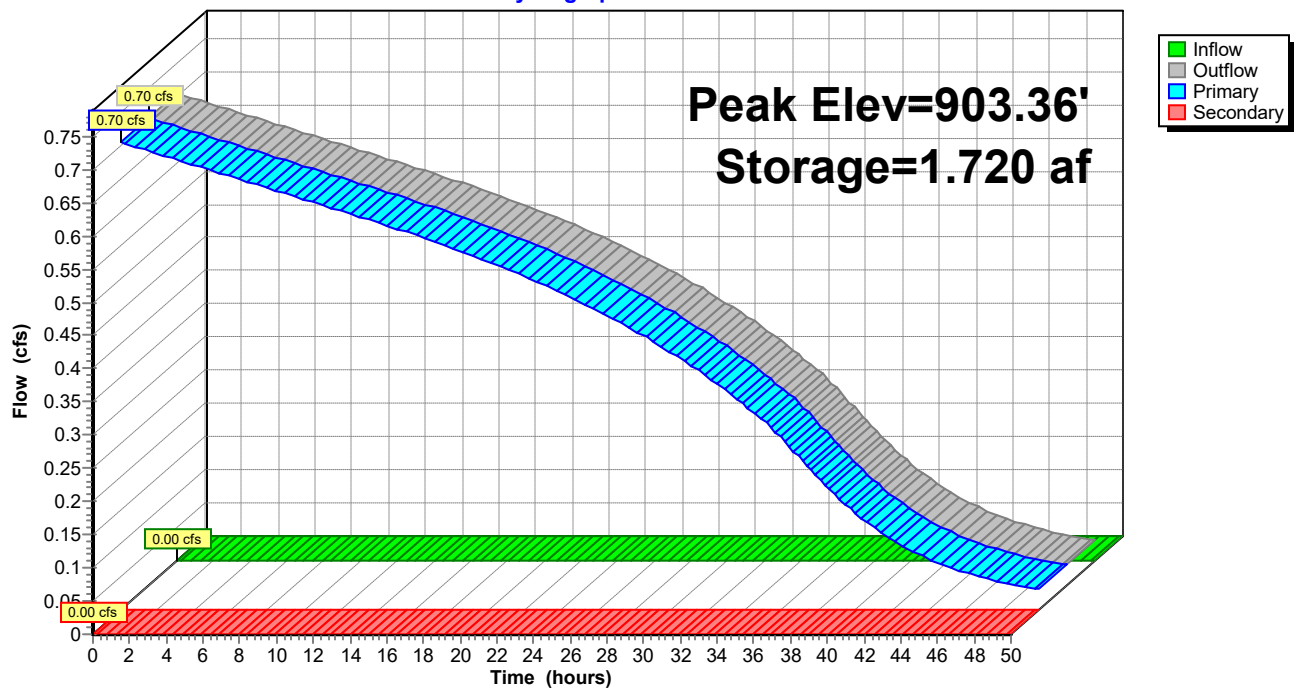
4=Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=903.36' (Free Discharge)

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 46P: Basin 01 WQ

Hydrograph



Hydrograph for Pond 46P: Basin 01 WQ

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	1.720	903.36	0.70	0.70	0.00
1.00	0.00	1.662	903.33	0.70	0.70	0.00
2.00	0.00	1.605	903.30	0.69	0.69	0.00
3.00	0.00	1.549	903.28	0.68	0.68	0.00
4.00	0.00	1.493	903.25	0.67	0.67	0.00
5.00	0.00	1.438	903.22	0.66	0.66	0.00
6.00	0.00	1.384	903.20	0.65	0.65	0.00
7.00	0.00	1.330	903.17	0.64	0.64	0.00
8.00	0.00	1.277	903.15	0.64	0.64	0.00
9.00	0.00	1.225	903.12	0.63	0.63	0.00
10.00	0.00	1.174	903.09	0.62	0.62	0.00
11.00	0.00	1.123	903.07	0.61	0.61	0.00
12.00	0.00	1.073	903.05	0.60	0.60	0.00
13.00	0.00	1.024	903.02	0.59	0.59	0.00
14.00	0.00	0.975	903.00	0.58	0.58	0.00
15.00	0.00	0.927	902.97	0.57	0.57	0.00
16.00	0.00	0.880	902.95	0.56	0.56	0.00
17.00	0.00	0.834	902.92	0.56	0.56	0.00
18.00	0.00	0.788	902.90	0.55	0.55	0.00
19.00	0.00	0.744	902.87	0.54	0.54	0.00
20.00	0.00	0.700	902.85	0.52	0.52	0.00
21.00	0.00	0.657	902.82	0.51	0.51	0.00
22.00	0.00	0.615	902.79	0.50	0.50	0.00
23.00	0.00	0.574	902.76	0.49	0.49	0.00
24.00	0.00	0.534	902.74	0.48	0.48	0.00
25.00	0.00	0.495	902.71	0.46	0.46	0.00
26.00	0.00	0.458	902.68	0.45	0.45	0.00
27.00	0.00	0.421	902.65	0.44	0.44	0.00
28.00	0.00	0.386	902.62	0.42	0.42	0.00
29.00	0.00	0.351	902.59	0.40	0.40	0.00
30.00	0.00	0.319	902.56	0.39	0.39	0.00
31.00	0.00	0.288	902.52	0.37	0.37	0.00
32.00	0.00	0.258	902.49	0.35	0.35	0.00
33.00	0.00	0.230	902.46	0.33	0.33	0.00
34.00	0.00	0.204	902.43	0.31	0.31	0.00
35.00	0.00	0.179	902.39	0.29	0.29	0.00
36.00	0.00	0.157	902.36	0.26	0.26	0.00
37.00	0.00	0.137	902.33	0.23	0.23	0.00
38.00	0.00	0.119	902.30	0.20	0.20	0.00
39.00	0.00	0.104	902.28	0.17	0.17	0.00
40.00	0.00	0.091	902.25	0.15	0.15	0.00
41.00	0.00	0.080	902.23	0.12	0.12	0.00
42.00	0.00	0.070	902.21	0.11	0.11	0.00
43.00	0.00	0.062	902.19	0.09	0.09	0.00
44.00	0.00	0.055	902.17	0.08	0.08	0.00
45.00	0.00	0.049	902.16	0.07	0.07	0.00
46.00	0.00	0.044	902.15	0.06	0.06	0.00
47.00	0.00	0.040	902.14	0.05	0.05	0.00
48.00	0.00	0.036	902.13	0.04	0.04	0.00
49.00	0.00	0.033	902.12	0.04	0.04	0.00
50.00	0.00	0.030	902.11	0.03	0.03	0.00

Summary for Pond 48P: Basin 01 Skimmer

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.67 cfs @ 0.00 hrs, Volume= 2.054 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.67 cfs @ 0.00 hrs, Volume= 2.054 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-50.00 hrs, dt= 0.01 hrs

Starting Elev= 903.53' Surf.Area= 2.098 ac Storage= 2.075 af

Peak Elev= 903.53' @ 0.00 hrs Surf.Area= 2.098 ac Storage= 2.075 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no inflow)

Volume Invert Avail.Storage Storage Description

#1 902.00' 14.168 af **Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
902.00	0.230	0.000	0.000	0.230
903.00	2.030	0.981	0.981	2.030
904.00	2.160	2.095	3.076	2.162
905.00	2.290	2.225	5.300	2.295
906.00	2.420	2.355	7.655	2.427
907.00	2.540	2.480	10.135	2.550
908.00	2.670	2.605	12.740	2.683
908.30	2.820	0.823	13.563	2.833
908.50	3.230	0.605	14.168	3.243

Device Routing Invert Outlet Devices

#1 Primary 902.00' **18.0" Round RCP_Round 18"**
 L= 30.0' RCP, square edge headwall, Ke= 0.500
 Inlet / Outlet Invert= 902.00' / 901.85' S= 0.0050 ' / Cc= 0.900
 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf

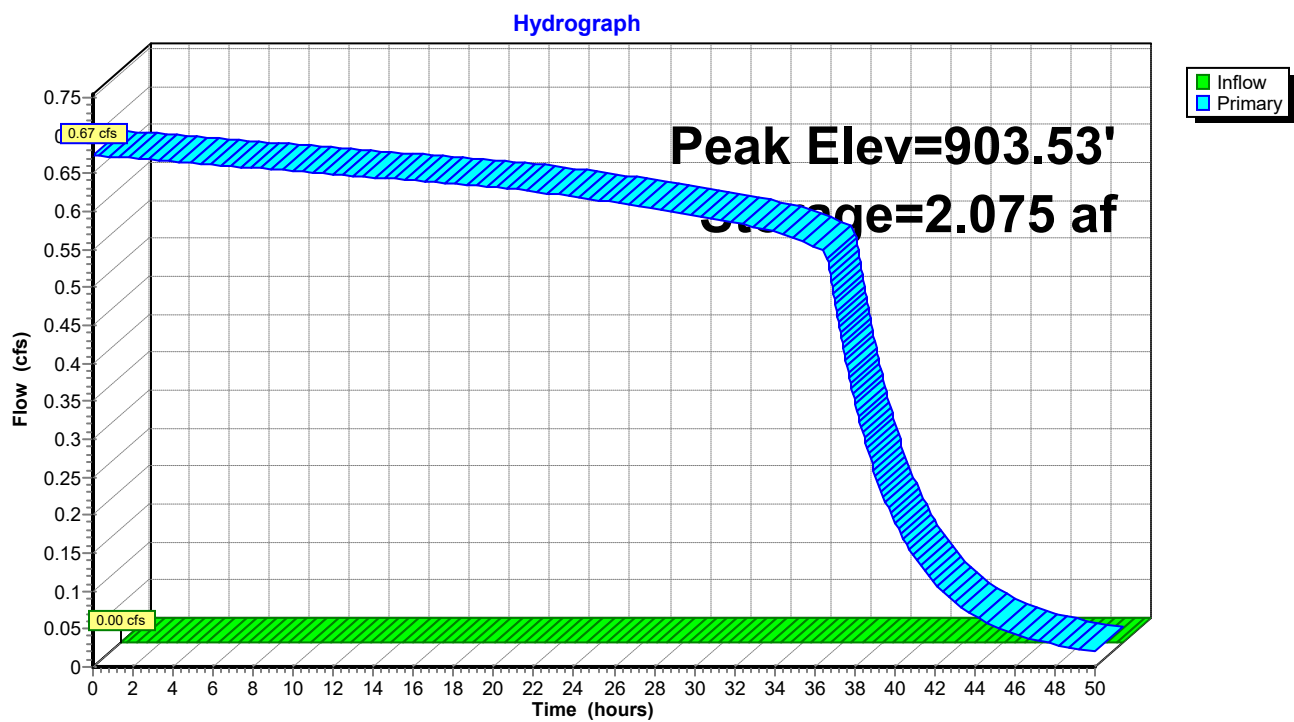
#2 Device 1 902.00' **Marlee Float 6 in - 6 in orifice**

Primary OutFlow Max=0.67 cfs @ 0.00 hrs HW=903.53' (Free Discharge)

↑ **1=RCP_Round 18"** (Passes 0.67 cfs of 6.12 cfs potential flow)

↑ **2=Marlee Float 6 in - 6 in orifice** (Custom Controls 0.67 cfs)

Pond 48P: Basin 01 Skimmer



Hydrograph for Pond 48P: Basin 01 Skimmer

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	2.075	903.53	0.67
1.00	0.00	2.019	903.50	0.67
2.00	0.00	1.964	903.48	0.67
3.00	0.00	1.909	903.45	0.67
4.00	0.00	1.854	903.42	0.67
5.00	0.00	1.799	903.40	0.66
6.00	0.00	1.744	903.37	0.66
7.00	0.00	1.689	903.35	0.66
8.00	0.00	1.635	903.32	0.66
9.00	0.00	1.581	903.29	0.66
10.00	0.00	1.526	903.27	0.65
11.00	0.00	1.473	903.24	0.65
12.00	0.00	1.419	903.21	0.65
13.00	0.00	1.365	903.19	0.65
14.00	0.00	1.312	903.16	0.64
15.00	0.00	1.259	903.14	0.64
16.00	0.00	1.206	903.11	0.64
17.00	0.00	1.153	903.08	0.64
18.00	0.00	1.100	903.06	0.64
19.00	0.00	1.048	903.03	0.63
20.00	0.00	0.995	903.01	0.63
21.00	0.00	0.943	902.98	0.63
22.00	0.00	0.891	902.95	0.63
23.00	0.00	0.839	902.93	0.62
24.00	0.00	0.788	902.90	0.62
25.00	0.00	0.737	902.87	0.62
26.00	0.00	0.686	902.84	0.61
27.00	0.00	0.636	902.81	0.61
28.00	0.00	0.586	902.77	0.60
29.00	0.00	0.536	902.74	0.60
30.00	0.00	0.487	902.70	0.59
31.00	0.00	0.438	902.66	0.59
32.00	0.00	0.389	902.62	0.59
33.00	0.00	0.341	902.58	0.58
34.00	0.00	0.293	902.53	0.57
35.00	0.00	0.246	902.48	0.57
36.00	0.00	0.200	902.42	0.55
37.00	0.00	0.156	902.36	0.48
38.00	0.00	0.122	902.31	0.35
39.00	0.00	0.097	902.26	0.26
40.00	0.00	0.079	902.23	0.19
41.00	0.00	0.065	902.20	0.14
42.00	0.00	0.054	902.17	0.11
43.00	0.00	0.046	902.15	0.08
44.00	0.00	0.040	902.14	0.07
45.00	0.00	0.035	902.12	0.05
46.00	0.00	0.031	902.11	0.04
47.00	0.00	0.028	902.10	0.04
48.00	0.00	0.025	902.09	0.03
49.00	0.00	0.023	902.09	0.03
50.00	0.00	0.021	902.08	0.02

Events for Pond 8P: Basin 02 Skimmer

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	0.00	1.26	904.25	3.856

Events for Pond 9P: Basin 02 Temp. Raised Micropool/Forebay

Event	Elevation (feet)	Storage (acre-feet)
1 yr	0.00	0.000

Events for Pond 10P: Basin 02 WQ

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	0.00	1.37	1.37	0.00	903.86	3.578

Events for Pond 37P: Basin 01 Micropool/Forebay

Event	Elevation (feet)	Storage (acre-feet)
1 yr	0.00	0.000

Events for Pond 46P: Basin 01 WQ

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	0.00	0.70	0.70	0.00	903.36	1.720

Events for Pond 48P: Basin 01 Skimmer

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	0.00	0.67	903.53	2.075

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Project Reports

- 1 Routing Diagram
- 2 Rainfall Events Listing (selected events)

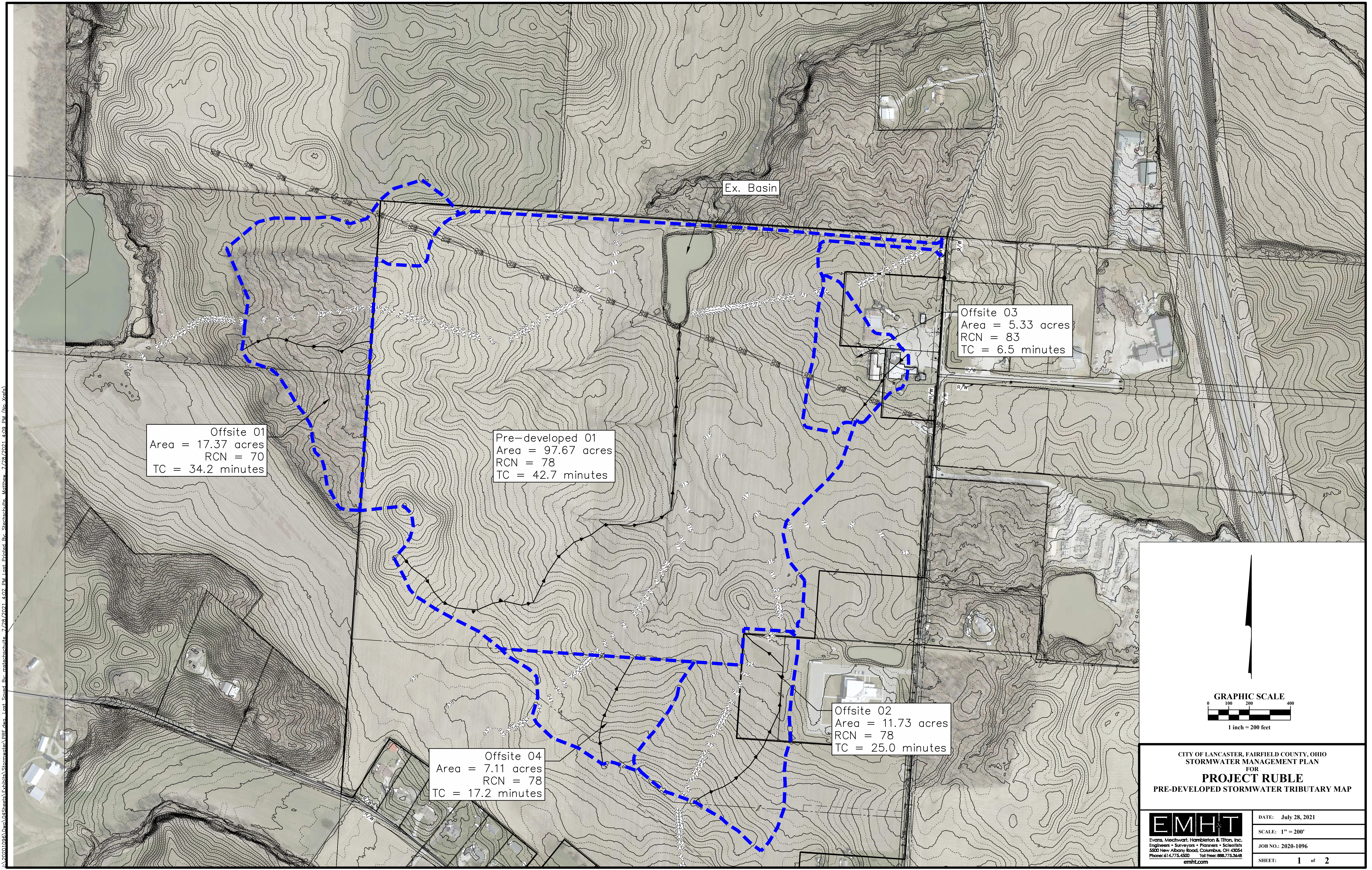
1 yr Event

- 3 Pond 8P: Basin 02 Skimmer
- 6 Pond 9P: Basin 02 Temp. Raised Micropool/Forebay
- 7 Pond 10P: Basin 02 WQ
- 10 Pond 37P: Basin 01 Micropool/Forebay
- 11 Pond 46P: Basin 01 WQ
- 14 Pond 48P: Basin 01 Skimmer

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- 18 Pond 9P: Basin 02 Temp. Raised Micropool/Forebay
- 19 Pond 10P: Basin 02 WQ
- 20 Pond 37P: Basin 01 Micropool/Forebay
- 21 Pond 46P: Basin 01 WQ
- 22 Pond 48P: Basin 01 Skimmer

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Offsite 01
Area = 17.37 acres
RCN = 70
TC = 34.2 minutes


Pre-developed 01
Area = 97.67 acres
RCN = 78
TC = 42.7 minutes

Offsite 02
Area = 11.73 acres
RCN = 78
TC = 25.0 minutes


Offsite 03
Area = 5.33 acres
RCN = 83
TC = 6.5 minutes

Offsite 04
Area = 7.11 acres
RCN = 78
TC = 17.2 minutes

Ex. Basin


GRAPHIC SCALE
0 100 200 400
1 inch = 200 feet

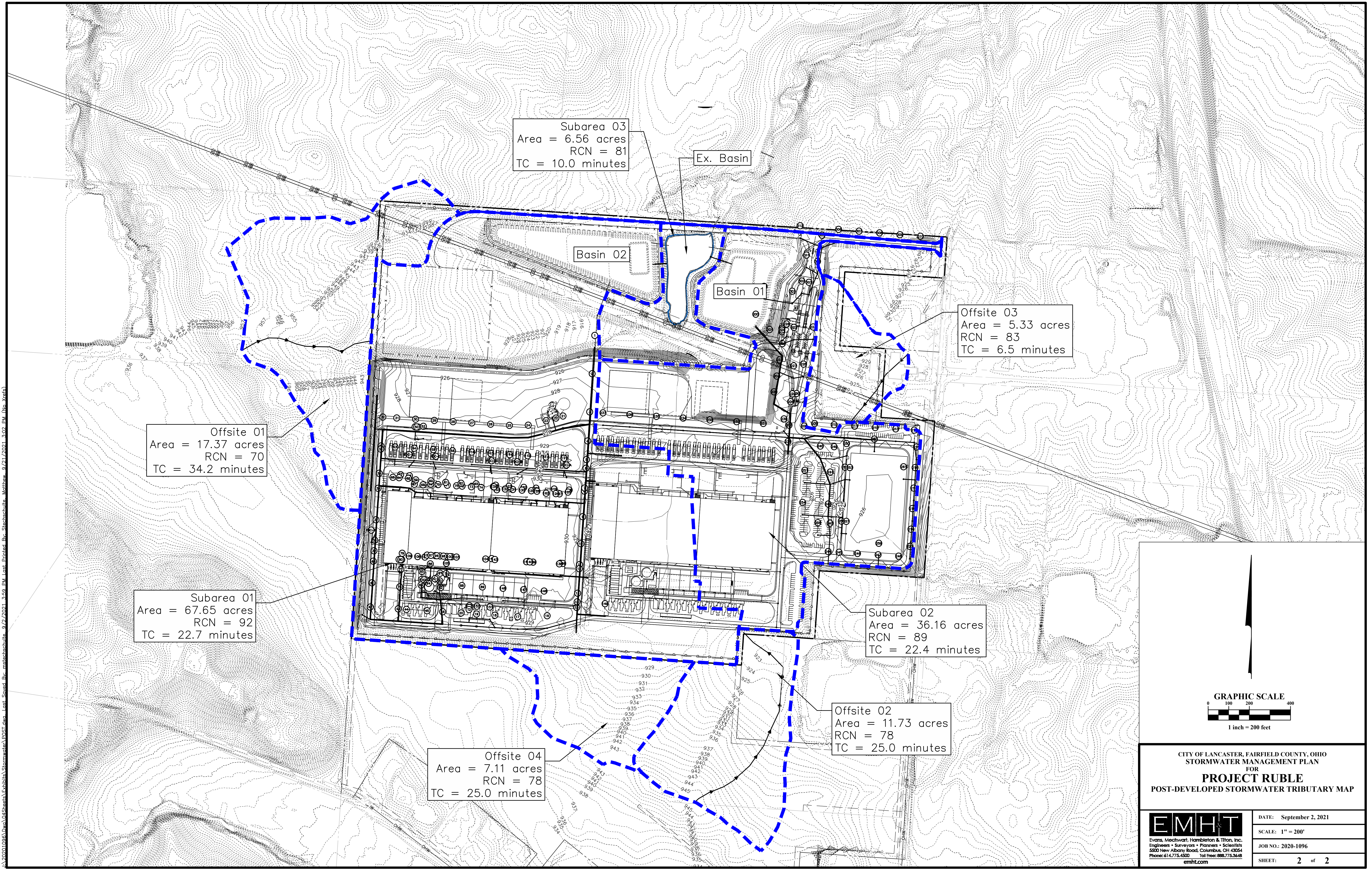
CITY OF LANCASTER, FAIRFIELD COUNTY, OHIO
STORMWATER MANAGEMENT PLAN
FOR
PROJECT RUBLE
PRE-DEVELOPED STORMWATER TRIBUTARY MAP


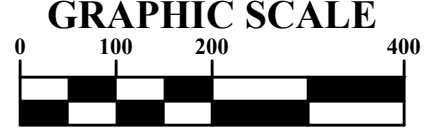


Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com


DATE:	July 28, 2021
SCALE:	1" = 200'
JOB NO.:	2020-1096
SHEET:	1 of 2

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1 inch = 200 feet

CITY OF LANCASTER, FAIRFIELD COUNTY, OHIO
STORMWATER MANAGEMENT PLAN
FOR
PROJECT RUBLE
POST-DEVELOPED STORMWATER TRIBUTARY MAP



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5500 New Albany Road, Columbus, OH 43054
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DATE: September 2, 2021

SCALE: 1" = 200'

JOB NO.: 2020-1096

SHEET: 2 of 2

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

11/29/2021 5:17:40 PM

in

Case No(s). 21-0860-EL-BLN

Summary: Notice Docket Permit electronically filed by Hector Garcia-Santana on
behalf of AEP Ohio Transmission Company, Inc.