



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

CHAPTER 105 WATER OBSTRUCTIONS AND ENCROACHMENT GENERAL PERMIT REGISTRATION

SECTION A. APPLICANT INFORMATION

Applicant's Name / Client Sunoco Pipeline LP	DEP Client ID# (if known)	Employer ID# (EIN) 23-3102656	
Client Information - Please select Client Type / Code from drop down box under the correct entity shown below. (or may be written in) ↓			
Government	Non-Government	Individual	
	PARTL Partnership-Limited		
Mailing Address 7 East Sixth Avenue	City Trenton	State NJ	ZIP + 4 08619
Contact Person – Last Name Greblunas	First John	MI	Suffix
			Telephone (302) 383-6025
Email Address john.greblunas@energytransfer.com			

SECTION B. CONSULTANT INFORMATION (If applicable) ☐ N/A

Contact Person – Last Name Gaskins	First Peter	MI	Suffix	Consultants Title Sr Environmental Scientist	Consulting Firm AED Energy Services LLC
Mailing Address 1105 Berkshire Blvd, Suite 320	City Wyomissing			State PA	ZIP + 4 19610
Telephone (610) 780-1559	Fax ()			Employer ID# (EIN) 93-2964460	
Email pgaskins@aedenergyservices.com					

SECTION C. PROJECT INFORMATION

Project / Site Name TWIN-NWRK Investigations Dig 16			DEP Site ID# (if known or leave blank)		
Client Relationship - Please select Site-to-Client Relationship / Code from drop down box to the right. (or may be written in) →			Double-click on shaded area below to select correct Site-to-Client Relationship / Code ↓ OWNOP Owner/Operator		
County Montgomery	Municipality Upper Dublin	☐ City ☐ Borough ☒ Township	Note: Municipal & County Notification is Required		
Site Location / Address (see coordinates below)		City Fort Washington	State PA	ZIP + 4 19034	
Latitude: 40.13360			Longitude: -75.18179		

SECTION D. REGISTRATION CHECKLIST AND REQUIREMENTS

PLEASE PLACE AN "X" NEXT TO EACH ITEM (1-11) TO ENSURE IT IS COMPLETED AND/OR PROVIDED. Unless otherwise specified, ALL ITEMS are required to ensure a complete Registration package. See [GP Registration Instructions](#) (3150-PM-BWEW0500) for additional details.

1. **Registering a General Permit (GP):** Check all GPs which you are registering. Enter project details to calculate applicable fee. See [Chapter 105 Fee Calculation Worksheet](#) (3150-PM-BWEW0553) for additional details

APPLICANT ENTRY				DEP ONLY
Federal, State, county or municipal agency or municipal authority:			☐ EXEMPT from fees	☐
☐ GP-1	Fish Habitat Enhancement Structures	Per Project	\$ 50 = \$ _____	☐
☐ GP-2	Small Docks and Boat Launching Ramps	Per Dock / Ramp _____ (#) x	\$ 175 = \$ _____	☐
☐ GP-3	Bank Rehabilitation, Bank Protection and Gravel Bar Removal	Per Project _____ (#) x	\$ 250 = \$ _____	☐
☐ GP-4	Intake and Outfall Structures	Per Structure _____ (#) x	\$ 200 = \$ _____	☐
☐ GP-5	Utility Line Stream Crossings	Utility Lines _____ (#) x Per Crossing _____ (#) x	\$ 250 = \$ _____	☐
☐ GP-6	Agricultural Crossings and Ramps	Per Crossing / Ramp _____ (#) x	\$ 50 = \$ _____	☐
☐ GP-7	Minor Road Crossings	Per Crossing _____ (#) x	\$ 350 = \$ _____	☐
☒ GP-8	Temporary Road Crossings.....	Per Crossing <u>4</u> (#) x	\$ 175 = \$ <u>700</u>	☐
☐ GP-9	Agricultural Activities	Per Project	\$ 50 = \$ _____	☐
☐ GP-10	Abandoned Mine Reclamation	Per Project	\$ 500 = \$ _____	☐
☒ GP-11	Maintenance, Testing, Repair, Rehabilitation, or Replacement of Water Obstructions and Encroachments.....		\$ 750 = \$ <u>750</u>	☐
	☒ Temporary Disturbance (\$400/0.1ac).....	<u>0.1</u> acres x	\$4,000 = + \$ <u>400</u>	☐
	☐ Permanent Disturbance (\$800/0.1ac)	<u>0.1</u> acres x	\$8,000 = + \$ <u>800</u>	☐
GP-11 subtotal			= \$ _____	☐
☐ GP-15	Private Residential Construction in Wetlands.....		\$ 750 = \$ _____	☐
	☐ Temporary Disturbance (\$400/0.1ac).....	_____ acres x	\$4,000 = + \$ _____	☐
	☐ Permanent Disturbance (\$800/0.1ac)	_____ acres x	\$8,000 = + \$ _____	☐
GP-15 subtotal			= \$ _____	☐
TOTAL OF ALL GP FEES			= \$ <u>2,650</u>	☒

APPLICANT ENTRY		DEP ONLY
2. Location Map with project site marked: (Note: PNDI Search Receipt Map is sufficient)	☒	☒
3. Color Photographs showing proposed activity and resource area, as recommended in the instructions.	☒	☒
4. Project Description including proposed impacts and potential coordination with the Federal Energy Regulatory Commission (FERC) or a separate/individual 401 Water Quality Certification.	☒	☒
5. Site Plan & Other Drawings showing all proposed project activities. Sample Drawings are available. NOTE - For registrations of a GP-7 or GP-11, some activities for use by the general public may require a Professional Engineer Seal and Certification. See GP Registration Instructions for specific details.	☒	☒
6. Chapter 102 (Erosion and Sediment Control): Select ONE option to indicate how compliance is being obtained. See GP Registration Instructions for more information.		
a. For GP-9: Has a Conservation Plan been approved by the county conservation district?	☐	☐
b. For GP-11: The E&S Plan is attached.	☒	☒
c. For Oil & Gas activities: The E&S Plan is attached OR a separate E&S permit (ESCGP) has been submitted.	☐	☐
d. All Other GPs: Will obtain an approved E&S Plan prior to commencement of construction.	☐	☐
7. Changes in Waterway Opening and Registration of Multiple Structures: Is this a GP-11? ☐ Yes ☒ No If Yes, provide the information below:		
a. Bridge Or Culvert Replacement Projects or Projects That Change the Waterway Opening form (3150-PM-BWEW0552B) or equivalent.	☐	☐
b. Registrations of multiple structures: Project Inventory form (3150-PM-BWEW0552A) or equivalent.	☐	☐
8. Pennsylvania Natural Diversity Inventory (PNDI): PNDI Search Receipt AND clearance letters. NOTE - Concurrent review does not apply to Chapter 105 GPs. See GP Registration Instructions for more information.	☒	☒
9. Wetlands: Are wetlands present at the project site? ☒ Yes ☐ No If Yes, provide the information below:		
a. A wetland delineation report following the method as detailed in the GP Registration Instructions .	☒	☒
b. Method to provide Compensatory Mitigation for impacts which require compensatory mitigation , as detailed in the GP Registration Instructions .	☐	☐
10. Proposed Impacts: General Permit Aquatic Resource Impact Table form (3950-PM-BWEW0560) or equivalent.	☒	☒
11. Submerged Lands of the Commonwealth: In certain situations, a Submerged Lands License Agreement (SLLA) is required, but not all waters are Submerged Lands of the Commonwealth. The final determination is made by DEP. See GP Registration Instructions for more information. Select ONE option to indicate how an SLLA is being addressed.		
a. I believe an SLLA is required and have attached plans including the facility area information. OR	☐	☐
b. I believe an SLLA is not required or I am unsure.	☒	☒



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Applicant's Name / Client Sunoco Pipeline LP

GENERAL PERMIT AQUATIC RESOURCE IMPACT TABLE
FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT GENERAL PERMIT REGISTRATION

[illegible]

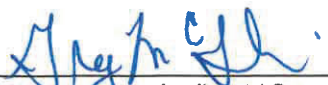


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DEP USE ONLY		
US Army Corps of Engineers impacts for PASPGP determination	TOTAL linear feet of stream impacts	
	TOTAL acres of waters impacted	

SECTION E. CERTIFICATION

I certify under penalty of law that the information provided in this permit registration is true and correct to the best of my knowledge and information and that I possess the authority to undertake the proposed action. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (If any of the information and/or plans is found to be in error, falsified, and/or incomplete, this authorization/verification may be subject to modification, suspension, or revocation in accordance with applicable regulations.) I further certify that this project complies with all the conditions of the general permit.



Applicant / Owner Signature


Typed / Printed Name

Date 3/11/25

This General Permit shall not be effective until the owner has had their E&S Plan reviewed by the appropriate Regional Office or District, and, where required, obtained an SLLA from DEP.

Please provide a copy of the Registration form to the Municipality & County in which the work will be performed.
Proof of receipt is not required to be provided to DEP.

**THIS ACKNOWLEDGED COPY OF THIS GENERAL PERMIT REGISTRATION PACKAGE AND THE E&S PLAN
MUST BE AVAILABLE AT THE PROJECT SITE DURING CONSTRUCTION.**



STOP! THE REMAINDER OF THIS FORM WILL BE COMPLETED BY DEP STAFF.



SECTION F. DECISION / DISPOSITION – COMPLETED BY DEP

Decision Review:



DEP / District Reviewer Signature

Abdel Nassani

Reviewer's Typed / Printed Name

GP GP114601225-009

GP GP084601225-003

GP _____

Disposition Status:

☒ **ACKNOWLEDGED**

SLLA Required

☐ **ELIGIBILITY DEFICIENCY ***

☐ **EXTENSION REQUEST ***

☐ **WITHDRAWN**

Date 3/24/2025

☐ Yes Attached ☒ No

Date _____

Date _____

Date _____

Comments

OK to be issued

* If the GP registration information is incomplete/deficient a copy of this registration form and requested additional information **must be re-submitted within 60 calendar days** unless extended by the extension date listed above. See [GP Registration Instructions](#) for more information

FEDERAL AUTHORIZATION:

☐ As proposed, this General Permit does not require Federal Authorization.

☒ Non-reporting PASPGP verification / authorization attached.

☐ Reporting * – A copy of this General Permit registration package has been sent to the U.S. Army Corps of Engineers. Separate federal authorization may be required.

* If the reporting box is checked **you do not have Federal authorization** for this project and **such authorization may be required prior to starting your project**. In accordance with procedures established with the U.S. Army Corps of Engineers, you will be contacted directly by the Corps regarding Federal Authorization.

PENNSYLVANIA STATE PROGRAMMATIC GENERAL PERMIT – 6
(PASPGP-6)
July 1, 2021

Please note: the full text of the PASPGP-6 may be viewed on the Baltimore District web site at <http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx> or by calling the Corps at 814-235-0570

Permittee: Sunoco Pipeline LP

Date of PASPGP-6 Verification: 3/24/2025

State Authorization(s): GP 114601225-009 & GP084601225-003

Corps District:

☐

Baltimore District

U.S. Army Corps of Engineers State College Field Office
1631 South Atherton Street
Suite 101
State College, Pennsylvania 16801-6260
Email: NAB-Regulatory@usace.army.mil



Philadelphia District

U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East Regulatory Branch
Philadelphia, Pennsylvania 19107-3390
Email: PhiladelphiaDistrictRegulatory@usace.army.mil



Pittsburgh District

U.S. Army Corps of Engineers, Regulatory Branch
William S. Moorhead Federal Building, 20th floor
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222-4186
Email: Regulatory.Permits@usace.army.mil

It has been determined that your proposed project, which includes the discharge of dredged and/or fill material and/or the placement of structures into waters of the United States, including wetlands, qualifies for federal authorization under the provisions of Section 404 of the Clean Water Act and /or Section 10 of the River and Harbor Act of 1899, under the terms and conditions of the PASPGP-6.

All activities authorized under PASPGP-6 must comply with all conditions of the authorization, including General, Procedural, and Special Conditions. Failure to comply with all the conditions of the authorization, including project special conditions, will constitute a permit violation and may be subject to criminal, civil, or administrative penalties, and /or restoration.

The authorized activity must be performed in compliance with the following General Conditions to be authorized under PASPGP-6:

General Conditions:

1. Permit Conditions: The permittee shall conduct all work and activities in waters of the United States, including jurisdictional wetlands, in strict compliance with the approved authorization/verification including all final maps, plans, profiles, and design specifications.
2. 401 State Water Quality Certification (SWQC) Conditions: The permittee shall comply with the following conditions unless a project specific SWQC is required as identified below:
 - a. Prior to beginning any activity authorized by the Corps under PASPGP-6, the applicant shall obtain from the Department all necessary environmental permits, authorizations or approvals, and submit to the Department environmental assessments and other information necessary to obtain the permits and approvals, as required under state law, including The Clean Streams Law (35 P.S. §§ 691.1—691.1001), the Dam Safety and Encroachments Act (32 P.S. §§ 693.1—693.27), the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1—1396.19b), the Noncoal Surface Mining Conservation and Reclamation Act (52 P.S. §§ 3301—3326), the Bituminous Mine Subsidence and Land Conservation Act (52 P.S. §§ 1406.1—1406.21), the Coal Refuse Disposal Control Act (52 P.S. §§ 30.51—30.66), the Solid Waste Management Act (35 P.S. §§ 6018.101—6018.1003), the Hazardous Sites Cleanup Act (35 P.S. §§ 6020.101—6020.1305), the Land Recycling and Environmental Remediation Standards Act (35 P.S. §§ 6026.101—6026.908), 58 Pa.C.S. §§ 3201—3274 (related to development), the Air Pollution Control Act (35 P.S. §§ 4001—4015), the Storage Tank and Spill Prevention Act (35 P.S. §§ 6021.101—6021.2104) and the regulations promulgated thereunder, including 25 Pa. Code Chapters 16, 71, 77, 78, 78a, 86—91, 92a, 93, 95, 96, 102, 105, 106, 127, 245 and 260a—299.
 - b. Fill material may not contain any wastes as defined in the Solid Waste Management Act.
 - c. Applicants and projects eligible for the PASPGP-6 must obtain all state permits or approvals, or both, necessary to ensure that the project meets the state's applicable water quality standards, including a project-specific SWQC.

Note: As part of PADEP's issuance of 401 SWQC for PASPGP-6 on February 12, 2021, the following was included to clarify the meaning of this condition:

This 401 SWQC is only available for projects that do not require any federal authorization other than authorization from the Corps under Section 404 of the Act or Section 10 of the Rivers and Harbors Act of 1899. Applicants seeking authorization for activities not eligible for coverage under PASPGP-6, or for activities that require another federal authorization (such as an interstate natural gas pipeline, a gas storage field or a nuclear or hydroelectric project requiring authorization by another federal agency), must submit a request to the Department for a project-specific SWQC. The scope of the issuance of this SWQC is related only to the scope and applicability of the proposed PASPGP-6. Any activity or project requiring the Department to

issue 401 SWQC that is beyond the scope of the proposed PASPGP-6 or other programmatically issued SWQC (e.g. Nationwide Permits) will require the applicant to obtain a project-specific SWQC from the Department. This would include any activity or project requiring a SWQC associated with an authorization, permit or license issued by a federal agency, such as Federal Energy Regulatory Commission or Nuclear Regulatory Commission. Such activities or projects include, but are not limited to, an interstate natural gas pipeline, a gas storage field or a nuclear or hydroelectric project.

3. Terms and Conditions Related to Coastal Zone Management Act (CZMA) Certification: For those projects located within Pennsylvania's Coastal Zones, Non-Reporting Activities have General CZMA consistency determination and Reporting Activities must obtain individual CZMA consistency determination (see General Condition 30(b)).
4. 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 crossing cannot be used, then culverts should be designed, constructed, and appropriately depressed, if possible, below the stream invert to minimize adverse effects to aquatic life movements.
5. Threatened and Endangered Species: By signing the Pennsylvania Natural Diversity Inventory (PNDI) receipt, the permittee has agreed to comply with all avoidance measures identified by the PNDI receipt. The applicant may also agree in writing to comply with all avoidance measures identified in U.S. Fish and Wildlife Service (USFWS) correspondence, including IPaC, as part of the application. To ensure compliance with the Endangered Species Act (ESA), those avoidance measures associated with federally listed, threatened, or endangered species are a condition of the PASPGP-6 verification, unless modified by the Corps.

If an activity is verified under the PASPGP-6, and a federally listed, threatened, or endangered species, or proposed species, is subsequently found to be present, all work must cease, and the Corps and USFWS (or National Marine Fisheries Service (NMFS)) must be notified by telephone immediately (contact information below). The PASPGP-6 verification is automatically suspended without additional notification to the permittee and will not be re-issued until consultation pursuant to Section 7 of the ESA is concluded and adverse effects to federally listed, threatened, endangered, and proposed species are avoided, or incidental take authorization issued.

Furthermore, persons have an independent responsibility under Section 9 of the ESA to avoid any activity that could result in the "take" of a federally listed species.

USFWS:
Pennsylvania Field Office
110 Radnor Rd; Suite 101
State College, PA 16801
office phone: 814 234-4090
fax: 814-234-0748 or 814 206-7452

NMFS:
Ms. Jennifer Anderson
Assistant Regional Administrator
Protected Resources Division NOAA Fisheries
55 Greater Republic Drive
Gloucester, Massachusetts 01930

6. Spawning Areas: The permittee shall comply with all time-of-year-restrictions (see below) associated with spawning areas as set forth by the Pennsylvania Fish and Boat Commission (PFBC) or other designated agency. Discharges or structures in spawning or nursery areas shall not occur during spawning seasons unless written approval is obtained from the PFBC or another designated agency. In addition, work in areas used for other time sensitive life span activities of fish and wildlife (such as hibernation or migration) may necessitate the use of seasonal restrictions for avoidance of adverse impacts to vulnerable species. Impacts to these areas shall be avoided or minimized to the maximum extent practicable during all other times of the year.

Wild Trout	October 1 - December 31
Class A Wild Trout	October 1 - April 1

List of Trout Streams found at:

<https://www.fishandboat.com/Fish/PennsylvaniaFishes/Trout/Pages/TroutWaterClassifications.aspx>.

7. Shellfish Production: No discharge of dredged and/or fill material and/or the placement of structures may occur in areas of concentrated shellfish production, unless the discharge is directly related to an authorized shellfish harvesting activity.
8. Adverse Effects From Impoundment: If the regulated activity creates an impoundment of water, the adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow, including impacts to wetlands, shall be minimized to the maximum extent practicable.
9. Management of High 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 pre-construction course, condition, capacity,

and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Erosion and Sediment Controls: Appropriate soil erosion and sediment controls, in accordance with state regulations, 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, including jurisdictional wetlands, during periods of low-flow or no-flow, or during low tides.
11. Suitable Material: No activities, including discharges of dredged and/or fill material or the placement of structures, may consist of unsuitable material (i.e., asphalt, trash, debris, car bodies, etc.). No material discharged shall contain toxic pollutants in amounts that would violate the effluent limitation standards of § 307 of the Clean Water Act (CWA).
12. Temporary Fill and Structures: Temporary fill (i.e., access roads and cofferdams) and structures in waters and/or wetlands authorized by PASPGP-6 shall be properly constructed and stabilized during use to prevent erosion and accretion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade, unless such requirement is specifically waived by the Corps. Whenever possible, rubber or wooden mats should be used for equipment access through wetlands to the project area. Temporary fills and structures shall be removed, in their entirety, to an upland site, and suitably contained to prevent erosion and transport to a waterway or wetland. Temporarily impacted areas shall be restored to their preconstruction contours, elevations, and hydrology, and revegetated with a wetland seed mix that contains non-invasive, native species, to the maximum extent practicable. Unless approved by the Corps, the restoration work must be completed within 30 days of the date the temporary fill/structure is no longer needed.
13. Equipment Working in Wetlands: Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
14. Installation and Maintenance: Any regulated structure or fill authorized by PASPGP-6 shall be properly installed and maintained to ensure public safety.
15. PASPGP-6 Authorization:
 - a. PASPGP-6 expires June 30, 2026, unless suspended or revoked.
 - b. Verifications of PASPGP-6 expire June 30, 2026, unless the PASPGP-6 permit is suspended, revoked, or the PADEP authorization expires, whichever date occurs sooner. Activities authorized under PASPGP-6 that have commenced construction or are under contract to commence construction will remain authorized provided the activity is completed within 12 month of the date of the PASPGP-6 expiration, modification, or revocation; or until the expiration date of the project specific verification, whichever is sooner.

16. One-Time Use: A PASPGP-6 verification is valid to construct the project, or perform the activity, one time only, except for PASPGP-6 verifications specifically issued for reoccurring maintenance activities.
17. Water Supply Intakes: No regulated activity may occur in the proximity of a public water supply intake and adversely impact the public water supply. In order to minimize the effects of intakes on anadromous fish eggs and larvae, and oyster larvae, intake structures should be equipped with screening (with mesh size no larger than 2 mm) of wedge wire or another material of equal or better performance. Where feasible, intakes should be located away from spawning or nursery grounds, or to minimize the impingement on, or entrainment of, eggs or larvae. In addition, intake velocities should not exceed 0.5 ft/sec.
18. Historic Properties: For all activities verified under a PASPGP-6, upon the unanticipated discovery of any previously unknown historic properties (historic or archeological), all work must cease immediately, and the permittee must notify the State Historic Preservation Officer (SHPO) and the Corps. The Corps will contact the tribes with whom they routinely consult, within 24 hours in accordance with each District's tribal consultation process. PASPGP-6 may be re-verified, and special conditions added if necessary, after an effect's determination on historic properties and/or tribal resources is made, in consultation with the SHPO, the tribes and other interested parties. The PASPGP-6 verification may be modified and/or rescinded for the specific activity if an adverse effect on the historic property cannot be avoided, minimized, or mitigated.
19. 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.
20. Corps Civil Works Projects: The PASPGP-6 does not authorize any work which will interfere with an existing or proposed Corps Civil Works project, or any Corps-owned or managed property or easement (i.e., flood control projects, dams, reservoirs, and navigation projects), unless specifically approved by the Corps in writing. Pursuant to 33 U.S.C 408, a review by, or permission from the Corps is required for activities that will alter or temporarily or permanently occupy or use a Corps federally authorized Civil Works project. Any activity that requires Section 408 permission and/or review is not authorized by PASPGP-6 until the appropriate Corps office issues the Section 408 permission or completes its review to alter, occupy, or use the Corps Civil Works project, and Corps issues a written PASPGP-6 verification.
21. Navigation: No activity verified under PASPGP-6 may cause more than minimal adverse effect on navigation. No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein. In addition, activities that require temporary causeways that prohibit continued navigational use of a waterway (i.e., temporary causeways extending greater than $\frac{3}{4}$ the width across the waterway) shall be removed in their entirety upon completion of their use. Any safety lights and signals prescribed by the U.S. Coast Guard (USCG), through regulation or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States. The permittee understands and agrees that, if further 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 an 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, 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.

22. Inspections: The permittee shall allow a District Engineer or an authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with all the terms and conditions of PASPGP-6. The District Engineer may also require post-construction engineering drawings (as-built plans) for completed work.
23. Modifications of Prior Verifications: Any proposed modification of a previously verified Single and Complete project that results in a change in the verified impact to, or use of waters of the United States, including jurisdictional wetlands, must be approved by PADEP, or the Corps if applicable. Corps written approval is required if the prior verification was reviewed by the Corps, or if the proposed modification is a Reporting Activity under PASPGP-6. Project modifications that cause a Single and Complete Project to exceed 0.5 acre of loss of waters of the United States, including jurisdictional wetlands (except those identified in Part II A.2. a. and b.), or greater than 1,000 linear feet of permanent jurisdictional stream loss (except those identified in Part II A.2. a and b.), are not eligible for PASPGP-6 and will be forwarded to the Corps for review under an alternative permit review procedure.
24. Recorded Conservation Instruments: As per Part III.D.27 and Part III.E.8 of this permit, proposed Draft Conservation Instruments may be submitted by the applicant as part of the permit application package for review and approval. When such proposed Conservation Instruments are submitted by the applicant, proof of the recorded deed restriction, conservation easement, or deed restricted open space area shall be forwarded to the appropriate Corps District and appropriate PADEP offices, prior to the initiation of any permitted work, unless specifically waived by the Corps in writing. Conservation Instrument templates can be found at:
<http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.aspx>
25. Property Rights: PASPGP-6 does not obviate the need to obtain other federal, state, or local authorizations required by law, nor does the permit grant any property rights or exclusive privileges or authorize any injury to the property or rights of others.
26. Navigable Waters of the United States (Section 10 Waters):

In addition to the other general conditions, the following conditions are applicable for activities in the eligible navigable waters of the United States identified in Appendix B:

- a. For aerial transmission lines, the following minimum clearances are required for aerial electric power transmission lines crossing navigable waters of the United States. These clearances are related to the clearances over the navigable channel provided by the

existing fixed bridges, or the clearances which would be required by the USCG for new fixed bridges, in the vicinity of the proposed aerial transmission line. These clearances are based on the low point of the line under conditions producing the greatest sag, taking into consideration temperature, load, wind, length of span, and type of supports as outlined in the National Electric Safety Code:

Nominal System Voltage (kV)	Minimum Additional Clearance (ft.) Above Clearance Required for Bridges
115 and below	20
138	22
161	24
230	26
350	30
500	35
700	42
750-765	45

- i. Clearances for communication lines, stream gauging cables, ferry cables, and other aerial crossings must be a minimum of ten feet above clearances required for bridges, unless specifically authorized otherwise by the District Engineer.
 - ii. Corps regulation ER 1110-2-4401 prescribes minimum vertical clearances for power communication lines over Corps lake projects. In instances where both regulation and ER 1110-2-4401 apply, the greater minimum clearance is required.
- b. Encasement: The top of any cable, encasement, or pipeline shall be located a minimum of three feet below the existing bottom elevation of the streambed and shall be backfilled with suitable heavy material to the preconstruction bottom elevation. Where the cable, encasement, or pipeline is placed in rock, a minimum depth of one foot from the lowest point in the natural contour of the streambed shall be maintained. When crossing a maintained navigation channel, the requirements are a minimum of eight feet between the top of the cable, encasement, or pipeline and the authorized depth of the navigation channel. For maintained navigational channels, where the utility line is placed in rock, a minimum depth of two feet from the authorized depth of the navigation channel shall be maintained.
- c. As-Built Drawings: Within 60 days of completing an activity that involves an aerial transmission line, submerged cable, or submerged pipeline across a navigable water of the United States (i.e., Section 10 waters), the permittee shall furnish the Corps and National Oceanic and Atmospheric Administration, Nautical Data Branch, N/CS26, Station 7317, 1315 East-West Highway, Silver Spring, Maryland, 20910 with professional, certified as-built drawings, to scale, with control (i.e., latitude/longitude, state plane coordinates), depicting the alignment and minimum clearance of the aerial wires above the mean high water line at the time of survey or depicting the elevations and alignment of the buried cable or pipeline across the navigable waterway.

d. Aids to Navigation: The permittee must prepare and provide for USCG approval, a Private Aids to Navigation Application (CG-2554). The application can be found at: https://media.defense.gov/2017/Nov/20/2001846135/-1/-1/0/CG_2554.pdf. The completed application must be sent to the appropriate USCG office as indicated below:

- i. Baltimore/Philadelphia Districts: Commander Fifth Coast Guard District, 431 Crawford Street, Room 100, Portsmouth, VA 23704-5504, Attn: Mr. Matthew Creelman; by email to Matthew.K.Creelman2@uscg.mil; or by FAX to (757) 398-6303.
- ii. Pittsburgh District: Eighth Coast Guard District, Sector Ohio Valley, USCGC Osage, 300 McKown Ln, Sewickley, PA 15143; phone (412) 741-1180

Within 30 days of the date of receipt of the USCG approval, the permittee must provide a copy to the appropriate Corps district office.

27. PADEP Waiver: If the Corps determines a specific activity, which is eligible for a PADEP Non-reporting Waiver, has a significant adverse impact on life, property or important aquatic resources, the Corps may require the owner to modify the activity to eliminate the adverse condition or to obtain a Corps Individual Permit. In accordance with 33 CFR 325.7(a), "The District Engineer may reevaluate the circumstances and conditions of any permit, including regional permits, either on his own motion, at the request of the permittee, or a third party, or as the result of periodic progress inspections, and initiate action to modify, suspend, or revoke a permit as may be made necessary by considerations of the public interest. In the case of regional permits, this reevaluation may cover individual activities, categories of activities, or geographic areas."
28. Corps Water Releases: For projects located downstream of a Corps dam, the permittee should contact the appropriate Corps, Area Engineer Office, to obtain information on potential water releases and to provide contact information for notification of unscheduled water releases. It is recommended that no in-water work be performed during periods of high-water flow velocities. Any work performed at the project site is at the permittee's own risk.
29. State Authorization: The activity must receive state authorization. For the purpose of this requirement, any one of the following is considered as a state authorization:
 - a. A PADEP Chapter 105 Water Obstruction and Encroachment Permit, including PADEP approved Environmental Assessment pursuant to 25 Pa. Code § 105.15; or
 - b. A PADEP GP issued pursuant to 25 Pa. Code §§ 105.441-105.449; or
 - c. A PADEP approved Environmental Assessment for activities not otherwise requiring a PADEP permit pursuant to 25 Pa. Code § 105.12; or
 - d. A PADEP Dam Permit, including maintenance or repairs of existing authorized dams, including maintenance dredging; or

- e. A PADEP Emergency Permit issued pursuant to 25 Pa. Code § 105.64; or
 - f. A PADEP permit for the construction of a bridge or culvert which allows for maintenance activities of bridges and culverts; or
 - g. A PADEP Chapter 105 Dam Safety and Encroachment Enforcement Action.
30. Other Authorizations: Additional federal, state, and/or local authorizations or approvals may be required and where applicable must be secured by the applicant, prior to initiating any discharge of dredged and/or fill material, and/or the placement of structures into waters of the United States, including jurisdictional wetlands. These approvals include, but are not limited to:
- a. A project specific 401 SWQC issued by PADEP or considered waived, consistent with Section 401 of the CWA.
- PADEP has issued 401 SWQC for activities authorized by PASPGP-6 with conditions. See General Condition 2 for conditions and for identification when a project specific 401 SWQC or a waiver thereof is required. If the permittee cannot comply with all of the conditions of the 401 SWQC previously issued for PASPGP-6, then the permittee must obtain a project specific 401 SWQC or waiver for the proposed discharge in order for the activity to be authorized by PASPGP-6. The Corps 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; and
- b. Reporting Activities located within the designated CZM Areas. Require a CZMA consistency determination issued by PADEP or a presumption of concurrence pursuant to Section 307 of the Federal Coastal Zone Management Act.
- The District Engineer or PADEP may require additional measures to ensure that the authorized activity is consistent with state CAM requirements; and
- c. Fills within the 100-year floodplains. This activity must comply with applicable Federal Emergency Management Agency approved state or local floodplain management requirements.
31. Federal Liability: In issuing this permit and any subsequent activity verification, the federal government does not assume any liability, including but not limited to the following:
- a. Damages to permitted project or users, thereof, as a result of other permitted or unpermitted activities or from natural causes;
 - b. Damages to the permitted project or uses, thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

- d. Design or construction deficiencies associated with the permitted work; and
- e. Damage claims associated with any future modification, suspension, or revocation of the PASPGP-6.

32. False and Incomplete Information: The Corps may modify or rescind a previously issued project specific verification, if it determines that the original verification was issued based on false, incomplete and/or inaccurate information; or other information becomes available whereby such action is necessary to ensure compliance with other federal laws and regulations.

33. Anadromous Fish Waters: To protect anadromous fish during their migration and spawning, no work can take place in the following anadromous fish waterways listed in the table below from March 15 to June 30 unless approved in writing by the Corps. Questions on the applicability of this condition should be directed to the Corps, Philadelphia District.

<u>Waterway</u>	<u>Downstream extent</u>	<u>Upstream extent</u>	<u>Upstream Latitude (N)</u>	<u>Upstream Longitude (E)</u>
<u>Delaware River in Pennsylvania (including W. Branch)</u>	<u>Rte. 220 Bridge</u>	<u>PA/NY Border</u>	<u>41.999448</u>	<u>-75.359573</u>
<u>Lehigh River and adjacent canals</u>	<u>confluence with Delaware River</u>	<u>500 feet upstream of the Cementon Dam</u>	<u>40.690275</u>	<u>-75.503800</u>
<u>Little Lehigh Creek</u>	<u>confluence with Lehigh River</u>	<u>500 feet upstream of the lowermost dam</u>	<u>40.596318</u>	<u>-75.475570</u>
<u>Hokendauqua Creek</u>	<u>confluence with Lehigh River</u>	<u>State Route 4014 (West Scenic Drive)</u>	<u>40.793273</u>	<u>-75.439262</u>
<u>Bushkill Creek</u>	<u>confluence with Delaware River</u>	<u>500 feet upstream of the lowermost dam</u>	<u>40.694859</u>	<u>-75.212406</u>
<u>Waterway</u>	<u>Downstream extent</u>	<u>Upstream extent</u>	<u>Upstream Latitude (N)</u>	<u>Upstream Longitude (E)</u>
<u>Brodhead Creek</u>	<u>confluence with Delaware River</u>	<u>500 feet upstream of the Stroudsburg Water Co. Dam</u>	<u>41.018667</u>	<u>-75.201063</u>
<u>Bush Kill</u>	<u>confluence with Delaware River</u>	<u>500 feet upstream of Resica Falls</u>	<u>41.111235</u>	<u>-75.095824</u>
<u>Lackawaxen River</u>	<u>confluence with Delaware River</u>	<u>500 feet upstream of the Woolen Mill Dam</u>	<u>40.984304</u>	<u>-75.191569</u>
<u>Dyberry Creek</u>	<u>confluence with Lackawaxen River</u>	<u>Jadwin Dam</u>	<u>41.612088</u>	<u>-75.263391</u>
<u>Darby Creek</u>	<u>Confluence with Delaware River</u>	<u>500 feet upstream of the confluence of Cobbs Creek and Darby Creek</u>	<u>39.907278</u>	<u>-75.255432</u>

Schuylkill River	Fairmount Dam	500 feet upstream of the Bingaman St. Bridge in Reading, Pennsylvania	40.326411	-75.934417
Neshaminy Creek	Confluence with Delaware River	500 feet upstream of the lowermost dam	40.143369	-74.915828

34. Compliance Certification: Each permittee who receives a written PASPGP-6 verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. This certification should indicate if the success of any required permittee-responsible 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. The signature of the permittee is also required to certify 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.
35. Migratory Birds and Bald and Golden Eagles: The permittee is responsible for ensuring that an action authorized by PASPGP-6 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 USFWS 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. The permittee should contact the appropriate local office of the USFWS to determine if such authorizations are required for a particular activity. Information on the conservation of migratory birds and Bald and Golden Eagles can be found at the following USFWS web site:
<http://www.fws.gov/northeast/pafo/>
36. Migratory Bird Breeding Areas: Activities in waters of the United States, including jurisdictional wetlands, that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable. Recommendations pertaining to the conservation of migratory birds can be found at the following USFWS web site:
<http://www.fws.gov/northeast/pafo/>

By Authority of the Secretary of the Army:

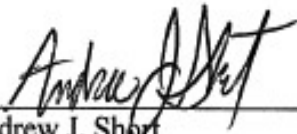
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John T. Litz
Colonel, U.S. Army
Commander and District Engineer
Baltimore District

PARK.DAVID.CHON
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David C. Park
Lieutenant Colonel, Corps of Engineers
District Commander
Philadelphia District



Andrew J. Short
Colonel, Corps of Engineers
District Engineer
Pittsburgh District



SUNOCO PIPELINE
An ENERGY TRANSFER Partnership

525 FRITZTOWN ROAD
SINKING SPRING, PA 19608

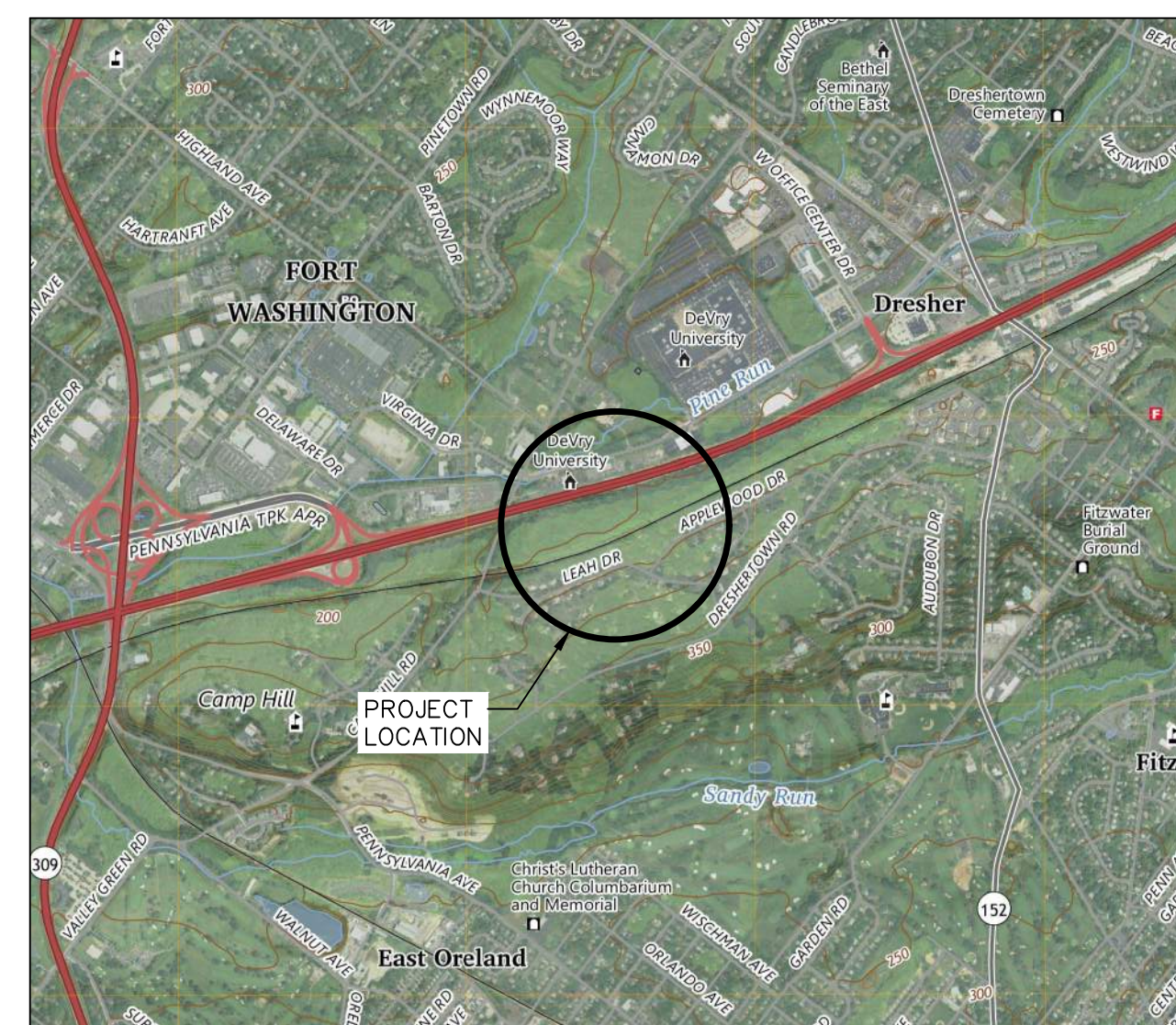
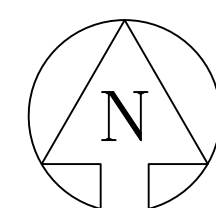
11010 – 14-INCH TWIN OAKS TO NEWARK TWIN-NWRK INVESTIGATIONS

DIG 16 PIPELINE REPAIR
UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
CIVIL CONSTRUCTION PLANS
ISSUED FOR PERMIT



AED ES PROJECT NO. 44-44116

MARCH 2025



PROJECT LOCATION MAP
SCALE: 1"=2,000'

MAP REFERENCES: USGS AMBLER, PA (2023)

INDEX OF DRAWINGS

44-44116-D16-101	ACCESS AND OVERALL SITE PLAN
44-44116-D16-102	PLAN AND PROFILE
44-44116-D16-103	EROSION AND SEDIMENTATION CONTROL PLAN
44-44116-D16-104	EROSION AND SEDIMENTATION CONTROL PLAN
44-44116-D16-105	RESTORATION PLAN
44-44116-D16-106	EROSION AND SEDIMENTATION CONTROL DETAILS
44-44116-D16-107	EROSION AND SEDIMENTATION CONTROL DETAILS
44-44116-D16-108	EROSION AND SEDIMENTATION CONTROL NOTES
44-44116-D16-109	EROSION AND SEDIMENTATION CONTROL NOTES

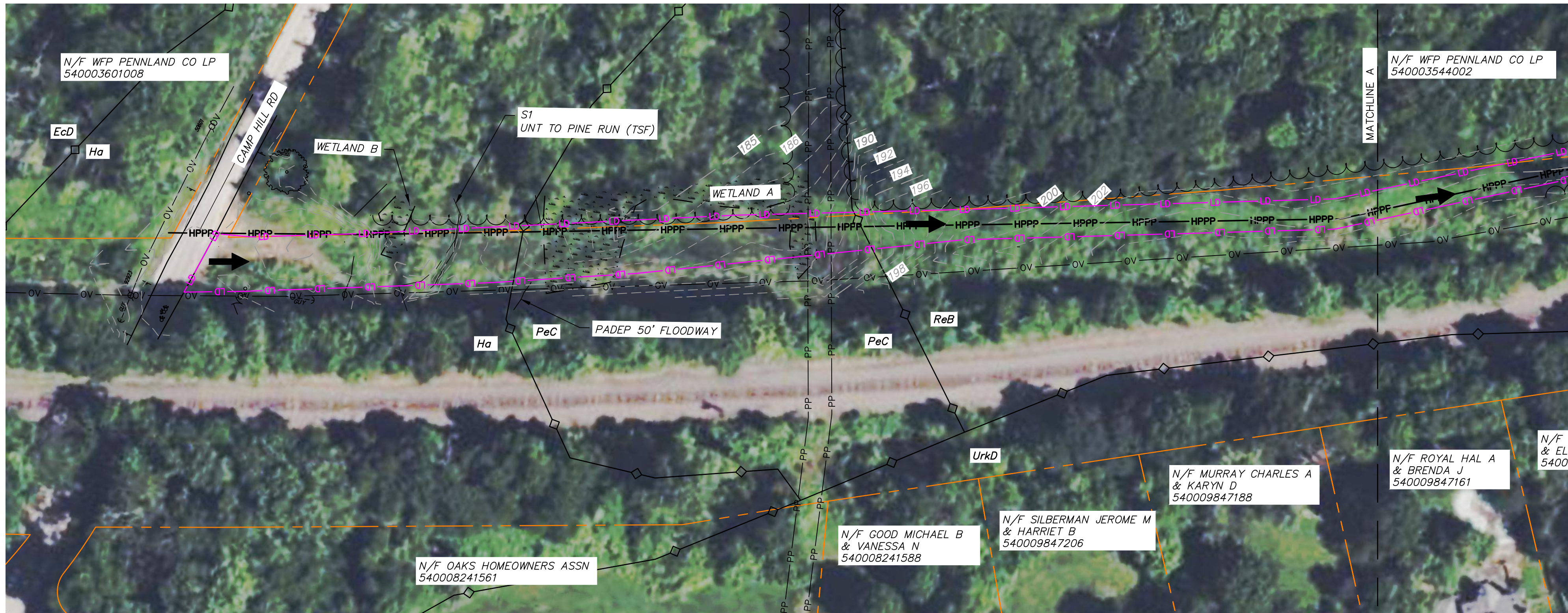
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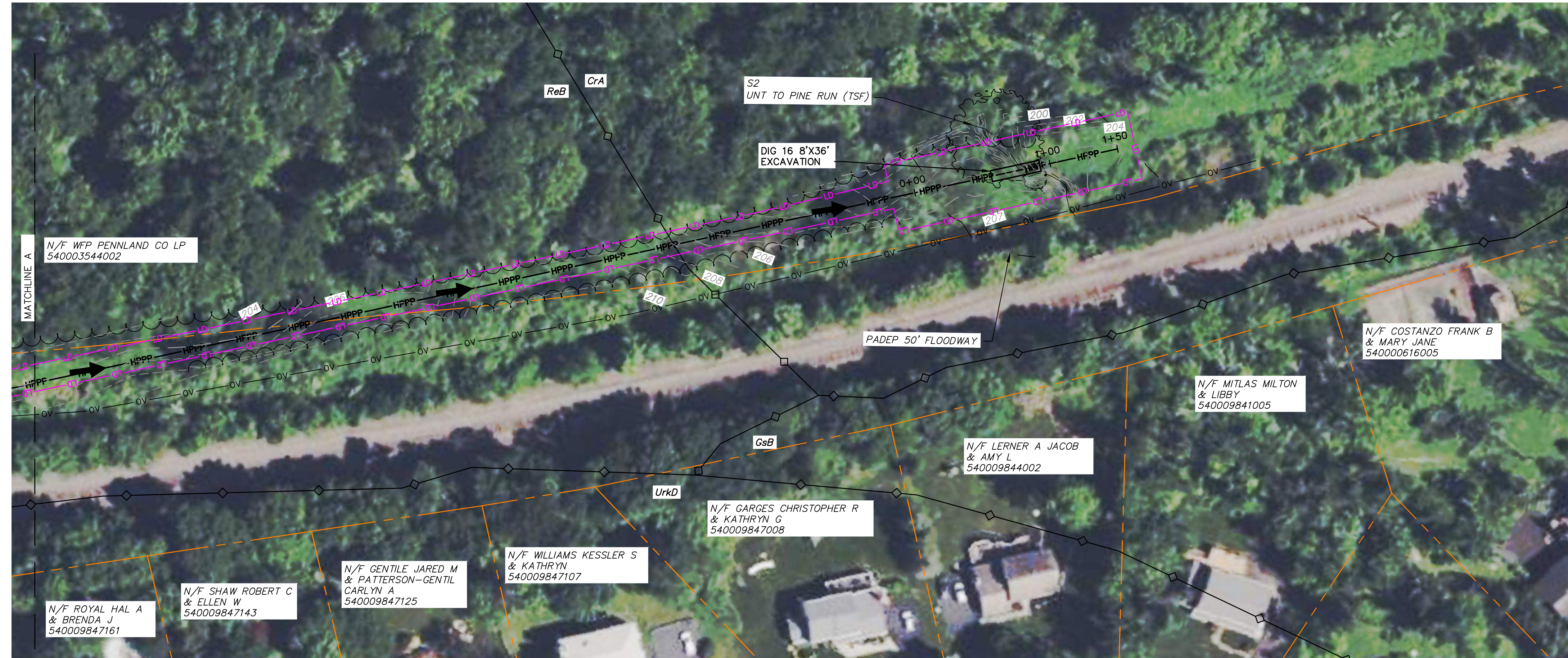
Know what's below.
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ACCESS AND OVERALL SITE PLAN
SCALE: 1"=50'



ACCESS AND OVERALL SITE PLAN
SCALE: 1"=50'

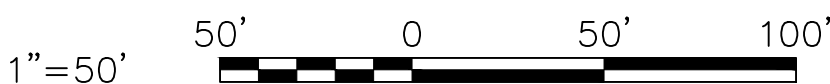
GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT PENNSYLVANIA 811. AT 811 OR 1-800-242-1776 AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EARTH DISTURBANCE.
2. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING BURIED UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION.
3. THE PLANS ARE BASED ON THE FOLLOWING:
 - a. TOPOGRAPHIC SURVEY PERFORMED BY AEDES IN FEBRUARY, 2025.
 - b. WETLAND AND STREAM DELINEATIONS PERFORMED BY AED ENERGY SERVICES IN FEBRUARY, 2025.
 - c. NO BOUNDARY SURVEY WAS PERFORMED AS A PART OF THIS PROJECT. PROPERTY LINES BASED ON COUNTY GIS DATA.
4. THE PROJECT IS LOCATED IN PENNSYLVANIA STATE PLANE SOUTH, US FOOT, NAD83. THE VERTICAL DATUM IS NAVD88.
5. THE CONTRACTOR SHALL USE TIMBER MATS TO PREVENT RUTTING AND TO PROTECT EXISTING BURIED UTILITIES AS NECESSARY.
6. LIMIT OF DISTURBANCE AREAS:
 - TOTAL LOD = 42,554 S.F. (0.977 AC±)
 - CHAPTER 102 AREA= 28,501 S.F. (0.654 AC±)
 - CHAPTER 105 AREA= 14,053 S.F. (0.323 AC±)
7. WORK AREA SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS WITH REGARDS TO LAND COVER AND GRADES.
8. EROSION CONTROL BLANKET SHALL BE USED IN ACCORDANCE WITH PLANS.
9. AT NO TIME SHALL WORK CAUSE SEDIMENT TO ENTER A SURFACE WATER BODY OR ALLOW EXCESSIVE EROSION.
10. WORK TO BE CONDUCTED IN DRY CONDITIONS TO THE EXTENT POSSIBLE.
11. SEDIMENT TRACKED OR CONVEYED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE REMOVED AND REDEPOSITED INTO THE LIMIT OF DISTURBANCE BY THE END OF EACH WORKING DAY. REMOVAL CAN BE COMPLETED THROUGH USE OF MECHANICAL OR HAND TOOLS. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER. IF REMOVAL AT THE END OF EACH WORKING DAY IS NOT EFFECTIVE, STREET SWEEPING SHALL BE USED.
12. THE RECEIVING WATER IS UNNAMED TRIBUTARY TO PINE RUN. IT HAS A DESIGNATED USE OF TROUT STOCK FISHES (TSF). THERE ARE NO EXISTING USES.

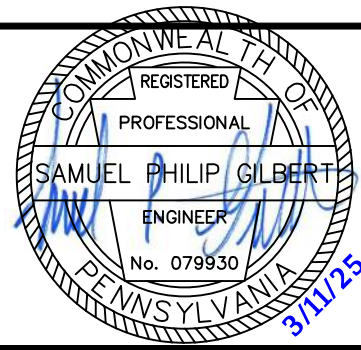
LEGEND

SYMBOL	DESCRIPTION
	EXISTING ENERGY TRANSFER PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	EXISTING ENERGY TRANSFER RIGHT-OF-WAY
	TOP OF BANK
	BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	UTILITY POLE
	OVERHEAD ELECTRIC
	WATER VALVE
	EXISTING PROPERTY LINE
	ACCESS ARROW
	EXISTING TREELINE
	FLOODWAY LINE
	LIMIT OF DISTURBANCE

GRAPHIC SCALE



NOTES/REFERENCE DRAWINGS



THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

AED ES PROJECT No.: 44-44057

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE
0	ISSUED FOR PERMIT	AEDES	03/2025	MWS	CDA	AS NOTED

FACILITY CODE OR ACCOUNT NO:	CONSTRUCTION YEAR:
DRAWN BFC	DATE 03/2025
CHECK MWS	DATE 03/2025
APPROVED CDA	DATE 03/2025



ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK DIGS PROJECT
DIG 16 PIPELINE REPAIR
ACCESS AND OVERALL SITE PLAN

UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

AFE NO.

OLD DRAWING NO.

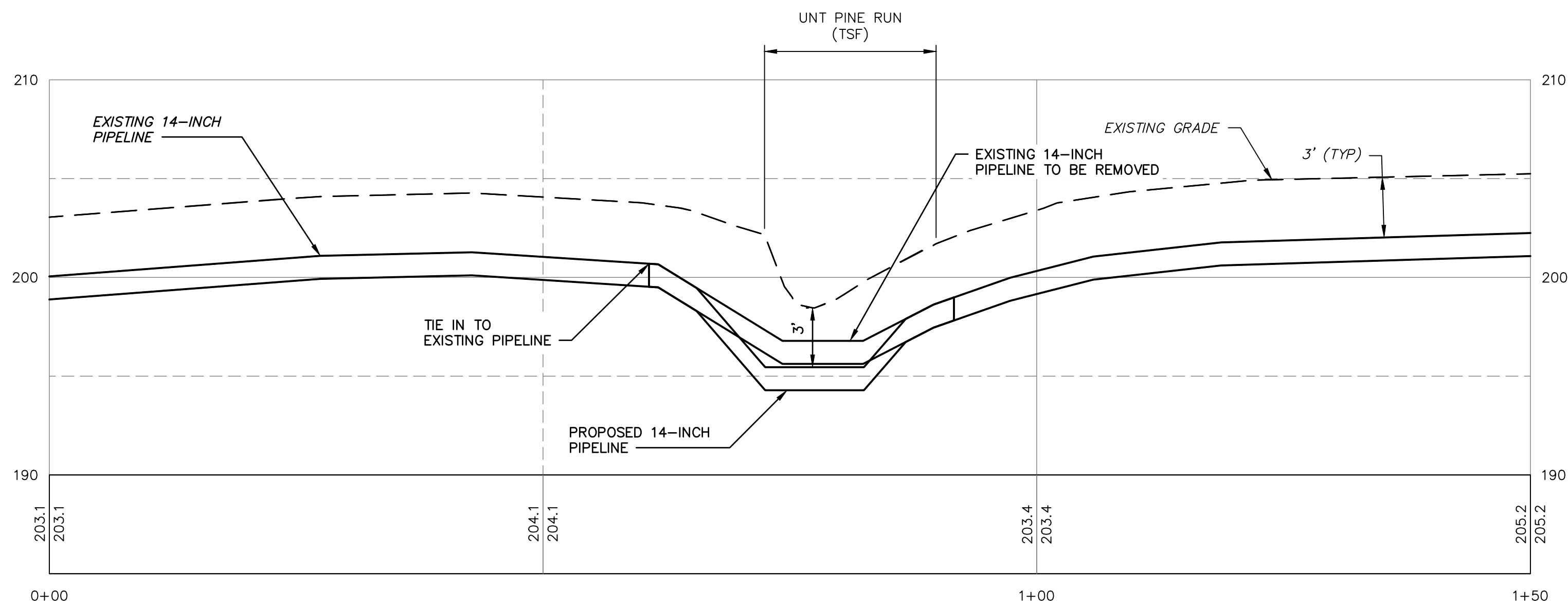
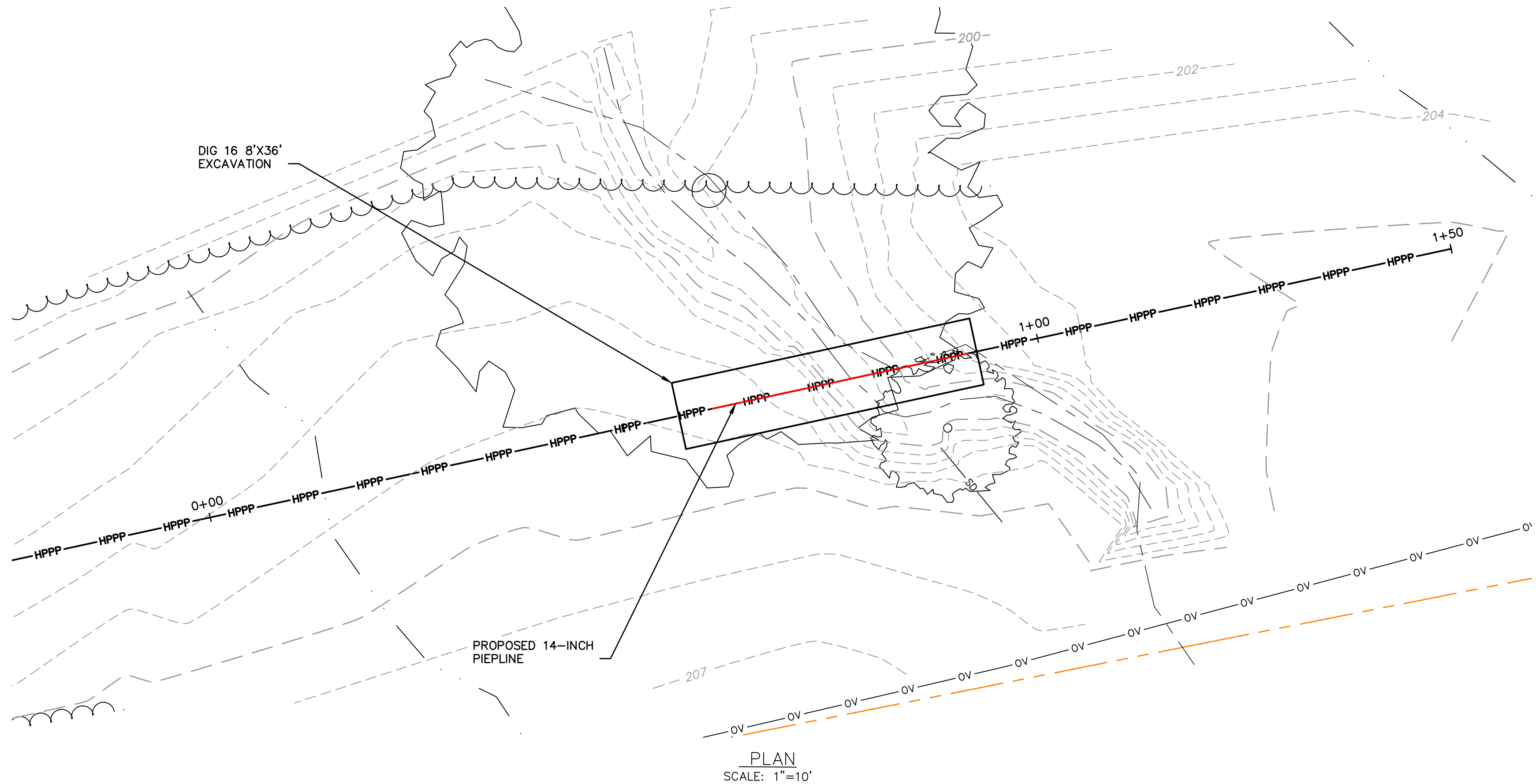
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44-44116-D16-101

REV. NO.

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PIPELINE EXCAVATION PROFILE
HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=5'

GENERAL NOTES:

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- THE PROJECT IS LOCATED IN PENNSYLVANIA STATE PLANE SOUTH, US FOOT, NAD83. THE VERTICAL DATUM IS NAVD88.
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LEGEND

SYMBOL	DESCRIPTION
HPPP HPPP	EXISTING ENERGY TRANSFER PIPELINE
630	MAJOR CONTOUR
628	MINOR CONTOUR
	EXISTING ENERGY TRANSFER RIGHT-OF-WAY
	TOP OF BANK
	BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
σ	UTILITY POLE
OV OV	OVERHEAD ELECTRIC
⊗	WATER VALVE
	EXISTING PROPERTY LINE
LD LD LD	LIMIT OF DISTURBANCE
	EXISTING TREELINE
	EROSION CONTROL BLANKET
	ROCK CONSTRUCTION ENTRANCE
	PROPOSED PIPELINE

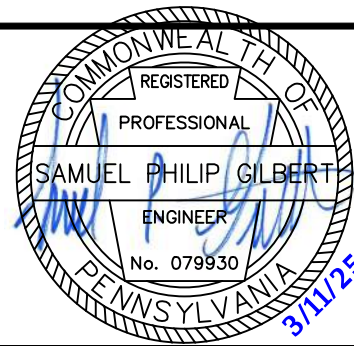
GRAPHIC SCALE



NOTES/REFERENCE DRAWINGS



Know what's below.
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AED ES PROJECT No.: 44-44057

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE
0	ISSUED FOR PERMIT	AEDES	03/2025	MWS	CDA	AS NOTED

FACILITY CODE OR ACCOUNT NO:	CONSTRUCTION YEAR:
DRAWN	BFC 03/2025
CHECK	MWS 03/2025
APPROVED	CDA 03/2025



ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK DIGS PROJECT
DIG 16 PIPELINE REPAIR
EROSION AND SEDIMENTATION CONTROL PLAN

UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

AFE NO.

OLD DRAWING NO.

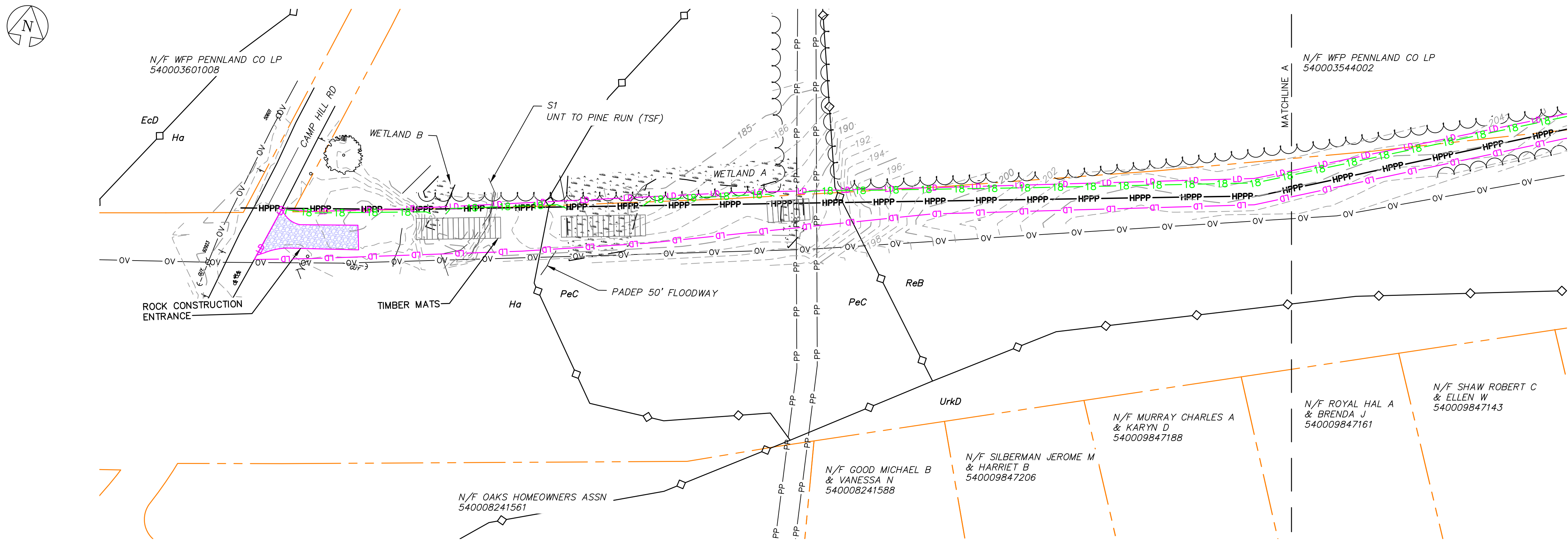
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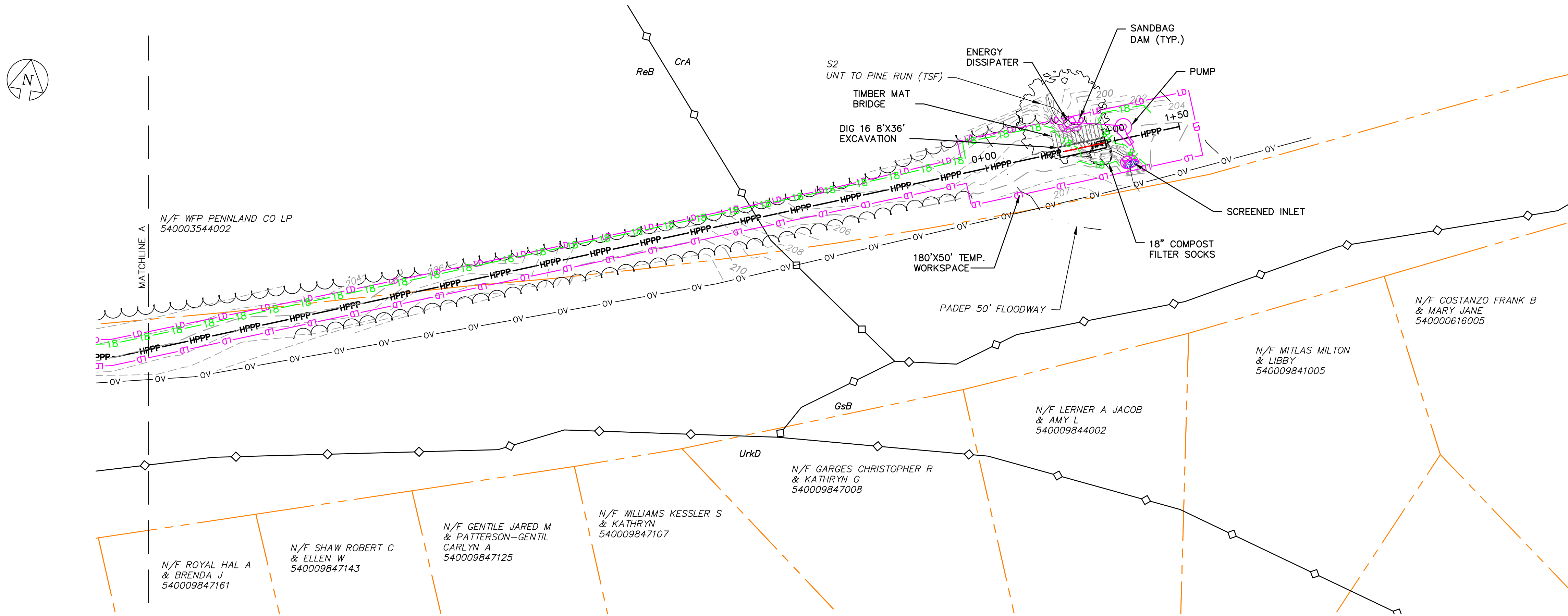
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EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=50'



EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=50'

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- THE RECEIVING WATER IS UNNAMED TRIBUTARY TO PINE RUN. IT HAS A DESIGNATED USE OF TROUT STOCK FISHES (TSF). THERE ARE NO EXISTING USES.

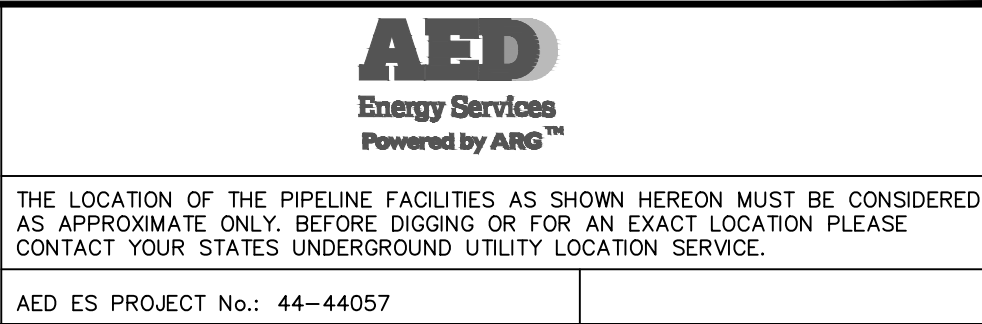
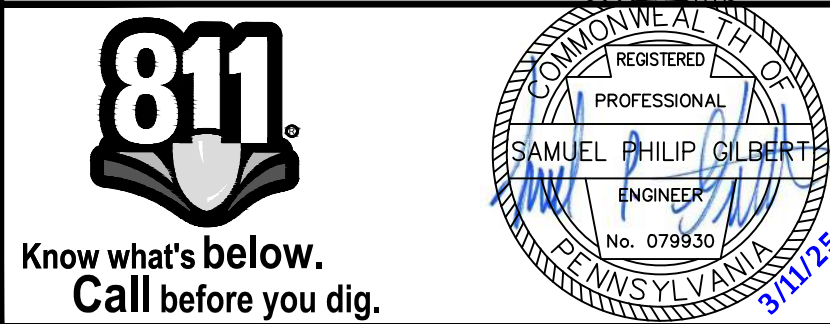
LEGEND

SYMBOL	DESCRIPTION
— HPPP — HPPP —	EXISTING ENERGY TRANSFER PIPELINE
--- 630 ---	MAJOR CONTOUR
----- 628 -----	MINOR CONTOUR
---	EXISTING ENERGY TRANSFER RIGHT-OF-WAY
---	TOP OF BANK
---	BOTTOM OF BANK
---	EXISTING EDGE OF PAVED ROADWAY
σ	UTILITY POLE
— OV — OV —	OVERHEAD ELECTRIC
⊗	WATER VALVE
---	EXISTING PROPERTY LINE
— LD — LD — LD —	LIMIT OF DISTURBANCE
---	EXISTING TREELINE
---	EROSION CONTROL BLANKET
---	ROCK CONSTRUCTION ENTRANCE

GRAPHIC SCALE



NOTES/REFERENCE DRAWINGS



REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE	AS NOTED
0	ISSUED FOR PERMIT	AEDES	03/2025	MWS	CDA	APPROVED	CDA 03/2025

FACILITY CODE OR ACCOUNT NO:	
CONSTRUCTION YEAR:	DATE
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CHECK	MWS 03/2025
APPROVED	CDA 03/2025
SCALE: AS NOTED	

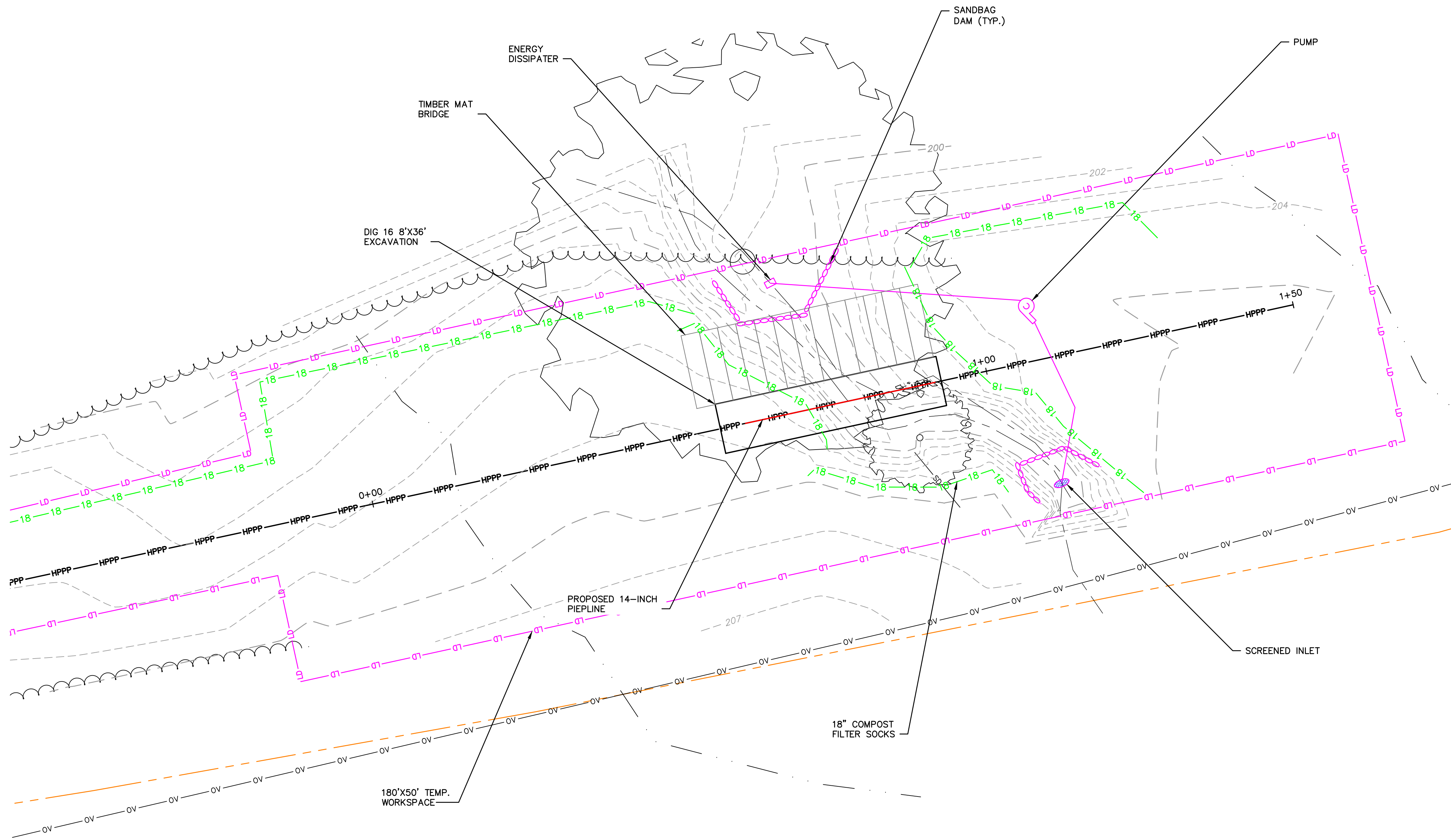


ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK DIGS PROJECT
DIG 16 PIPELINE REPAIR
EROSION AND SEDIMENTATION CONTROL PLAN
UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

AFE NO.	
OLD DRAWING NO.	
DRAWING NO.	REV. NO.
44-44116-D16-103	0



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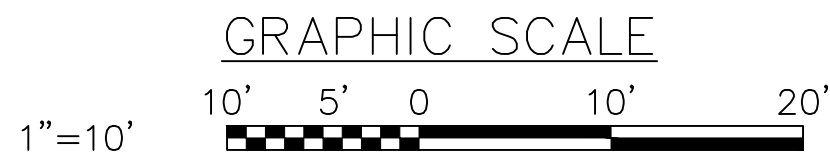


EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=10'

GENERAL NOTES:

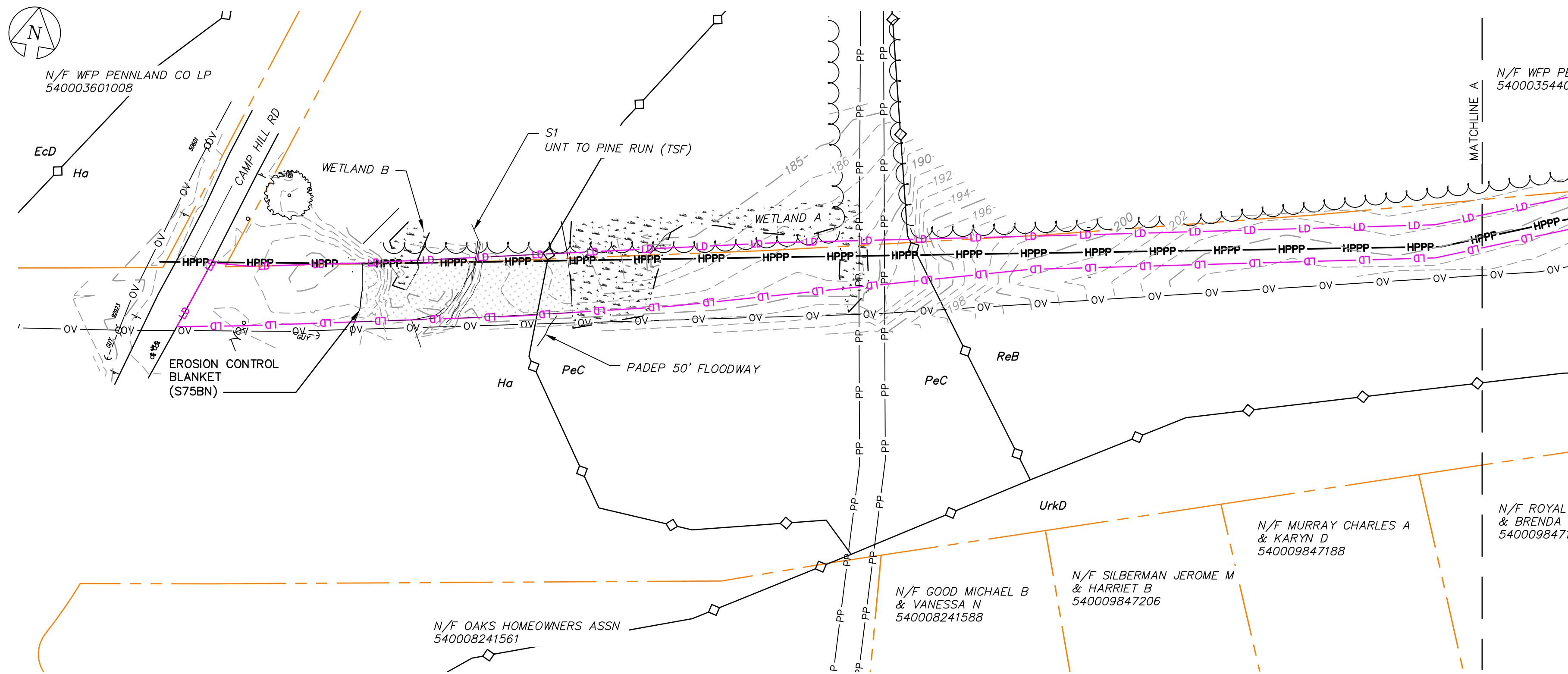
1. THE CONTRACTOR SHALL CONTACT PENNSYLVANIA 811. AT 811 OR 1-800-242-1776 AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EARTH DISTURBANCE.
2. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING BURIED UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION.
3. THE PLANS ARE BASED ON THE FOLLOWING:
 - a. TOPOGRAPHIC SURVEY PERFORMED BY AEDES IN FEBRUARY, 2025.
 - b. WETLAND AND STREAM DELINEATIONS PERFORMED BY AED ENERGY SERVICES IN FEBRUARY, 2025.
 - c. NO BOUNDARY SURVEY WAS PERFORMED AS A PART OF THIS PROJECT. PROPERTY LINES BASED ON COUNTY GIS DATA.
4. THE PROJECT IS LOCATED IN PENNSYLVANIA STATE PLANE SOUTH, US FOOT, NAD83. THE VERTICAL DATUM IS NAVD88.
5. THE CONTRACTOR SHALL USE TIMBER MATS TO PREVENT RUTTING AND TO PROTECT EXISTING BURIED UTILITIES AS NECESSARY.
6. LIMIT OF DISTURBANCE AREAS:
 - TOTAL LOD = 42,554 S.F. (0.977 AC±)
 - CHAPTER 102 AREA= 28,501 S.F. (0.654 AC±)
 - CHAPTER 105 AREA= 14,053 S.F. (0.323 AC±)
7. WORK AREA SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS WITH REGARDS TO LAND COVER AND GRADES.
8. EROSION CONTROL BLANKET SHALL BE USED IN ACCORDANCE WITH PLANS.
9. AT NO TIME SHALL WORK CAUSE SEDIMENT TO ENTER A SURFACE WATER BODY OR ALLOW EXCESSIVE EROSION.
10. WORK TO BE CONDUCTED IN DRY CONDITIONS TO THE EXTENT POSSIBLE.
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12. THE RECEIVING WATER IS UNNAMED TRIBUTARY TO PINE RUN. IT HAS A DESIGNATED USE OF TROUT STOCK FISHES (TSF). THERE ARE NO EXISTING USES.

LEGEND	
SYMBOL	DESCRIPTION
— HPPP — HPPP —	EXISTING ENERGY TRANSFER PIPELINE
- - - 630 - - -	MAJOR CONTOUR
- - - 628 - - -	MINOR CONTOUR
- - - - -	EXISTING ENERGY TRANSFER RIGHT-OF-WAY
— — — — —	TOP OF BANK
— — — — —	BOTTOM OF BANK
— — — — —	EXISTING EDGE OF PAVED ROADWAY
⌵	UTILITY POLE
— OV — OV —	OVERHEAD ELECTRIC
⌵	WATER VALVE
- - - - -	EXISTING PROPERTY LINE
— LD — LD — LD —	LIMIT OF DISTURBANCE
— — — — —	EXISTING TREELINE
+	EROSION CONTROL BLANKET

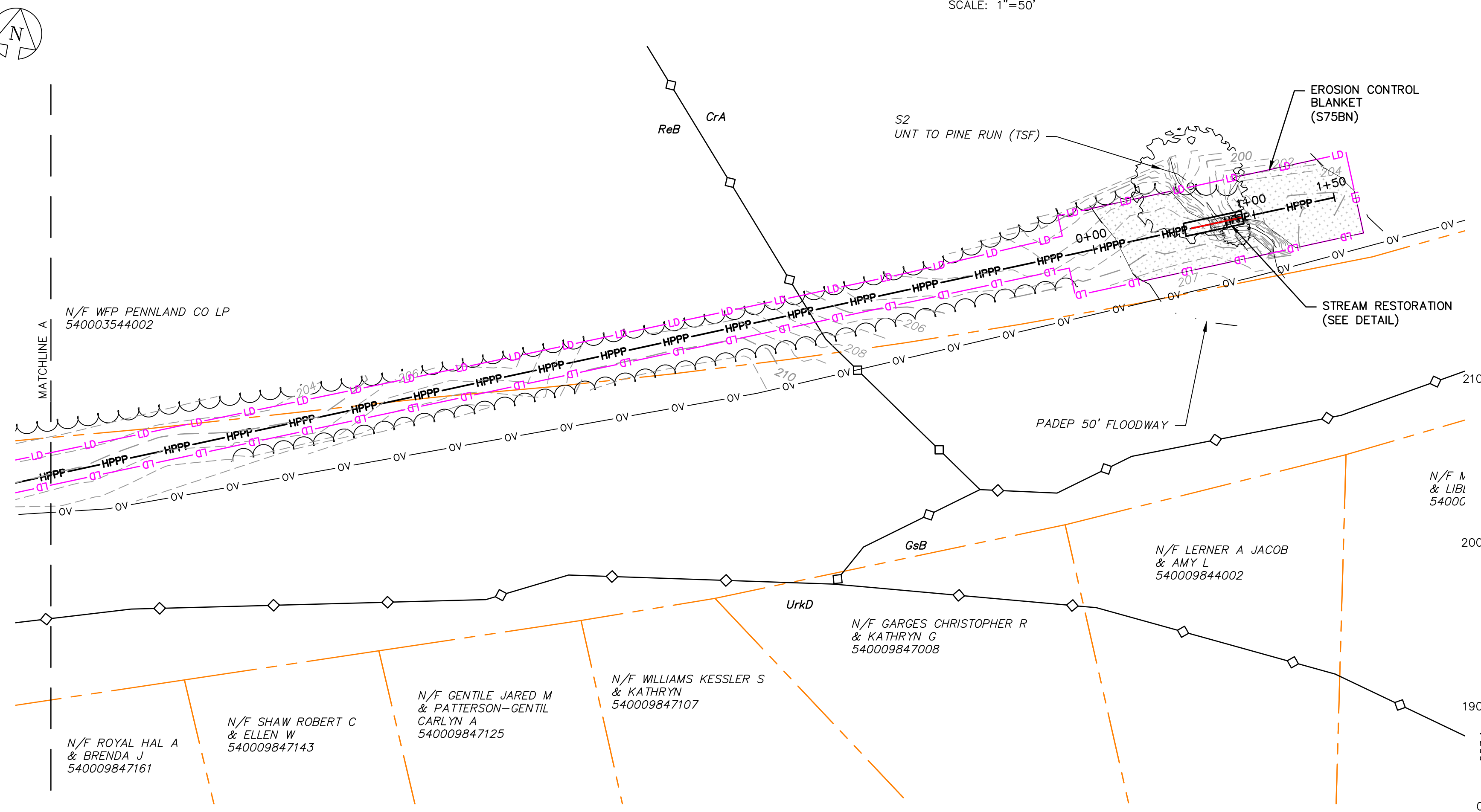


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THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.		AED Energy Services Powered by ARG™				0 ISSUED FOR PERMIT		AEDES 03/2025		MWS CDA		APPROVED CDA 03/2025		SCALE: AS NOTED		SUNOCO PIPELINE An ENERGY TRANSFER Partnership		ENERGY TRANSFER 11010 - 14-INCH TWIN OAKS TO NEWARK TWIN-NWRK DIGS PROJECT DIG 16 PIPELINE REPAIR EROSION AND SEDIMENTATION CONTROL PLAN		UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA		AFE NO.		OLD DRAWING NO.		DRAWING NO. 44-44116-D16-104		REV. NO. 0			
AED ES PROJECT No.: 44-44057						0 ISSUED FOR PERMIT		AEDES 03/2025		MWS CDA		APPROVED CDA 03/2025		SCALE: AS NOTED		SUNOCO PIPELINE An ENERGY TRANSFER Partnership		ENERGY TRANSFER 11010 - 14-INCH TWIN OAKS TO NEWARK TWIN-NWRK DIGS PROJECT DIG 16 PIPELINE REPAIR EROSION AND SEDIMENTATION CONTROL PLAN		UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA		AFE NO.		OLD DRAWING NO.		DRAWING NO. 44-44116-D16-104		REV. NO. 0			

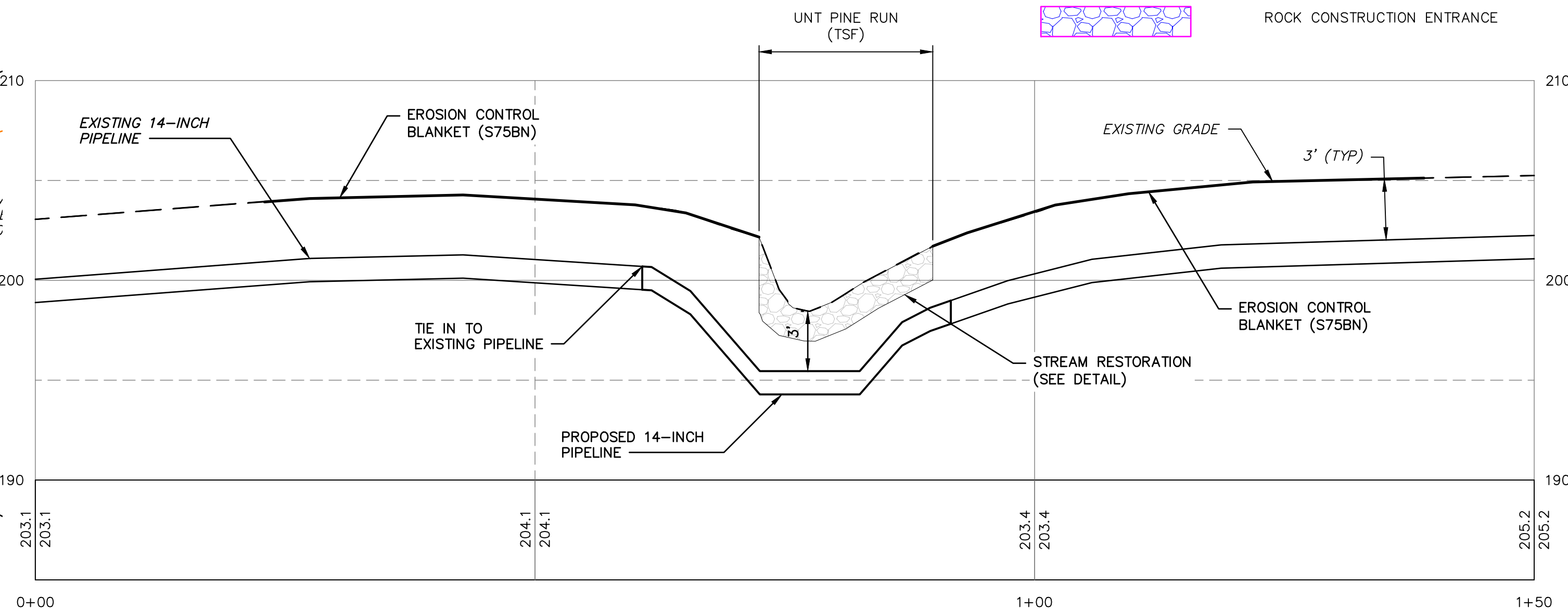
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RESTORATION PLAN
SCALE: 1"=50'



RESTORATION PLAN
SCALE: 1"=50'



PIPELINE RESTORATION PROFILE
HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=5'

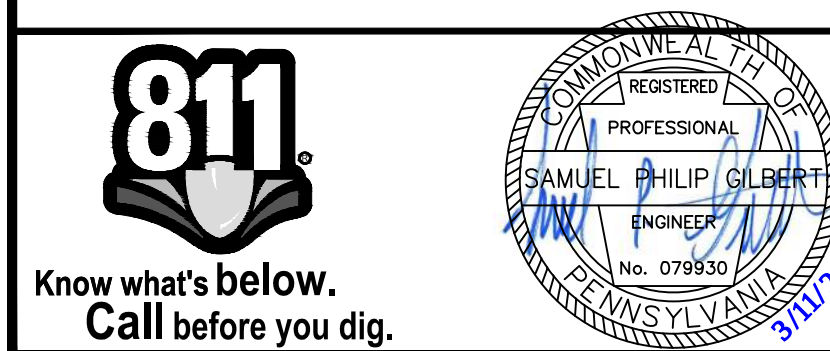
GRAPHIC SCALE

1"=50' 50' 0 50' 100'

- GENERAL NOTES:
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LEGEND

SYMBOL	DESCRIPTION
HPPP	EXISTING ENERGY TRANSFER PIPELINE
630	MAJOR CONTOUR
628	MINOR CONTOUR
	EXISTING ENERGY TRANSFER RIGHT-OF-WAY
	TOP OF BANK
	BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	UTILITY POLE
OV	OVERHEAD ELECTRIC
	WATER VALVE
	EXISTING PROPERTY LINE
LD	LIMIT OF DISTURBANCE
	EXISTING TREELINE
	EROSION CONTROL BLANKET
	ROCK CONSTRUCTION ENTRANCE



NOTES/REFERENCE DRAWINGS	
AED Energy Services Powered by ARS™	
THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.	
AED ES PROJECT No.: 44-44057	

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE
0	ISSUED FOR PERMIT	AEDES	03/2025	MWS	CDA	AS NOTED

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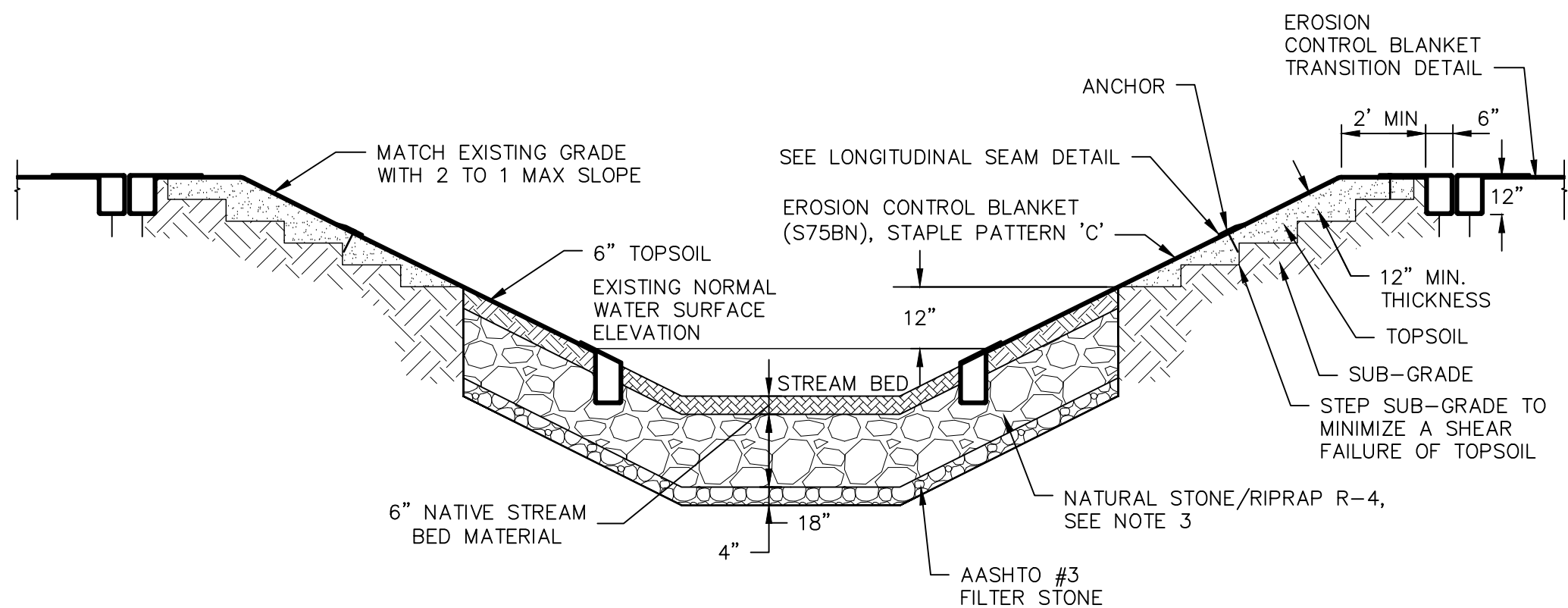
SUNOCO PIPELINE
An ENERGY TRANSFER Partnership



ENERGY TRANSFER 11010 - 14-INCH TWIN OAKS TO NEWARK TWIN-NWRK DIGS PROJECT DIG 16 PIPELINE REPAIR RESTORATION PLAN	
UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA	

AFE NO.	
OLD DRAWING NO.	
DRAWING NO.	REV. NO.
44-44116-D16-105	0

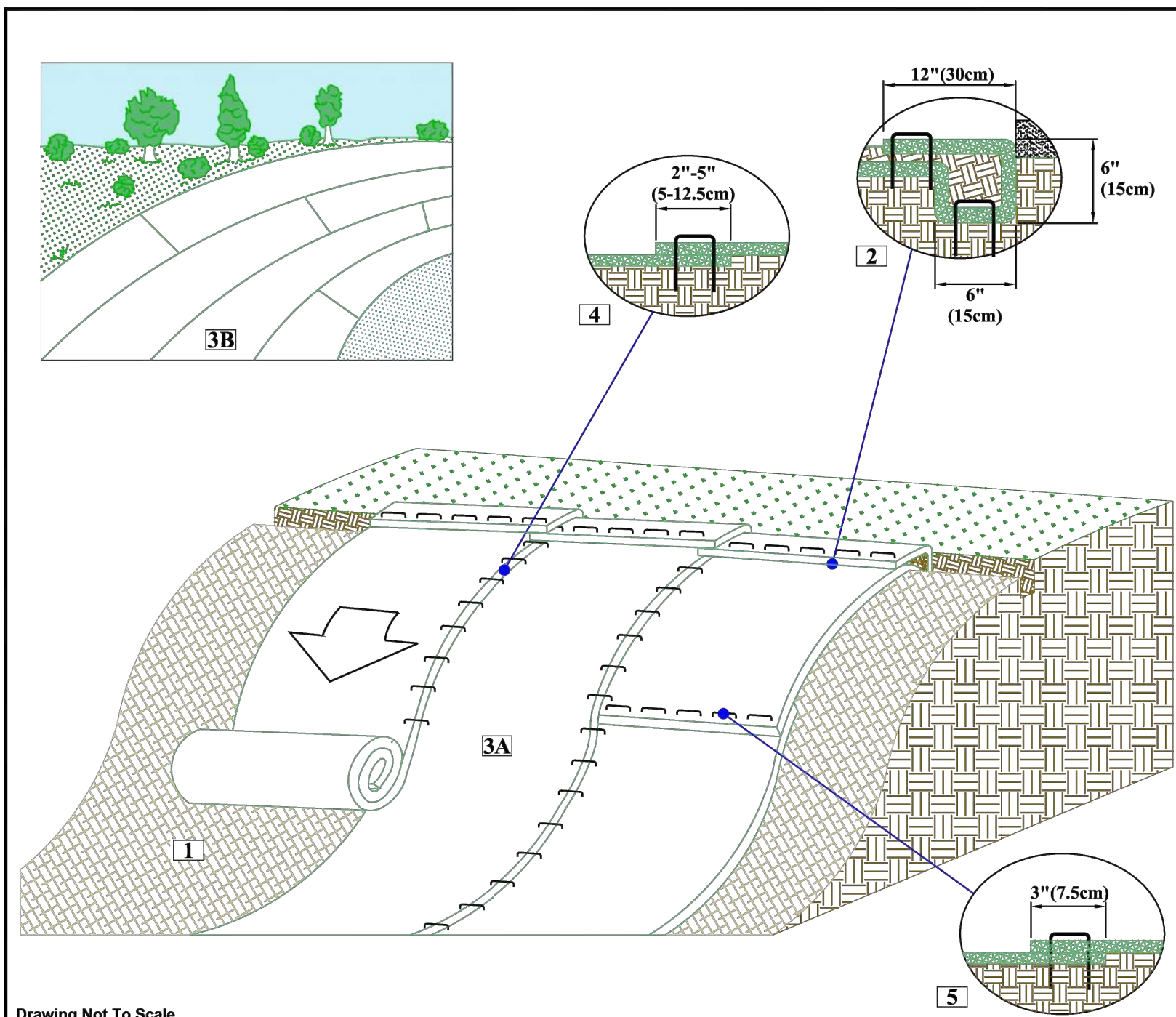
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NOTES:

1. THE EMBANKMENT SHALL BE PERMANENTLY SEEDED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET.
2. HARVEST NATURAL STONE FROM WORKSPACE IF POSSIBLE. DO NOT SCAVENGE OR DISTURB STREAM BED FOR STONE FOR RESTORATION.
3. NATURAL STONE SIZE SHALL BE EQUIVALENT TO RIPRAP CLASSIFICATION FOR DESIGNATED STREAM CROSSING.
4. CROSS SECTION OF STREAM SHALL REMAIN UNCHANGED FROM EXISTING CONDITIONS.

TYPICAL BANK AND BED RESTORATION DETAIL
NO SCALE



Drawing Not To Scale

Tensar NORTH AMERICAN GREEN
5401 St. Wendel - Cynthia Rd. Poseyville, IN 47633
PH: 800-722-2040
www.nagreen.com

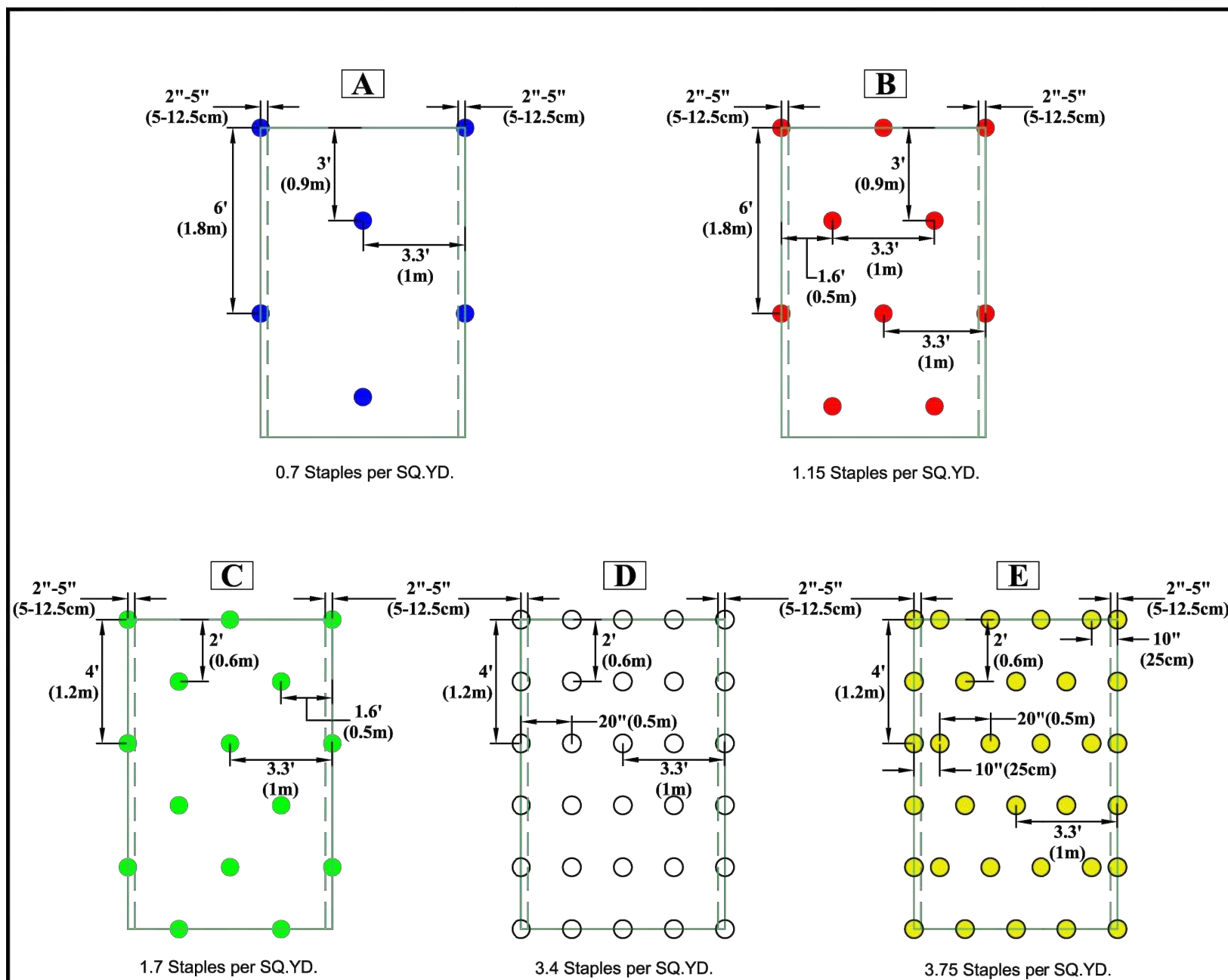
Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 3-16-11

SLOPE
INSTALLATION
DETAIL

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12" (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECPs type.
5. Consecutive RECPs applied down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECPs.



Tensar NORTH AMERICAN GREEN
5401 St. Wendel - Cynthia Rd. Poseyville, IN 47633
PH: 800-722-2040
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Disclaimer:
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Drawn on: 3-16-11

STAPLE
PATTERN GUIDE

- 4:1 Slopes (A)
- 3:1 Slopes (B)
- 2:1 Slopes (C)
- 1:1 & Steeper Slopes (D)
- Medium/High Flow Channel (D)
- High Flow Channel And Shoreline (E)

NOTES:

* Use ECMDS® for more accurate staple pattern selection.

Drawing Not To Scale

TABLE 11.4
Recommended Seed Mixtures

Mixture Number	Species	Seeding Rate - Pure Live Seed ¹	
		Most Sites	Adverse Sites
1 ²	Spring oats (spring), or Annual ryegrass (spring or fall), or Winter wheat (fall), or Winter rye (fall)	64	96
		10	15
		90	120
		56	112
2 ³	Tall fescue, or Fine fescue, or Kentucky bluegrass, plus Redtop ⁴ , or Perennial ryegrass	60	75
		35	40
		25	30
		3	3
3	Birdsfoot trefoil, plus Tall fescue	15	20
		6	10
		30	35
4	Birdsfoot trefoil, plus Reed canarygrass	6	10
		10	15
5 ⁵	Crownvetch, plus Tall fescue, or Perennial ryegrass	10	15
		20	25
		20	25
6 ^{5,6}	Crownvetch, plus Annual ryegrass	10	15
		20	25
7 ⁶	Birdsfoot trefoil, plus Crownvetch, plus Tall fescue	6	10
		10	15
		20	30
		20	30
8	Flatpea, plus Tall fescue, or Perennial ryegrass	20	25
		20	30
		20	25
9 ⁶	Serecia lespedeza, plus Tall fescue, plus Redtop ⁴	10	20
		20	25
		3	3
10	Tall fescue, plus Fine fescue	40	60
		10	15
11	Deertongue, plus Birdsfoot trefoil	15	20
		6	10
12 ⁷	Switchgrass, or Big Bluestem, plus Birdsfoot trefoil	15	20
		15	20
		6	10
13	Orchardgrass, or Smooth bromegrass, plus Birdsfoot trefoil	20	30
		25	35
		6	10

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS.
2. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.
3. This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.
4. Keep seeding rate to that recommended in table. These species have many seeds per pod and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and reedtop, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc.
5. Use for highway slopes and similar sites where the desired species after establishment is crownvetch.
6. Use only in extreme southeastern or extreme southwestern Pennsylvania. *Serecia lespedeza* is not well adapted to most of PA.
7. Do not mow shorter than 9 to 10 inches.
8. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

TABLE 11.3
Plant Tolerances of Soil Limitation Factors

Species	Growth Habit ¹	Tolerates				Minimum Seed Specifications ⁴						Seeds/lb (1,000s)
		Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5-5.5) ²	Purity (%)	Ready Germ (%)	Hard Seed (%)	Total Germ (%)			
Warm-Season Grasses												
Deertongue	bunch	yes	yes	yes	yes	95	75		75		250	
Weeping lovegrass	bunch	no	yes	yes	yes	97	75		75		1,500	
Switchgrass ³	bunch	yes	yes	yes	yes			(60 PLS)			390	
Big bluestem	bunch	no	yes	yes	yes			(60 PLS)			150	
Cool-Season Grasses												
Tall Fescue	bunch	yes	no	yes	no	95	80		80		227	
Redtop	sod	yes	yes	yes	yes	92	80		80		5,000	
Fine fescues	sod	no	no	yes	no	95	80		80		400	
Perennial ryegrass	bunch	yes	no	no	no	95	85		85		227	
Annual ryegrass	bunch	yes	no	yes	no	95	85		85		227	
Kentucky bluegrass	sod	yes	yes	yes	yes	85	75		75		2,200	
Reed canarygrass	sod	yes	yes	yes	yes	95	70		70		520	
Orchardgrass	bunch	yes	yes	yes	yes	95	80		80		654	
Timothy	bunch	yes	no	yes	yes	95	80		80		1,230	
Smooth bromegrass	sod	no	yes	yes	no	95	80		80		136	
Legumes ⁵												
Crownvetch	sod	no	yes	yes	yes	98	40	30	65		120	
Birdsfoot trefoil ⁶	bunch	yes	no	yes	yes	98	60	20	80		400	
Flatpea	sod	no	no	yes	yes	98	55	20	75		10	
Serecia lespedeza	bunch	no	yes	yes	yes	98	60	20	80		335	
Cereals												
Winter wheat	bunch	no	no	no	no	98	85		85		15	
Winter rye	bunch	no	no	yes	yes	98	85		85		18	
Spring oats	bunch	no	no	no	no	98	85		85		13	
Sundangrass	bunch	no	yes	no	no	98	85		85		55	
Japanese millet	bunch	yes	no	yes	yes	98	80		80		155	

1. Growth habit refers to the ability of the species to either form a dense sod by vegetative means (stolons, rhizomes, or roots) or remain in a bunch or single plant form. If seeded heavily enough, even bunch formers can produce a very dense stand. This is sometimes called a sod, but not in the sense of a sod formed by vegetative means.
2. Once established, plants may grow at a somewhat lower pH, but cover generally is only adequate at pH 6.0 or above.
3. Minimum seed lots are truly minimum, and seed lots to be used for revegetation purposes should equal or exceed these standards. Thus, deertongue grass should germinate 75% or better. Crownvetch should have at least 40% readily germinable seed and 30% hard seed. Commonly, seed lots are available that equal or exceed minimum specifications. Remember that disturbed sites are adverse for plant establishment. Ready germination refers to seed that germinates during the period of the germination test and that would be expected, if conditions are favorable, to germinate rapidly when planted. The opposite of ready germination is dormant seed, of which hard seed is one type.
4. Switchgrass seed is sold only on the basis of PLS.
5. Need specific legume inoculant. Inoculant suitable for garden peas and sweetpeas usually is satisfactory for flatpea.
6. Birdsfoot trefoil is adapted over the entire state, except in the extreme southeast where crown and root rots may injure stands.

Penn State, "Erosion Control and Conservation Plantings on Noncropland,"

TABLE 11.2
Soil Amendment Application Rate Equivalents

Soil Amendment	Permanent Seeding Application Rate			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields
10-10-20 fertilizer	1,000 lb.	25 lb.	210 lb.	Or as per soil test; may not be required in agricultural fields
Temporary Seeding Application Rate				
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

TABLE 11.6
Mulch Application Rates

Mulch Type	Application Rate (Min.)			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Straw	3 tons	140 lb.	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4 - 6 tons	185 - 275 lb.	1,650 - 2,500 lb.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415	See limitations above

TABLE 11.5
Recommended Seed Mixtures for Stabilizing Disturbed Areas

Site Condition	Nurse Crop	Seed Mixture (Select one mixture)
Slopes and Banks (not mowed) Well-drained Variable drainage	1 plus 1 plus	3, 5, 8, or 12 ¹ 3 or 7
Slopes and Banks (mowed) Well-drained	1 plus	2 or 10
Slopes and Banks (grazed/hay) Well-drained	1 plus	2, 3, or 13
Gullies and Eroded Areas Well-drained	1 plus	3, 5, 7, or 12 ¹
Erosion Control Facilities (BMPs) Sod waterways, spillways, frequent water flow areas Drainage ditches Shallow, less than 3 feet deep Deep, not mowed Pond banks, dikes, levees, dams, diversion channels, and occasional water flow areas Mowed areas Non-mowed areas For hay or silage on diversion channels and occasional water flow areas	1 plus 1 plus 1 plus 1 plus 1 plus 1 plus 1 plus	2, 3, or 4 5 or 7 2, 3, or 4 5 or 7 2 or 3 5 or 7 3 or 13
Highways² Non-mowed areas Pure crownvetch ³ Well-drained Variable drained Poorly drained Areas mowed several times per year	1 plus 1 plus 1 plus 1 plus 1 plus 1 plus	5 or 6 5, 7, 8, 9, or 10 3 or 7 3 or 4 2, 3, or 10
Utility Right-of-way Well-drained Variable drained Well-drained areas for grazing/hay	1 plus 1 plus 1 plus	5, 8, or 12 ¹ 3 or 7 2, 3, or 13
Effluent Disposal Areas (time to soil test)	1 plus	3 or 4
Sanitary Landfills	1 plus	3, 5, 7, 11 ¹ , or 12 ¹
Surface mines Spoils, mine wastes, fly ash, slag, settling basin Residues and other severely disturbed areas (time to soil test) Severely disturbed areas for grazing/hay	1 plus 1 plus 1 plus	3, 4, 5, 7, 8, 9, 11 ¹ , or 12 ¹ 3 or 13

Penn State, "Erosion Control and Conservation Plantings on Noncropland"

1. For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.
2. Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices.
3. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

NOTES/REFERENCE DRAWINGS



Know what's below.
Call before you dig.



THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATE UNDERGROUND UTILITY LOCATION SERVICE.

AED ES PROJECT No.: 44-44057

0	ISSUED FOR PERMIT
REV	DESCRIPTION

AEDES	03/2025	MWS	CDA	APPROVED	CDA	03/2025
BY	DATE	CHK'D	APP'D	SCALE:	AS NOTED	

FACILITY CODE OR ACCOUNT NO:	
CONSTRUCTION YEAR:	
BY	DATE
DRAWN	BFC 03/2025
CHECK	MWS 03/2025
APPROVED	CDA 03/2025



SUNOCO PIPELINE
An ENERGY TRANSFER Partnership

ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK DIGS PROJECT
DIG 16 PIPELINE REPAIR
EROSION AND SEDIMENTATION CONTROL DETAILS

UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

AFE NO.

OLD DRAWING NO.

DRAWING NO.

44-44116-D16-107

REV. NO.

0

CONSTRUCTION SEQUENCE

REMOVAL OF EXISTING GROUND COVER, EXCAVATION, AND FINAL STABILIZATION OF THE SITE WILL BE PERFORMED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND THE E&S PLANS.

THE CONTRACTOR MAY STORE EQUIPMENT AND MATERIALS WITHIN THE LOD AND ON OTHER EXISTING, STABILIZED AREAS. IF ADDITIONAL AREAS OF DISTURBANCE ARE NECESSARY TO SUPPORT CONSTRUCTION ACTIVITIES, THE E&S CONTROL PLAN SHALL BE UPDATED, AND REGULATORY APPROVAL SHALL BE REQUIRED.

ALL CONTROL MEASURES WILL BE INSTALLED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE "EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL," PUBLISHED BY PADEP, BUREAU OF SOIL AND WATER CONSERVATION AND CHAPTER 102 REQUIREMENTS.

THE ANTICIPATED SEQUENCE OF CONSTRUCTION IS DESCRIBED BELOW.

PHASE 1 – GENERAL RIGHT-OF-WAY PREPARATION MEASURES

1. MANAGEMENT REGULATIONS AT PA CODE 260.1 ET. SEQ. AND 287.1 ET. SEQ. THE CONTRACTOR SHALL NOT BURY, DUMP OR DISCHARGE ANY WASTES OTHER THAN SOIL IN THOSE AREAS SO DESIGNATED BY THIS PLAN.

2. HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE TOP OF STREAM BANK OR WETLAND AREA. ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE STREAM CROSSING AREA.

3. INSTALL ROCK CONSTRUCTION ENTRANCES AS SHOWN ON THE PLAN.

4. PLACE GEOTEXTILE FABRIC AND TIMBER MATS AS NEEDED IN SOFT, WET AREAS AND WETLANDS AS SHOWN ON THE PLANS. TIMBER MATS SHALL ALSO BE USED TO PROTECT EXISTING UTILITIES AS NEEDED. TIMBER MATS SHALL BE USED TO CROSS STREAM AS SHOWN.

5. INSTALL COMPOST FILTER SOCKS AND ALL OTHER PERIMETER EROSION AND SEDIMENT CONTROL MEASURES WITHIN THE PROJECT AREA AS INDICATED ON THE DRAWINGS. ONCE PERIMETER CONTROLS ARE IN PLACE, INSTALL ANY OTHER REMAINING EROSION CONTROL BMP'S.

6. TOPSOIL SHALL BE SEGREGATED FROM SUBSURFACE MATERIAL DURING ANY EXCAVATION, EARTHMOVING, OR GRADING OPERATIONS.

7. TEMPORARILY SEED AND MULCH ANY DISTURBED AREAS. DO NOT TEMPORARILY SEED CONSTRUCTION ACCESS AREAS. CESSATION OF ACTIVITY FOR AT LEAST 4 DAYS REQUIRES TEMPORARY STABILIZATION.

8. INSTALL TIMBER MATTING AND/OR TIMBER MAT BRIDGE FOR ACCESS.

9. TEMPORARILY SEED ALL TOPSOIL STOCKPILES.

PHASE 2 –PIPELINE CONSTRUCTION

OPEN CUT STREAM CROSSING

1. STREAM CROSSING SHALL BE PERFORMED DURING OPTIMUM, DRY CONDITIONS.

2. HAZARDOUS OR POLLUTANT MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM THE TOP OF STREAMBANK. ALL EXCESS EXCAVATED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE STREAM CROSSING AREA.

3. WORK FOR THE STREAM CROSSING SHALL NOT TAKE PLACE UNTIL ALL MATERIALS REQUIRED TO COMPLETE THE CROSSING ARE ON SITE AND THE PIPE IS READY FOR INSTALLATION.

4. PREPARE PIPE AND MATERIALS REQUIRED FOR INSTALLING PIPE WITHIN THE STREAM AS MUCH AS POSSIBLE.

5. USE TIMBER MATS WHERE NECESSARY TO STABILIZE ANY WORKSPACE.

6. INSTALL TEMPORARY PUMP AROUND BYPASS AND ENERGY DISSIPATER.

7. PERFORM STRINGING, WELDING, X-RAY, AND COATING OF PIPELINE.

8. EXCAVATE THE PIPELINE TRENCH, DEWATERING AS NECESSARY USING A PUMPED WATER FILTER BAG ACCORDING TO DETAILS. STOCKPILE TOPSOIL, SUBSOIL, AND STREAMBED MATERIAL SEPARATELY.

9. INSTALL PIPELINE WITH BEDDING.

10. REMOVE EXISTING PIPELINE BETWEEN TIE-INS.

11. BACKFILL AND COMPACT TRENCH. REPLACE SUBSOIL AND NATIVE STREAMBED MATERIAL TO MATCH EXISTING CONDITIONS TO GREATEST EXTENT PRACTICAL.

12. STABILIZE THE STREAMBANK USING RIP RAP R-4.

13. SURFACE STREAMBED WITH NATIVE STONE MATERIAL.

14. INSTALL EROSION CONTROL BLANKET WITHIN IN ALL DISTURBED AREAS WITHIN 50 FEET OF THE STREAMBANK ACCORDING TO PLAN.

15. INSTALL COMPOST FILTER SOCKS AT TOP OF BANK AFTER CROSSING IS COMPLETE PRIOR TO STABILIZATION.

16. REFER TO TESTING, PURGING, TIE-IN PROCEDURES, AND POST CONSTRUCTION MEASURES.

TESTING, PURGING, TIE-IN PROCEDURES AND CP MITIGATION

1. UPON COMPLETION OF INSTALLATION OF THE ENTIRE PIPELINE, A CALIPER PIG SHALL BE RUN THROUGH THE PIPELINE AND EVALUATED.

2. PERFORM HYDROSTATIC TEST OF THE ENTIRE PIPELINE. TEST DISCHARGES MUST BE HAULED OFF SITE, NOT DISCHARGED TO GRADE.

3. INSTALL PIPELINE CATHODIC PROTECTION SYSTEM APPURTENANCES AS DIRECTED

BY THE SITE REPRESENTATIVE.

4. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH POST CONSTRUCTION MEASURES.

PHASE 3 – RESTORATION AND POST-CONSTRUCTION MEASURES

POST CONSTRUCTION MEASURES

1. DOZER SHALL TRACK ALL STEEP SLOPES.

2. ALL DISTURBED AREAS SHALL BE RETURNED TO EXISTING GRADE, PERMANENTLY SEEDED AND MULCHED.

3. TOPSOIL WILL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS. WATER BARS TO BE REMOVED AFTER STABILIZATION IS ACHIEVED.

4. UPON STABILIZATION, REMOVE ALL PERIMETER SILT SOCKS AND ALL OTHER EROSION CONTROL MEASURES. WATER BARS ARE TO REMAIN AFTER STABILIZATION IS ACHIEVED, EXCEPT IN AGRICULTURAL AREAS. THE SUMPS ARE TO BE REMOVED.

5. PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.

6. ALL TEMPORARY ROCK CONSTRUCTION ENTRANCES SHALL BE REMOVED AND IMMEDIATELY PERMANENTLY SEEDED AND MULCHED. ANY AREAS OF SETTLEMENT, WASHOUT, OR ACCELERATED EROSION SHALL BE REPAIRED.

7. ANY EXISTING DRIVEWAYS USED SHALL BE CHECKED FOR ANY DAMAGES AND LEFT IN AT LEAST EXISTING CONDITIONS.

TEMPORARY CONTROL MEASURES

THE TEMPORARY CONTROL MEASURES AND FACILITIES FOR USE DURING CONSTRUCTION AND EARTHMOVING ACTIVITIES ARE DISCUSSED BELOW. REFER TO THE E&S CONTROL PLAN DRAWINGS (BOUND SEPARATELY) PREPARED BY AED ES.

THE TYPE OF MEASURES EMPLOYED PREVENTS EXCESSIVE E&S AND FACILITATES CONSTRUCTION BY PROVIDING MEANS OF MANAGING EROSION AND SEDIMENT POLLUTION CONTROL. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER THAT MINIMIZES EROSION AND WATER/AIR POLLUTION. STATE, COUNTY, AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE FOLLOWED.

COMPOST FILTER SOCKS

COMPOST FILTER SOCKS WILL BE PLACED ON THE DOWNGRADE SIDE OF SLOPES AND DISTURBED AREAS. THE DIAMETER OF THE FILTER SOCK IS DIFFERENT DEPENDING ON THE SLOPE OF THE LAND AND THE MAXIMUM UPSLOPE LENGTH. WOODEN POSTS WILL BE INSTALLED THROUGH THE FILTER SOCKS TWELVE INCHES BELOW GRADE AND MUST BE AT LEAST THIRTY-SIX INCHES HIGH. STAKES WILL BE 10 FEET ON CENTER. ENDS OF THE FILTER SOCK SHOULD EXTEND UPSLOPE AT 45 DEGREES. SEE APPENDICES FOR COMPOST FILTER SOCK SIZE CALCULATIONS. COMPOST SHALL MEET PADEP OR PENNDOT STANDARDS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED OF PROPERLY WITHIN THE LIMIT OF DISTURBANCE. SOCKS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER’S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

PUMPED WATER FILTER BAGS

PUMPED WATER FILTER BAGS ARE USED TO FILTER WATER THAT IS PUMPED FROM BELOW GRADE AREAS AS NECESSARY. GEOTEXTILE FABRIC-FILTER BAGS WILL BE PLACED ON A LEVEL, STABILIZED AREA. SILT FENCE SHALL BE PLACED ENTIRELY AROUND THE FILTER BAG. HOSES WILL BE WRED TO THE ENTRANCE OF THE BAG TO SECURE IT IN PLACE. FILTER BAGS SHALL NOT BE PLACED ON SLOPES EXCEEDING 5% IF A FILTER BAG IS REQUIRED ON SLOPES GREATER THAN 5%, NON-ERODIBLE MATERIAL MAY BE PLACED UNDER THE BAG, SUCH AS CLEAN STONE OR WOOD CHIPS, TO REDUCE STEEPNESS.

BAGS WILL BE REPLACED WHEN THEY REACH 1/2 CAPACITY. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

DUST CONTROL

AREAS SUBJECT TO BLOWING DUST SHALL BE CONTROLLED BY SPRINKLING WITH WATER UNTIL THE SURFACE IS DAMP.

ROCK CONSTRUCTION ENTRANCES

ROCK CONSTRUCTION ENTRANCES SHOULD BE USED WHEREVER IT IS ANTICIPATED THAT CONSTRUCTION TRAFFIC WILL EXIT THE PROJECT SITE ONTO ANY STABILIZED ROADWAY. CONSTRUCTION TRAFFIC ACCESS SHOULD BE LIMITED TO CONSTRUCTION ENTRANCES TO THE GREATEST EXTENT FEASIBLE. CONSTRUCTION ENTRANCES WILL BE CONSTRUCTED OF EIGHT INCHES OF AASHTO #1 STONE OVER GEOTEXTILE FABRIC (AMOCO WOVEN FABRIC TYPE 2002 OR EQUIVALENT) AND WILL BE LOCATED AS DESIGNATED ON THE CONSTRUCTION PLAN DRAWINGS. REFER TO DRAWING DETAIL SHEETS FOR ADDITIONAL NOTES AND DIMENSIONS.

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCES. ROCK CONSTRUCTION ENTRANCES THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF CONSTRUCTION ENTRANCE UNTIL CONDITION IS ALLEVIATED OR USE A WASH RACK. CONSTRUCTION ENTRANCES WILL BE CLEANED EVERY WORKING DAY.

TEMPORARY SEEDING:

UPON CESSATION OF WORK FOR FOUR (4) DAYS, TEMPORARILY SEED AND STABILIZED DISTURBANCE IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE (BMP) MANUAL (MARCH 2012 ED) OR PENNDOT PUBLICATION 408, FORMULA E. STOCKPILES SHALL ALSO BE SEEDED.

PENNDOT FORMULA E:

SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)

% BY WEIGHT: 100

MINIMUM PURITY: 98

MINIMUM GERMINATION: 90

MAX % WEED SEED: 0.15

SEEDING RATE (LB/1000YD²): 10

SEEDING DATES: MARCH 15TH TO JUNE 1ST & AUGUST 1ST TO OCTOBER 15TH

MULCHES: FREE FROM FOREIGN MATERIAL COARSE STEMS, MOLD, SUBSTANCES TOXIC TO PLANT GROWTH, AND MATURE SEED BEARING STALKS OR ROOTS OF PROHIBITED AND NOXIOUS WEEDS, AS DEFINED BY LAW. PLACE HAY OR STRAW UNIFORMLY, IN A

CONTINUOUS BLANKET, AT A MINIMUM RATE OF 1,200 POUNDS PER 1,000 SQUARE YARDS.

DURING NON-GERMINATING PERIODS, TEMPORARY SEED AND MULCH MUST BE APPLIED AT THE RECOMMENDED RATES OVER THE DISTURBED AREA. THE DISTURBED AREA WILL NOT BE PERMANENTLY SEEDED UNTIL THE BEGINNING OF THE RECOMMENDED GERMINATION PERIOD. AT THAT TIME, THE DISTURBED AREA WILL BE PERMANENTLY SEEDED AND RE-MULCHED.

PERMANENT CONTROL MEASURES

THE PURPOSE OF THE PERMANENT CONTROL MEASURES AND FACILITIES IS TO PREVENT EROSION OF THE PROJECT SITE AFTER CONSTRUCTION IS COMPLETE. THE CONTROL MEASURES TO BE UTILIZED FOR ALL AREAS INCLUDE EROSION CONTROL BLANKET, PERMANENT SEEDING, TRENCH PLUGS, AND CHANNEL STABILIZATION. THE LOCATIONS OF THE MEASURES AND FACILITIES ARE DEPICTED ON THE E&S CONTROL PLAN DRAWINGS.

PERMANENT SEEDING:

DISTURBED WORK SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL MANUAL (MARCH, 2012 ED.) OR PENNDOT PUBLICATION 408. REFER TO THE FOLLOWING TABLES FROM THE ABOVE-REFERENCED PADEP MANUAL FOR ALL APPROPRIATE SEEDING INFORMATION.

ACCORDING TO DEP TABLE 11.5:

APPLICATION: UTILITY RIGHT-OF-WAY

DRAINAGE CLASS: WELL DRAINED

SEED MIX: 1 PLUS 8 (DEP TABLE 11.4) OR APPROVED EQUAL FROM TABLES USING PURE LIVE SEED, EXCLUDING TALL FESCUE. NOTE THAT CROWNVETCH SHOULD NOT BE USED ADJACENT TO WETLANDS.

THE CONTRACTOR SHALL AVOID RUNNING HEAVY EQUIPMENT OVER THE RESTORED AREAS.

THE CONTENT OF THE COMPOST FILTER SOCKS MAY BE DISPERSED ON SITE WHEN THE FILTER SOCKS ARE NO LONGER REQUIRED SO LONG AS IT IS WITHIN THE LOD AND DOES NOT INTERFERE WITH DRAINAGE.

EROSION CONTROL BLANKET

EROSION CONTROL BLANKET (ECB) WILL BE INSTALLED, AS SHOWN ON THE DRAWINGS. GENERALLY, ECB SHALL BE INSTALLED ON SLOPES GREATER THAN 3:1, WITHIN 50 FEET OF SURFACE WATERS, AND WITHIN 100 FEET OF SURFACE WATERS IN SPECIAL PROTECTION WATERSHEDS. SEE APPENDICES FOR FURTHER DETAILS.

MAINTENANCE OF CONTROL FACILITIES

ALL TEMPORARY CONTROL MEASURES, AS DESCRIBED IN THIS REPORT, AND AS NOTED AND DETAILED IN THE E&S CONTROL PLANS, WILL BE INSTALLED, MAINTAINED AND REMOVED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE PADEP EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE (BMP) MANUAL (MARCH, 2012 ED).

CONTROL MEASURES AND FACILITIES, BOTH TEMPORARY AND PERMANENT, WILL BE MAINTAINED DURING THE PROGRESS OF THE WORK. THIS WILL BE PERFORMED BY IMPLEMENTING A PROGRAM OF PROPER DISPOSAL OF MATERIALS AND FREQUENT REMOVAL OF MATERIALS ACCUMULATED AT THE CONTROL FACILITIES. TEMPORARY CONTROL MEASURES WILL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS ACHIEVED.

MATERIALS NOT USED IN CONSTRUCTION WILL BE REMOVED FROM THE SITE AS EARLY AS POSSIBLE. ANY SOILS REMOVED FROM THE SITE MUST BE TRANSPORTED TO A SITE THAT HAS AN ADEQUATE AND IMPLEMENTED EROSION AND SEDIMENT POLLUTION CONTROL PLAN. DEWATERED SEDIMENT CLEANED FROM COMPOST FILTER SOCK AND PUMPED WATER FILTER BAGS WILL BE DISPOSED ON SITE AND WILL BE REUSED IN FINAL GRADING OPERATIONS, OR DISPOSED OF AT A LOCATION WITH AN APPROVED E&S CONTROL PLAN.

MAINTENANCE WILL INCLUDE THE INSPECTION OF EROSION AND SEDIMENT CONTROL FACILITIES AFTER ANY MEASUR

THE OPERATOR/PERMITTEE SHALL ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTE INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL, MATERIALS, BUILDING MATERIALS, SANITARY WASTES, PACKAGING MATERIALS, COATING AND ASSOCIATED PACKAGING, WELDING MATERIALS, WASTE PIPE, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL. OFF-SITE TRANSPORT OF MATERIALS REQUIRES THAT THE RECEIVING FACILITY HAVE ITS OWN APPROVED, ACTIVE PERMIT TO RECEIVE SUCH MATERIALS.

STANDARD E&S PLAN NOTES

19. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
20. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
21. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
22. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
23. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
24. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
25. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
26. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
27. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
28. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

EROSION AND SEDIMENTATION CONTROL MEASURES MAINTENANCE SCHEDULE/PROCEDURES			
CONTROL MEASURE	INSPECTION SCHEDULE	POTENTIAL ISSUES	TYPICAL REMEDIES
COMPOST FILTER SOCK	WEEKLY AND AFTER EACH 0.25 INCH RAINFALL EVENT	UNDERCUTTING OF BARRIER	INCREASE NUMBER OF STAKES IN AFFECTED AREA
		SEDIMENT AT 1/2 HEIGHT OF BARRIER	REMOVE SEDIMENT, PLACE ACROSS SITE AS FILL
		DAMAGED FABRIC	REPAIR/REPLACE ACCORDING TO MANUFACTURERS SPECIFICATIONS
PUMPED WATER FILTER BAG	BEFORE AND AFTER EACH USE	TORN FABRIC	REPLACE FILTER BAG
		SEDIMENT ESCAPING BAG	REPLACE FILTER BAG
		BAG FILLED 1/2 WITH SEDIMENT	REPLACE FILTER BAG
ROCK CONSTRUCTION ENTRANCE	WEEKLY AND AFTER EACH MEASURABLE RAINFALL EVENT	MISSING STONE, RUTTING	ADD ROCK TO SPECIFIED DIMENSIONS
		SEDIMENT ON ROADWAY	SWEEP DRIED MATERIAL BACK TO PROJECT SITE. DO NOT WASH WITH WATER.
TEMPORARY/PERMANENT VEGETATION	WEEKLY AND AFTER EACH MEASURABLE RAINFALL EVENT	SEDIMENT AT TOE OF SLOPE	APPLY EROSION CONTROL BLANKET AS NECESSARY
		RILLS AND GULLIES FORMING	FILL RILLS AND GULLIES. APPLY EROSION CONTROL BLANKET AS NECESSARY
		BARE PATCHES	RE-SEED PER SEEDING SPECIFICATIONS
TIMBER MATTING	BEFORE AND AFTER EACH USE	BROKEN TIMBERS	REMOVE MAT AND REPLACE WITH NEW MAT
CONSTRUCTION FENCING	WEEKLY	FALLEN FABRIC	REPLACE STAKES AS NECESSARY TO ENSURE STURDY BARRIER



SUNOCO PIPELINE

An ENERGY TRANSFER Partnership

525 FRITZTOWN ROAD
SINKING SPRING, PA 19608

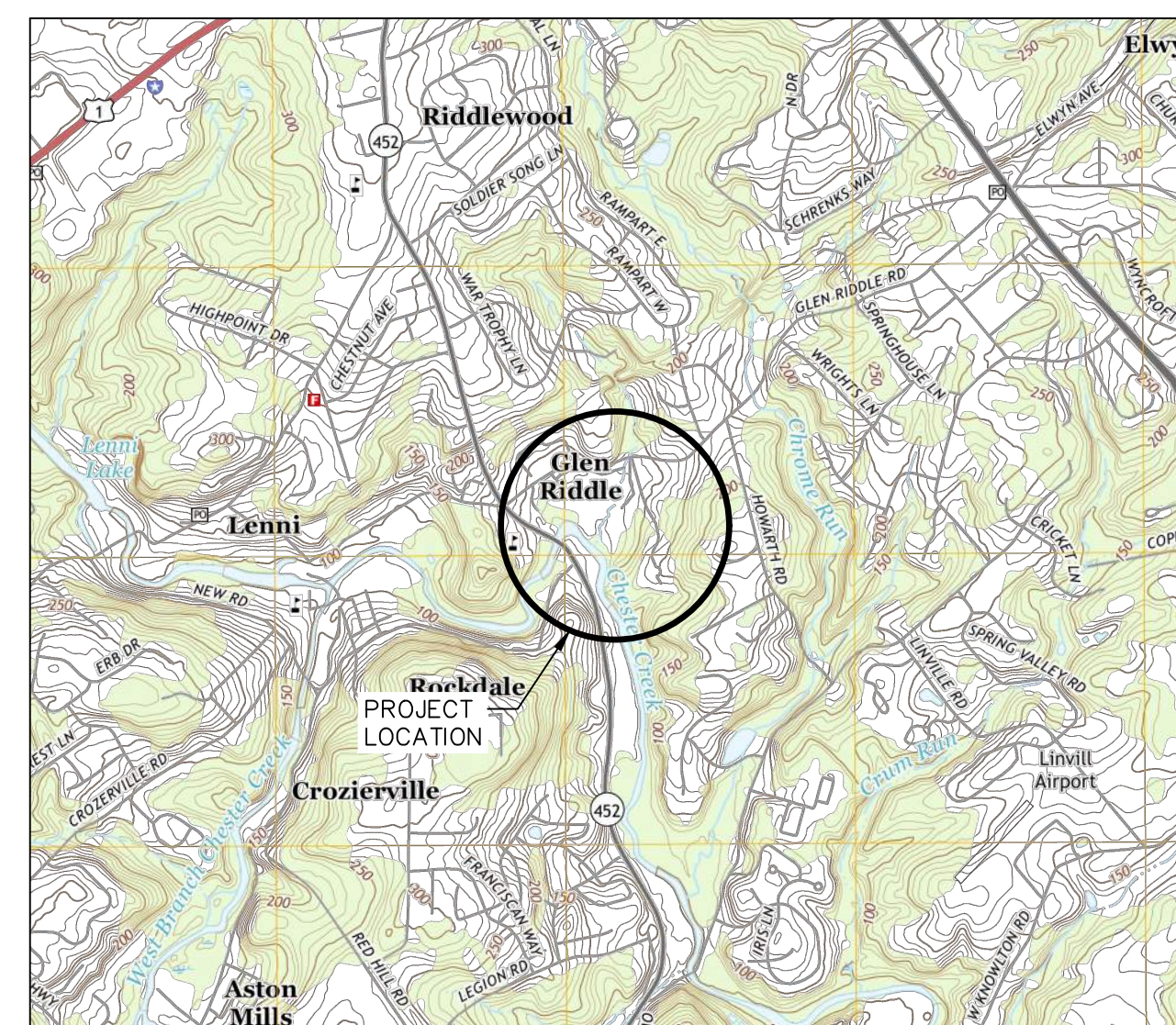
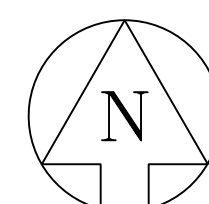
11010 – 14-INCH TWIN OAKS TO NEWARK TWIN-NWRK INVESTIGATIONS

DIG 4 PIPELINE REPAIR
MIDDLETOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA
CIVIL CONSTRUCTION PLANS
ISSUED FOR PERMIT



AED ES PROJECT NO. 44-44116

MARCH 2025



PROJECT LOCATION MAP
SCALE: 1"=2,000'

MAP REFERENCES: USGS MEDIA, PA (2016)

INDEX OF DRAWINGS

44-44116-D37-101	ACCESS AND OVERALL SITE PLAN
44-44116-D37-102	PLAN AND PROFILE
44-44116-D37-103	EROSION AND SEDIMENTATION CONTROL PLAN
44-44116-D37-104	RESTORATION PLAN
44-44116-D37-105	EROSION AND SEDIMENTATION CONTROL DETAILS
44-44116-D37-106	EROSION AND SEDIMENTATION CONTROL NOTES
44-44116-D37-107	EROSION AND SEDIMENTATION CONTROL NOTES

Approved by PA DEP, A. Nassani,
and Abe Koul 4/3/2025



Know what's below.
Call before you dig.





PLOTTED: 3/7/2025 1:54:48 PM

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FILENAME: S:\Projects\4444116 ET TWIN To NWRK Investigations\90_CAD Models And Sheets\04_Civil\Dig 4\44-44116-D4-1_rev.dwg

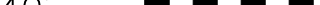


1. THE CONTRACTOR SHALL CONTACT PENNSYLVANIA 811. AT 811 OR 1-800-272-1000 AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EARTH DISTURBANCE.
2. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING BURIED UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION.
3. THE PLANS ARE BASED ON THE FOLLOWING:
 - a. TOPOGRAPHIC SURVEY PERFORMED BY AEDES IN FEBURARY, 2025.
 - b. NO BOUNDARY SURVEY WAS PERFORMED AS A PART OF THIS PROJECT. PROPERTY LINES BASED ON COUNTY GIS DATA.
 - c. EXISTING SUNOCO RIGHT-OF-WAY IS ASSUMED TO BE 30 FEET TOTAL WIDTH..
4. THE PROJECT IS LOCATED IN PENNSYLVANIA STATE PLANE SOUTH, US FOOT, NAD83. THE VERTICAL DATUM IS NAVD88.
5. THE CONTRACTOR SHALL USE TIMBER MATS TO PREVENT RUTTING AND TO PROTECT EXISTING BURIED UTILITIES AS NECESSARY.
6. LIMIT OF DISTURBANCE AREAS:
 - TOTAL LOD = 6,972 S.F. (0.160 AC±)
7. WORK AREA SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS WITH REGARDS TO LAND COVER AND GRADES.
8. AT NO TIME SHALL WORK CAUSE SEDIMENT TO ENTER A SURFACE WATER BODY OR ALLOW EXCESSIVE EROSION.
9. WORK TO BE CONDUCTED IN DRY CONDITIONS TO THE EXTENT POSSIBLE.
10. SEDIMENT TRACKED OR CONVEYED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE REMOVED AND REDEPOSITED INTO THE LIMIT OF DISTURBANCE BY THE END OF EACH WORKING DAY. REMOVAL CAN BE COMPLETED THROUGH USE OF MECHANICAL OR HAND TOOLS. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER. IF REMOVAL AT THE END OF EACH WORKING DAY IS NOT EFFECTIVE, STREET SWEEPING SHALL BE USED.
11. THE RECEIVING WATER IS CHESTER CREEK. IT HAS A DESIGNATED USE OF TROUT STOCK FISHES (TSF) AND NO EXISTING USE.

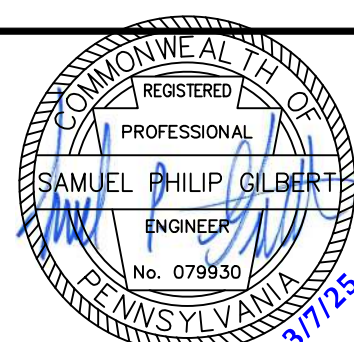
GRAPHIC SCALE

1"=40'

40' 0 40' 80'

A horizontal graphic scale bar. The left end is marked '40'', the middle is marked '0', the right end of the first segment is marked '40'', and the far right end is marked '80''. The bar is divided into alternating black and white segments, with the first segment being black and the others alternating.

Know what's below.
Call before you dig.



THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

AED ES PROJECT No.: 44-44116

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ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK INVESTIGATIONS
DIG 4 PIPELINE REPAIR
ACCESS AND OVERALL SITE PLAN

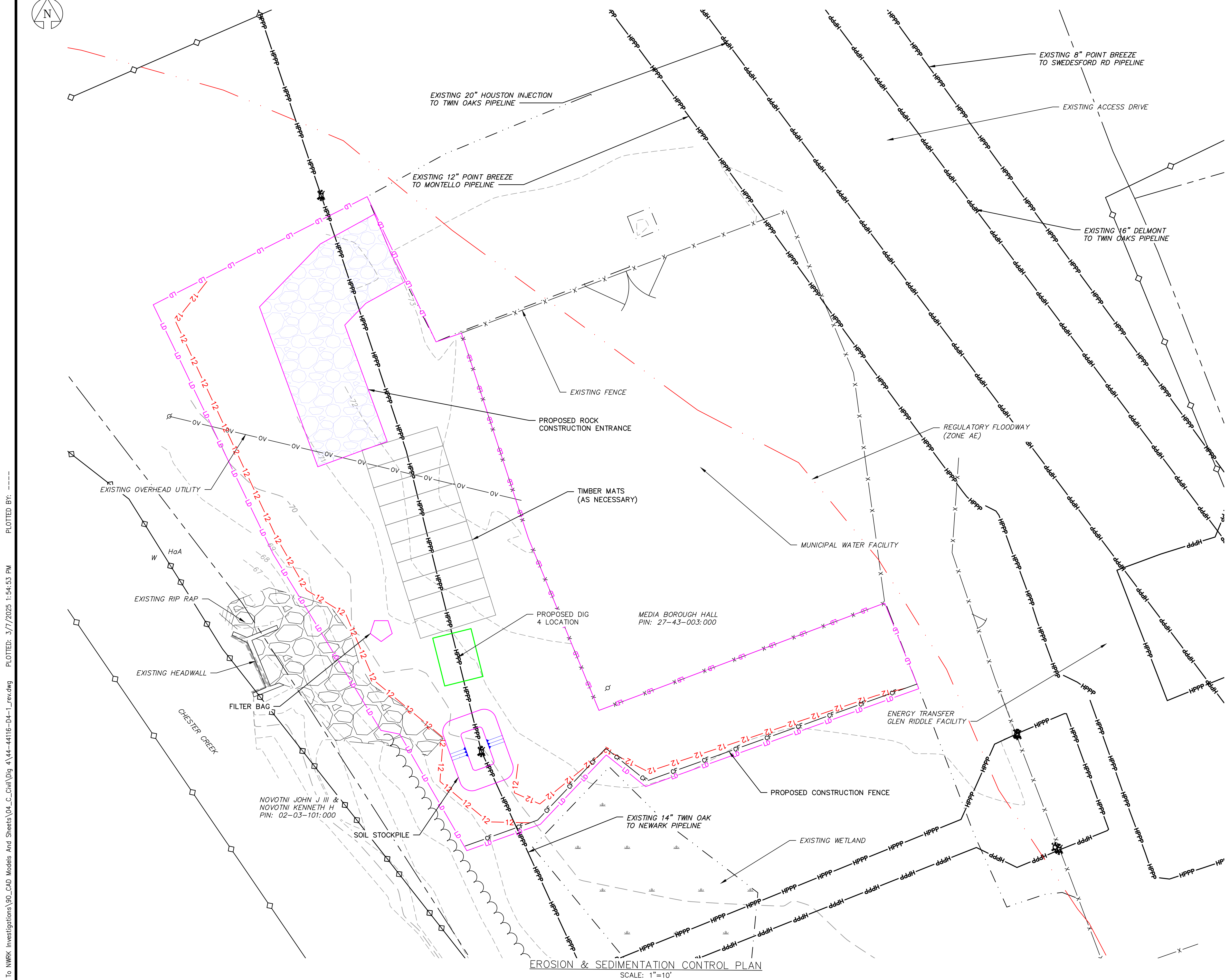
MIDDLETOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

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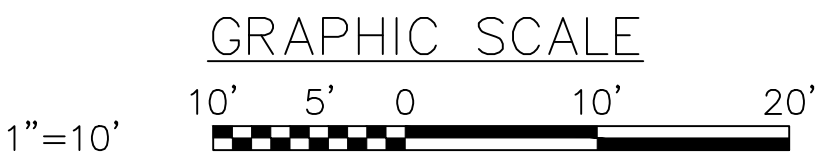
DRAWING NO.
44-44116-D4-101

REV. NO.



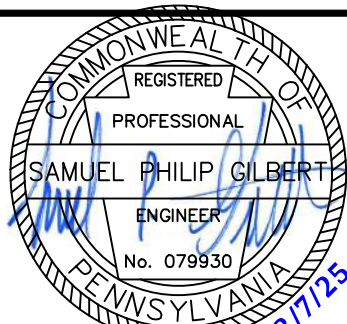
- GENERAL NOTES:
1. THE CONTRACTOR SHALL CONTACT PENNSYLVANIA 811. AT 811 OR 1-800-272-1000 AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EARTH DISTURBANCE.
 2. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING BURIED UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION.
 3. THE PLANS ARE BASED ON THE FOLLOWING:
 - a. TOPOGRAPHIC SURVEY PERFORMED BY AEDES IN FEBURARY, 2025.
 - b. NO BOUNDARY SURVEY WAS PERFORMED AS A PART OF THIS PROJECT. PROPERTY LINES BASED ON COUNTY GIS DATA.
 - c. EXISTING SUNOCO RIGHT-OF-WAY IS ASSUMED TO BE 30 FEET TOTAL WIDTH..
 4. THE PROJECT IS LOCATED IN PENNSYLVANIA STATE PLANE SOUTH, US FOOT, NAD83. THE VERTICAL DATUM IS NAVD88.
 5. THE CONTRACTOR SHALL USE TIMBER MATS TO PREVENT RUTTING AND TO PROTECT EXISTING BURIED UTILITIES AS NECESSARY.
 6. LIMIT OF DISTURBANCE AREAS:
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 11. THE RECEIVING WATER IS CHESTER CREEK. IT HAS A DESIGNATED USE OF TROUT STOCK FISHES (TSF) AND NO EXISTING USE.

LEGEND		DESCRIPTION
SYMBOL		
HPPP	HPPP	EXISTING ENERGY TRANSFER PIPELINE
---	70	MAJOR CONTOUR
---	71	MINOR CONTOUR
---		EXISTING ENERGY TRANSFER RIGHT-OF-WAY
---		TOP OF BANK
---		BOTTOM OF BANK
---		EXISTING EDGE OF PAVED ROADWAY
---		EXISTING EDGE OF UNPAVED ROADWAY
X-X		EXISTING FENCE
Ø		UTILITY POLE
OV	OV	OVERHEAD ELECTRIC
---		EXISTING PROPERTY LINE
---		WETLAND BOUNDARY
Mu	DcA	SOIL TYPE BOUNDARY
		PROPOSED ROCK CONSTRUCTION ENTRANCE
		TEMPORARY EQUIPMENT CROSSING
LD	LD	LIMIT OF DISTURBANCE
12	12	12" COMPOST FILTER SOCK
		AREA OF EXCAVATION FOR PIPE WORK
		FILTER BAG
		TEMPORARY SOIL STOCKPILE
		FEMA FLOOD HAZARD AREA LIMITS





Know what's below.
Call before you dig.





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AED ES PROJECT No.: 44-44116

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE
						AS NOTED

FACILITY CODE OR ACCOUNT NO:

CONSTRUCTION YEAR:

BY: DATE:

DRAWN: CNN 02/2025

CHECK: SPG 02/2025

APPROVED: WKS 02/2025



SUNOCO PIPELINE
An ENERGY TRANSFER Partnership

ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK INVESTIGATIONS
DIG 4 PIPELINE REPAIR
EROSION AND SEDIMENTATION CONTROL PLAN

MIDDLETOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

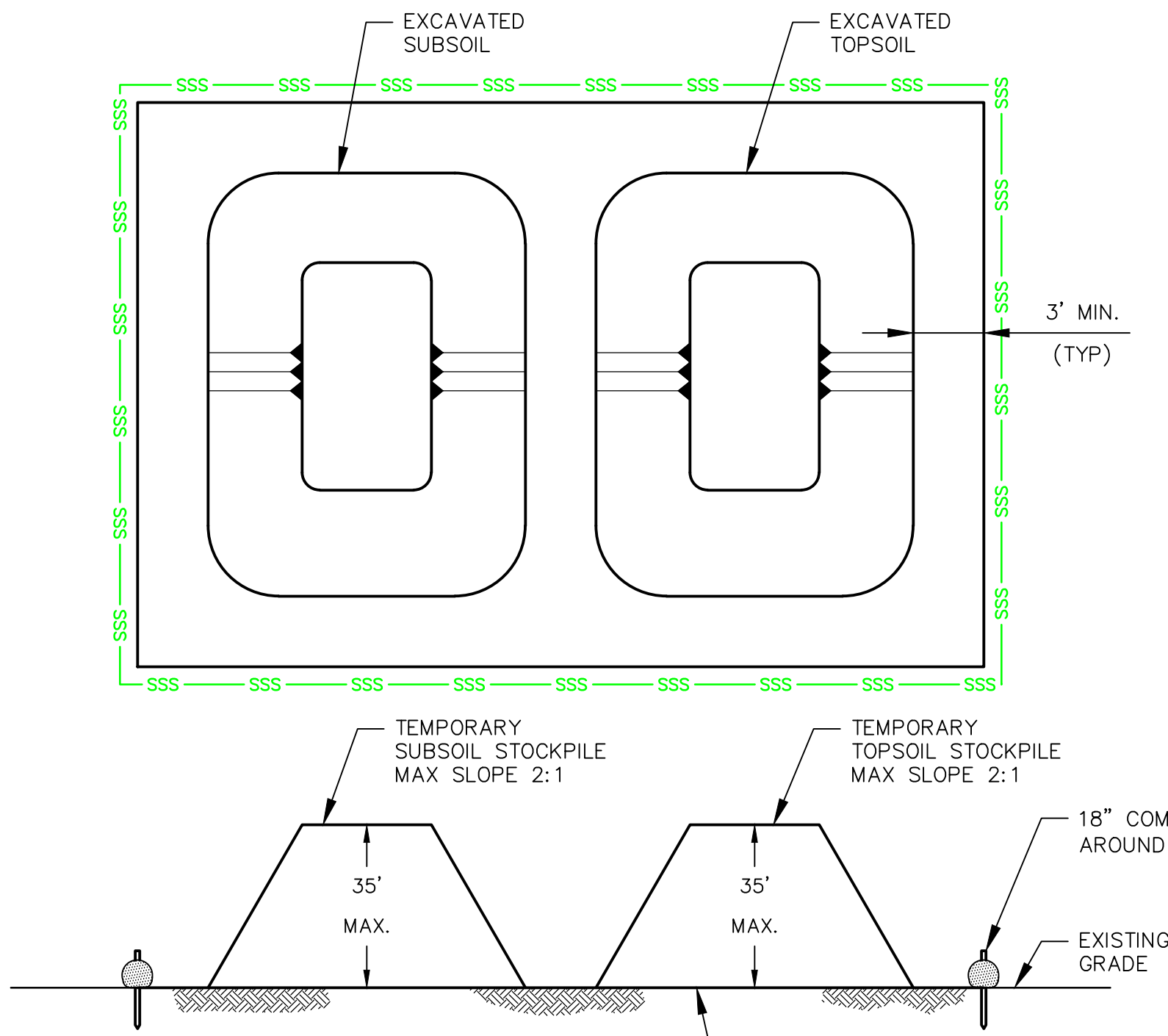
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OLD DRAWING NO.

DRAWING NO.
44-44116-D4-102

REV. NO.
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FILENAME: S:\Projects\4444116 ET TWIN To NWRK Investigations\90_CAD Models And Sheets\04_Civil\Dig 4\44-44116-D4-1.dwg PLOTTED: 3/7/2025 1:55:02 PM PLOTTED BY: -----



TEMPORARY SOIL STOCKPILE DETAIL
NO SCALE

NOTES:

1. TOPSOIL AND SUBSOIL MUST BE KEPT IN SEPARATE STOCKPILES.
2. EXCAVATED TOPSOIL (WITH THE VEGETATIVE ROOT MASS) SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL (UNLESS THERE IS STANDING WATER OR THE SOIL IS TOO SATURATED TO SEGREGATE).
3. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20' FOR 2:1 SLOPES OR 30' FOR 3:1 SLOPES, BENCHING MUST BE PROVIDED.
4. TOPSOIL STOCKPILES SHALL BE STABILIZED PER COUNTY SOIL CONSERVATION DISTRICT REQUIREMENTS.

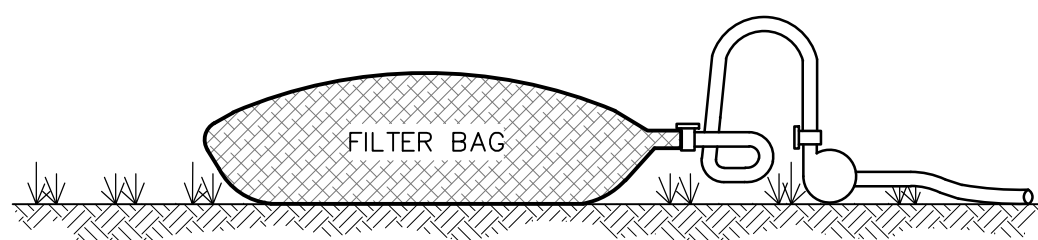
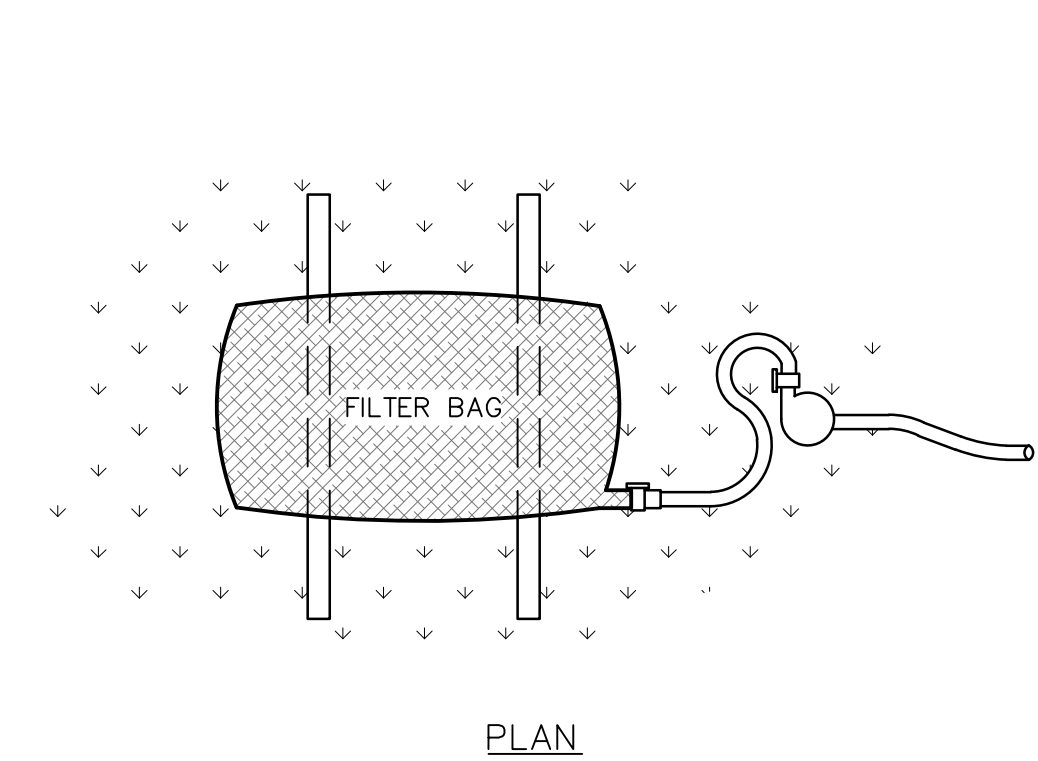
TABLE 4.1 COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS					
MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HDPE BIAXIAL NET
	CONTINUOUSLY WOUND
	FUSION-WELDED JUNCTURES
	3/4" X 3/4" MAX. APERTURE SIZE
OUTER FILTRATION MESH	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)
	3/16" MAX. APERTURE SIZE

SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.

FILTREXX & JMD



SEDIMENT FILTER BAG FOR PUMPED WATER
NOT TO SCALE

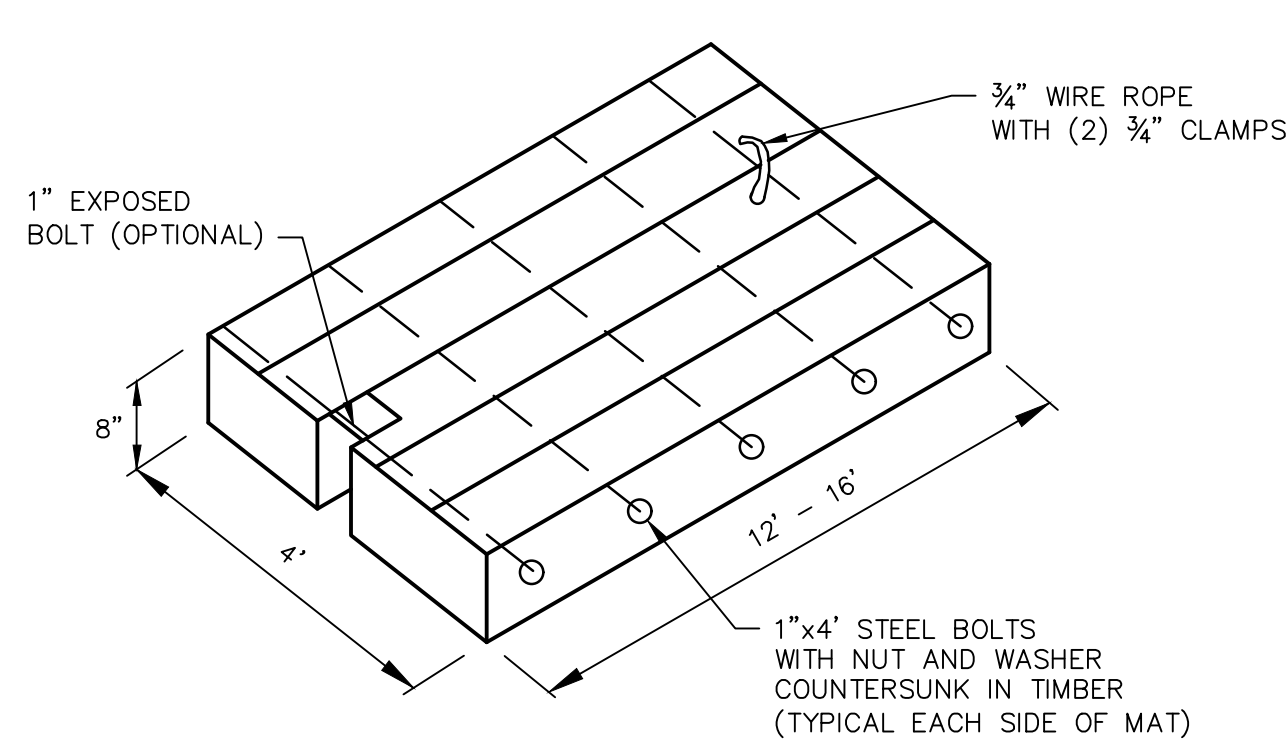
NOTES:

1. LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE ON SITE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
3. BAGS SHALL BE LOCATED IN WELL VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND AN EROSION RESISTANT FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5% CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
4. A DOWNSLOPE SEDIMENT BARRIER IS NOT REQUIRED FOR MOST INSTALLATIONS. HOWEVER, COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 OF THE MAXIMUM RATE SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
7. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

TABLE 4.2

COMPOST STANDARDS

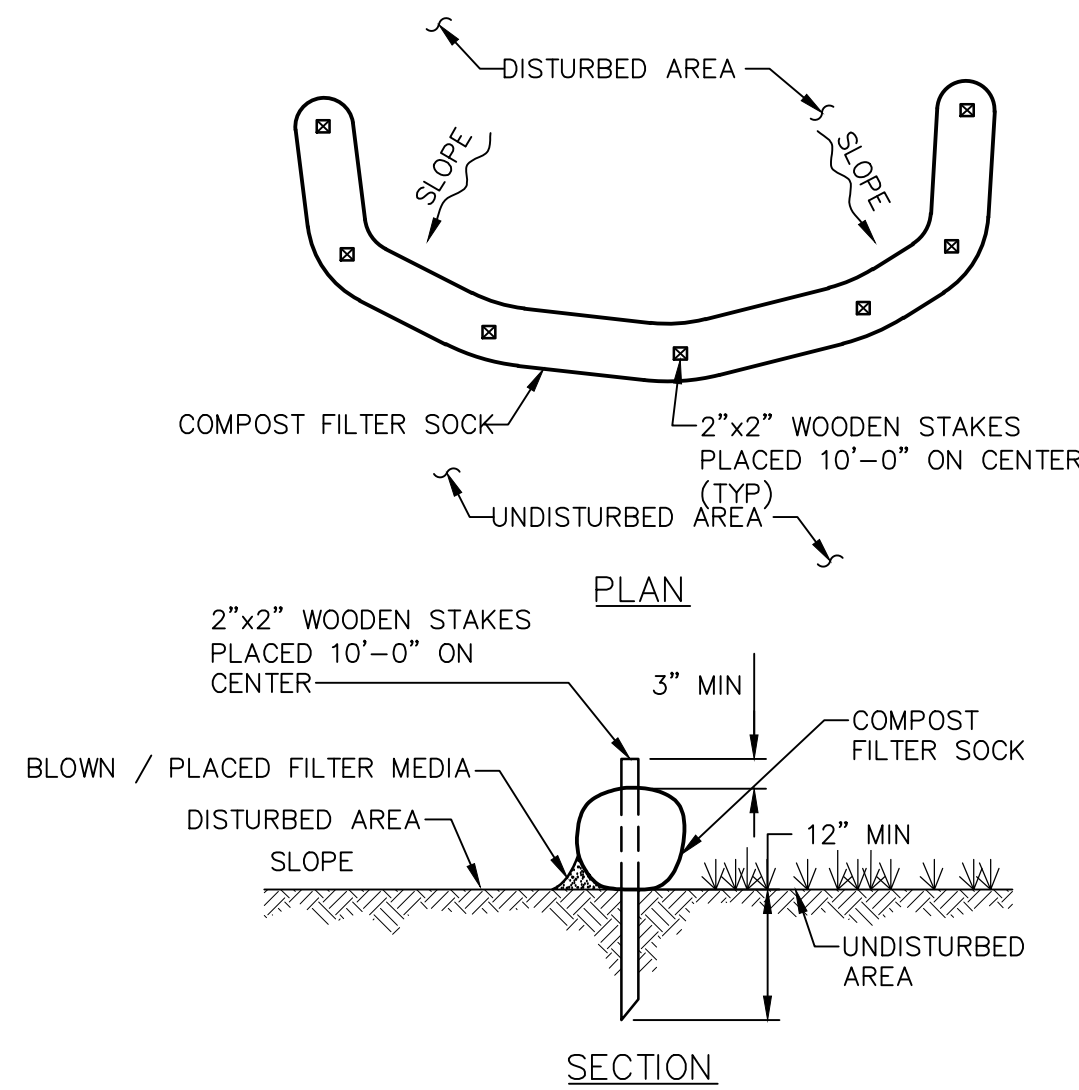
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30%-50% PASS THROUGH 3" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 dS/m (mmhos/cm) MAXIMUM



TYPICAL TIMBER MAT DETAIL

NO SCALE

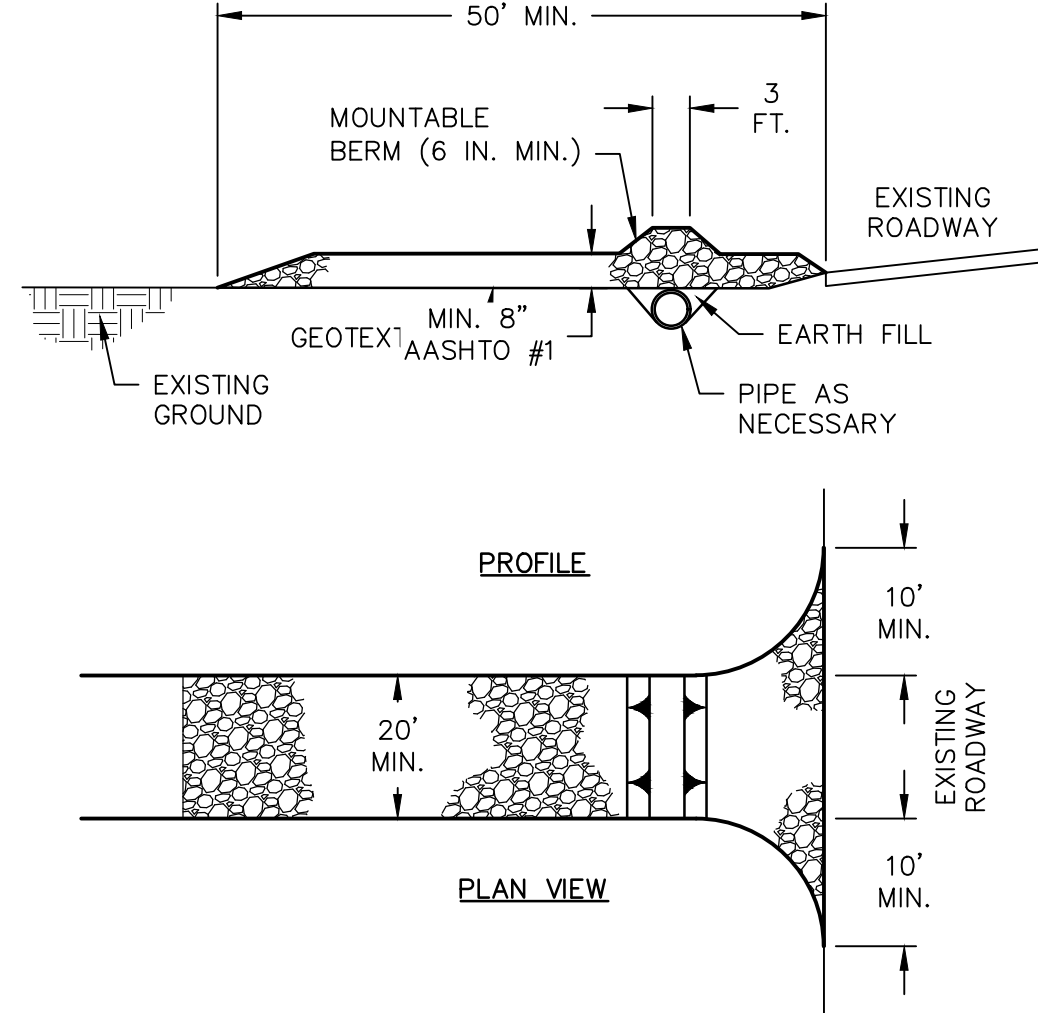
- NOTES:
1. MATS ARE BUILT WITH WIRE ROPE TYPICAL EACH END OR EXPOSED BOLT TYPICAL EACH END FOR HANDLING, CONSTRUCTED OF ROUGH CUT HARDWOOD.
 2. TIMBER MATS SHALL BE USED IN SOFT AREAS ALONG THE PIPELINE ROUTE AS NEEDED.
 3. CONTRACTOR TO PLACE GEOTEXTILE FABRIC (TENCATE MIRAFI 500X OR EQUIVALENT) UNDER TIMBER MATS.



COMPOST FILTER SOCK
NOT TO SCALE

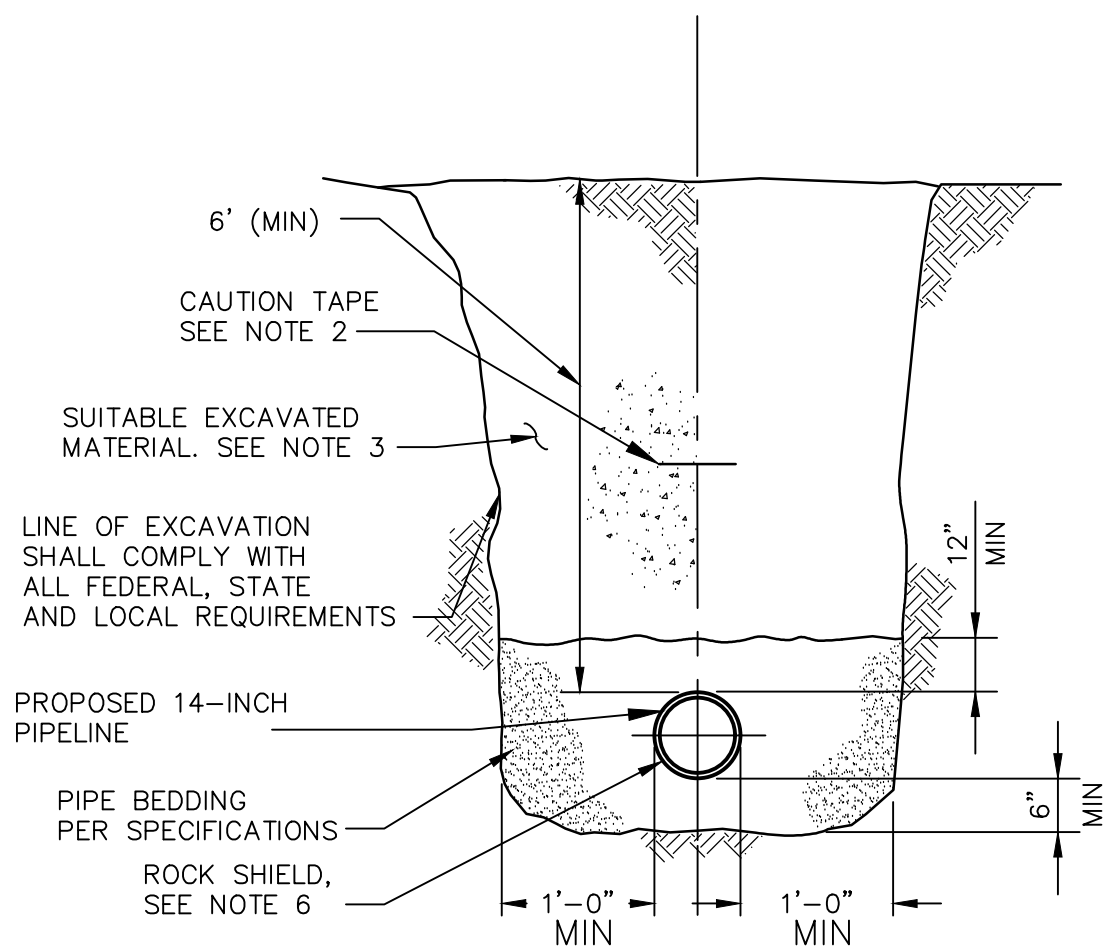
NOTES:

1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE COMPOST FILTER SOCK.
5. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS. PHOTODEGRADABLE SOCKS SHALL BE REPLACED AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE COMPOST FILTER SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IF THE SOCK IS LEFT IN PLACE THEN THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.



ROCK CONSTRUCTION ENTRANCE
NO SCALE

- NOTES:
1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
 2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
 4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK, WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



TYPICAL PIPE TRENCH (UNPAVED AREAS)
NO SCALE

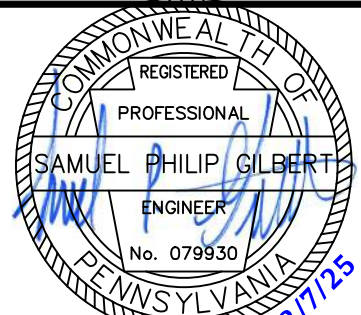
NOTES:

1. THE PIPELINE SHALL BE ADEQUATELY SUPPORTED IN THE DITCH WITH SPANS NOT GREATER THAN 25 FEET PRIOR TO BACKFILLING.
2. CAUTION TAPE SHALL BE INSTALLED AT DEPTH OF 2 FEET BELOW THE SURFACE.
3. THE OWNER'S REPRESENTATIVE WILL DETERMINE IF THE BACKFILL IS SUITABLE MATERIAL.
4. LIFTS NOT TO EXCEED 6-INCHES, FOR DEPTHS 0 TO 2 FEET, COMPACT TO 85% SPD. FOR DEPTHS BELOW 2FEET, COMPACT TO 90% SPD.
5. PIPELINE SHALL TYPICALLY HAVE A MINIMUM OF 4' OF COVER.

NOTES/REFERENCE DRAWINGS



Know what's below.
Call before you dig.



THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

AED ES PROJECT No.: 44-44116

REV

DESCRIPTION

BY

DATE

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SCALE: AS NOTED

FACILITY CODE
OR ACCOUNT NO:

CONSTRUCTION YEAR:

BY DATE

DRAWN CNN 02/2025

CHECK SPG 02/2025

APPROVED WKS 02/2025



SUNOCO PIPELINE

An ENERGY TRANSFER Partnership

ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK INVESTIGATIONS
DIG 4 PIPELINE REPAIR
EROSION AND SEDIMENTATION CONTROL DETAILS

MIDDLETOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

AFE NO.

OLD DRAWING NO.

DRAWING NO.

44-44116-D4-104

REV. NO.

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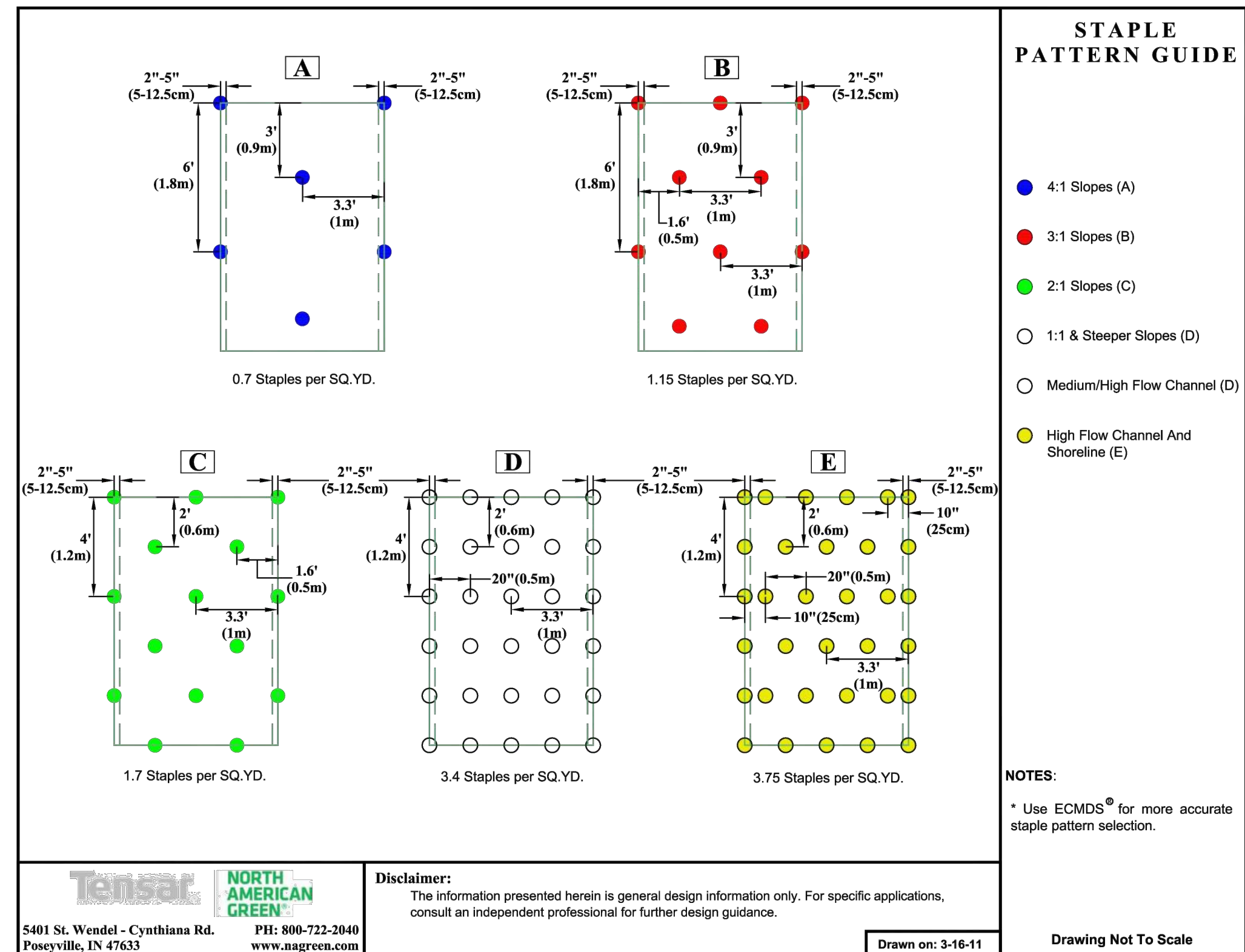
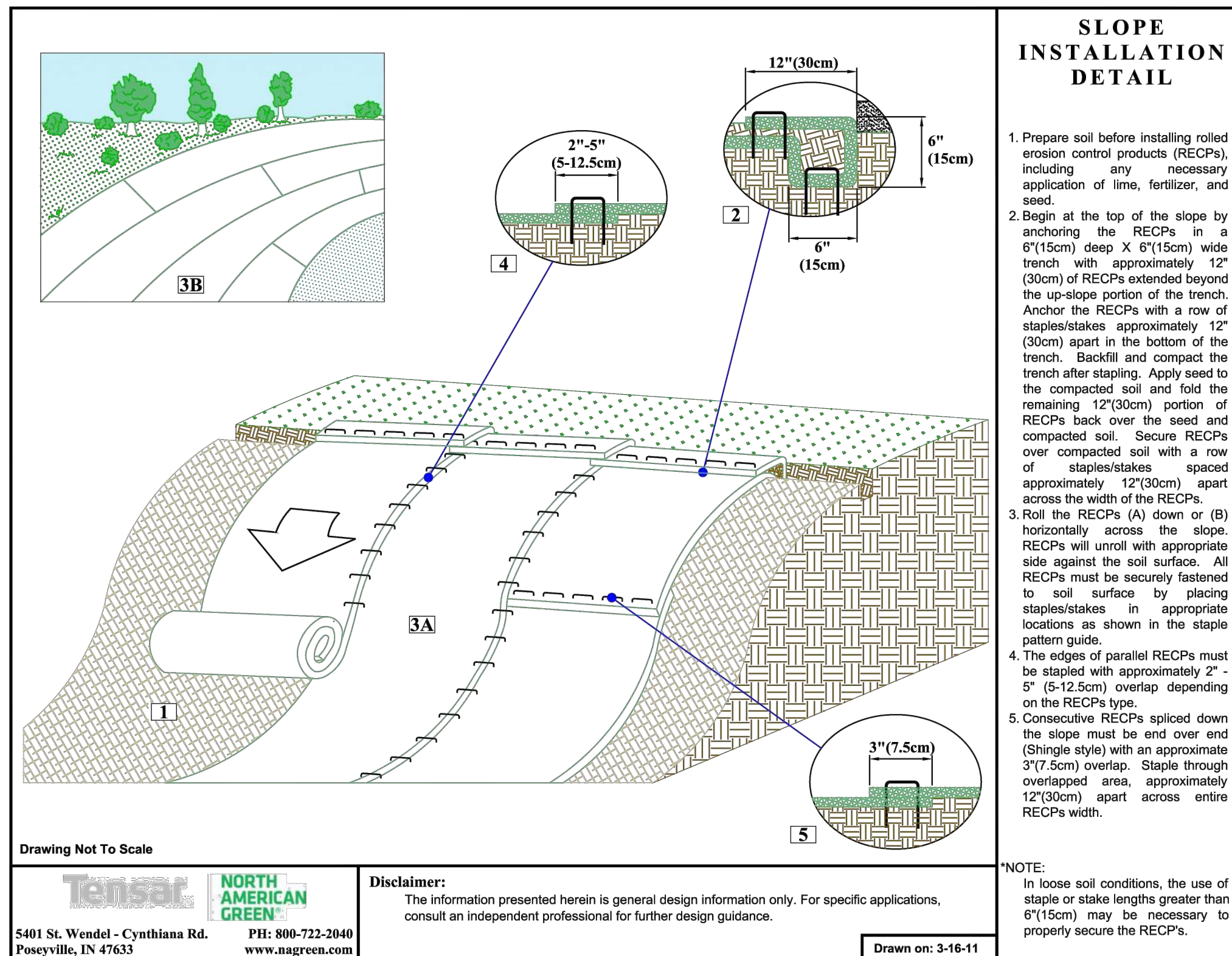


TABLE 11.4
Recommended Seed Mixtures

Mixture Number	Species	Seeding Rate - Pure Live Seed ¹	
		Most Sites	Adverse Sites
1 ²	Spring oats (spring), or	64	96
	Annual ryegrass (spring or fall), or	10	15
	Winter wheat (fall), or	90	120
	Winter rye (fall)	56	112
2 ³	Tall fescue, or	60	75
	Fine fescue, or	35	40
	Kentucky bluegrass, plus	25	30
	Redtop ⁴ , or	3	3
3	Perennial ryegrass	15	20
	Birdsfoot trefoil, plus	6	10
4	Tall fescue	30	35
	Birdsfoot trefoil, plus	6	10
5 ⁵	Reed canarygrass	10	15
	Crownvetch, plus	10	15
	Tall fescue, or	20	25
6 ^{5,8}	Perennial ryegrass	20	25
	Crownvetch, plus	10	15
	Annual ryegrass	20	25
7 ⁸	Birdsfoot trefoil, plus	6	10
	Crownvetch, plus	10	15
	Tall fescue	20	30
8	Flatpea, plus	20	30
	Tall fescue, or	20	30
	Perennial ryegrass	20	25
9 ⁶	Serecia lespedeza, plus	10	20
	Tall fescue, plus	20	25
	Redtop ⁴	3	3
10	Tall fescue, plus	40	60
	Fine fescue	10	15
11	Deertongue, plus	15	20
	Birdsfoot trefoil	6	10
12 ⁷	Switchgrass, or	15	20
	Big Bluestem, plus	15	20
	Birdsfoot trefoil	6	10
13	Orchardgrass, or	20	30
	Smooth bromegrass, plus	25	35
	Birdsfoot trefoil	6	10

1. Penn State, "Erosion Control and Conservation Plantings on Noncropland"
2. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS.
3. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.
4. This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.
5. Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redbud, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc.
6. Use for highway slopes and similar sites where the desired species after establishment is crownvetch.
7. Use only in extreme southeastern or extreme southwestern Pennsylvania. *Serecia lespedeza* is not well adapted to most of PA.
8. Do not mow shorter than 9 to 10 inches.
9. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

TABLE 11.3
Plant Tolerances of Soil Limitation Factors

Species	Growth Habit ¹	Tolerates				Minimum Seed Specifications ²				
		Wet Soil	Dry Site	Low Fertility	Acid Soil (pH 5-5.5) ³	Purity (%)	Ready Germ (%)	Hard Seed (%)	Total Germ (%)	Seeds/1,000s (1,00lb)
Warm-Season Grasses										
Deerfongue	bunch	yes	yes	yes	yes	95	75		75	250
Winged leavedgrass	bunch	no	yes	yes	yes	97	75		75	1,500
Switchgrass ⁴	bunch	yes	yes	yes	yes			(60 PLS)		390
Big bluestem	bunch	no	yes	yes	yes			(60 PLS)		150
Cool-Season Grasses										
Tall Fescue	bunch	yes	no	yes	yes	95	80		80	227
Redtop	sod	yes	no	yes	yes	92	80		80	5,000
Fine fescues	sod	no	no	yes	no	95	80		80	400
Perennial ryegrass	bunch	yes	no	no	no	95	85		85	227
Annual ryegrass	bunch	yes	no	yes	no	95	85		85	227
Kentucky bluegrass	sod	no	no	yes	no	85	75		75	2,200
Red canarygrass	sod	yes	yes	yes	yes	95	70		70	520
Orchardgrass	bunch	yes	yes	yes	yes	95	80		80	654
Timothy	bunch	sod	yes	no	yes	yes	95	80	80	1,230
Smooth bromegrass	sod	no	no	yes	yes	95	80		80	136
Legumes ⁵										
Crownwetch	sod	no	yes	yes	no	98	40	30	65	120
Birdfoot trefoil ⁶	bunch	yes	no	yes	yes	98	60	20	80	400
Flatpea	sod	no	no	yes	yes	98	55	20	75	10
Sericea lespezedea	sod	no	yes	yes	yes	98	60	20	80	335
Cereals										
Winter wheat	bunch	no	no	no	no	98	85		85	15
Barley	bunch	yes	no	yes	yes	98	85		85	18
Spring oats	bunch	no	no	no	no	98	85		85	13
Sundargrass	bunch	no	yes	no	no	98	85		85	55
Japanese millet	bunch	yes	no	yes	yes	98	80		80	155

- Growth habit refers to the ability of the species to either form a dense sod by vegetative means (stolons, rhizomes, or roots) or remain in a bunch or single plant form. If seeded heavily enough, even bunch formers can produce a very dense stand. This is sometimes called a sod, but not in the sense of a sod formed by vegetative means.
- ² Once established, plants may grow at a somewhat lower pH, but cover generally is only adequate at pH 6.0 or above.
- ³ *Minimum seed lots are truly minimum, and seed lots to be used for revegetation purposes should equal or exceed these standards.* Thus, deertongue grass should germinate 75% or better. Crownvetch should have at least 40% readily germinable seed and 30% hard seed. Commonly, seed lots are available that equal or exceed minimum specifications. Remember that disturbed sites are adverse for plant establishment. Ready germination refers to seed that germinates during the period of the germination test and that would be expected, if conditions are favorable, to germinate rapidly when planted. The opposite of ready germination is dormant seed, of which hard seed is one type.
- ⁴ Switchgrass seed is sold only on the basis of PLS.
- ⁵ Need specific legume inoculant. Inoculant suitable for garden peas and sweetpeas usually is satisfactory for flatpea.
- ⁶ Birdsoot trefoil is adapted over the entire state, except in the extreme southeast where crown and root rots may injure stands.

Penn State, "Erosion Control and Conservation Plantings on Noncropland,"

TABLE 11.2
Soil Amendment Application Rate Equivalents

Soil Amendment	Permanent Seeding Application Rate			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields
10-10-20 fertilizer	1,000 lb.	25 lb.	210 lb.	
Temporary Seeding Application Rate				
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles

NOTE: A compost blanket which meets the standards of this chapter may be substituted for the soil amendments shown in Table 11.2.

TABLE 11.6
Mulch Application Rates

Mulch Type	Application Rate (Min.)			Notes
	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	
Straw	3 tons	140 lb.	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4 - 6 tons	185 - 275 lb.	1,650 - 2,500 lb.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415	See limitations above

TABLE 11.5
Recommended Seed Mixtures for Stabilizing Disturbed Areas

Site Condition	Nurse Crop	Seed Mixture (Select one mixture)
Slopes and Banks (not mowed) Well-drained Variable drainage	1 plus 1 plus	3, 5, 8, or 12 ¹ 3 or 7
Slopes and Banks (mowed) Well-drained	1 plus	2 or 10
Slopes and Banks (grazed/hay) Well-drained	1 plus	2, 3, or 13
Gullies and Eroded Areas	1 plus	3, 5, 7, or 12 ¹
Erosion Control Facilities (BMPs) Soil waterways, spillways, frequent water flow areas Drainage ditches Shallow, less than 3 feet deep Deep, not mowed Pond banks, dikes, levees, dams, diversion channels, And occasional water flow areas Mowed areas Non-mowed areas For hay or silage on diversion channels and occasional water flow areas	1 plus 1 plus 1 plus 1 plus 1 plus 1 plus	2, 3, or 4 2, 3, or 4 5 or 7 2 or 3 5 or 7 3 or 13
Highways ² Non-mowed areas Pure crownvetch ³ Well-drained Variable drained Poorly drained Areas mowed several times per year	1 plus 1 plus 1 plus 1 plus 1 plus	5 or 6 5, 7, 8, 9, or 10 3 or 7 3 or 4 2, 3, or 10
Utility Right-of-way Well-drained Variable drained Well-drained areas for grazing/hay	1 plus 1 plus 1 plus	5, 8, or 12 ¹ 3 or 7 2, 3, or 13
Effluent Disposal Areas	1 plus	3 or 4
Sanitary Landfills	1 plus	3, 5, 7, 11 ¹ , or 12 ¹
Surface mines Spoils, mine wastes, fly ash, slag, settling basin Residues and other severely disturbed areas (lime to soil test) Severely disturbed areas for grazing/hay	1 plus 1 plus	3, 4, 5, 7, 8, 9, 11 ¹ , or 12 ¹ 3 or 13

1. For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.
2. Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices.
3. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

NOTES/REFERENCE DRAWINGS



THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

AED ES PROJECT No.: 44-44116

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								CHECK	SPG	02/2025
								APPROVED	WKS	02/2025
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	BY	DATE
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APPROVED	WKS	02/2025

SCALE: AS NOTED



ENERGY TRANSFER
11010 - 14-INCH TWIN OAKS TO NEWARK
TWIN-NWRK INVESTIGATIONS
DIG 4 PIPELINE REPAIR
EROSION AND SEDIMENTATION CONTROL DETAILS

MIDDLETOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA

AFE NO

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WASTE RECYCLING AND DISPOSAL

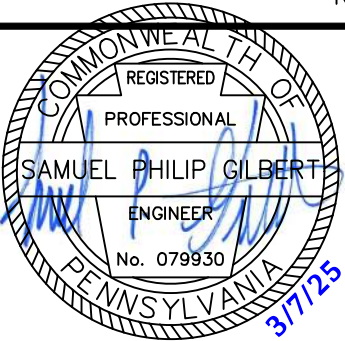
THE OPERATOR/PERMITTEE SHALL ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, SANITARY WASTES, PACKAGING MATERIALS, COATING AND ASSOCIATED PACKAGING, WELDING MATERIALS, WASTE PIPE, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL. OFF-SITE TRANSPORT OF MATERIALS REQUIRES THAT THE RECEIVING FACILITY HAVE ITS OWN APPROVED, ACTIVE PERMIT TO RECEIVE SUCH MATERIALS.

HAZARDOUS OR POLLUTANT MATERIALS, INCLUDING BUT NOT LIMITED TO CHEMICALS, FUELS, AND LUBRICATING OILS SHALL NOT BE STORED WITHIN 100 FEET OF A WETLAND OR WATERBODY. SUITABLE ACCUMULATED SEDIMENT SHALL BE USED ON SITE. UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER ACCORDING TO THE PADEP'S SOLID WASTE MANAGEMENT'S REGULATIONS (PA CODE TITLE 25, CHAPTER 260.1 ET SEQ. AND 287.1 ET SEQ). THE WASTE DISPOSAL SITE MUST HAVE A SEPARATE APPROVED EROSION CONTROL PLAN.

STANDARD E&S PLAN NOTES

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THESE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS.
4. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
5. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
6. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
7. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
8. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION.
9. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
10. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
11. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
12. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A PUMPED WATER FILTER BAG, OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER NON-DISTURBED VEGETATED AREAS. DISCHARGE POINTS SHOULD BE ESTABLISHED TO PROVIDE FOR MAXIMUM DISTANCE TO ACTIVE WATERWAYS.
13. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY/DAILY BASIS AS INDICATED ON THE EROSION AND SEDIMENTATION CONTROL MEASURES MAINTENANCE SCHEDULE/PROCEDURES. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRAVING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
14. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
15. SEDIMENT TRACKED OR CONVEYED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE REMOVED AND REDEPOSITED ONTO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY. REMOVAL CAN BE COMPLETED THROUGH USE OF MECHANICAL OR HAND TOOLS. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
16. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
17. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES — 6 TO 12 INCHES ON COMPACTED SOILS — PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
18. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

19. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
20. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
21. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
22. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
23. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
24. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
25. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS, DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
26. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
27. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
28. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
29. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
30. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIALS/WASTES.
31. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
32. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER, WITHIN 50 FEET OF A SURFACE WATER, AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
33. AT NO TIME SHALL WORK CAUSE SEDIMENT TO ENTER A SURFACE WATER BODY OR ALLOW EXCESSIVE EROSION.
34. WORK TO BE CONDUCTED IN DRY CONDITIONS TO THE EXTENT POSSIBLE.
35. SEDIMENT TRACKED OR CONVEYED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE REMOVED AND REDEPOSITED INTO THE LIMIT OF DISTURBANCE BY THE END OF EACH WORKING DAY. REMOVAL CAN BE COMPLETED THROUGH USE OF MECHANICAL OR HAND TOOLS. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER. IF REMOVAL AT THE END OF EACH WORKING DAY IS NOT EFFECTIVE, STREET SWEEPING SHALL BE USED

 Know what's below. Call before you dig.			 THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.	NOTES/REFERENCE DRAWINGS		REV		DESCRIPTION		BY	DATE	CHK'D	APP'D	FACILITY CODE OR ACCOUNT NO: CONSTRUCTION YEAR: <table><tr><td>DRAWN</td><td>CNN</td><td>02/2025</td></tr><tr><td>CHECK</td><td>SPG</td><td>02/2025</td></tr><tr><td>APPROVED</td><td>WKS</td><td>02/2025</td></tr></table>		DRAWN	CNN	02/2025	CHECK	SPG	02/2025	APPROVED	WKS	02/2025	 SUNOCO PIPELINE An ENERGY TRANSFER Partnership		ENERGY TRANSFER 11010 - 14-INCH TWIN OAKS TO NEWARK TWIN-NWRK INVESTIGATIONS DIG 4 PIPELINE REPAIR EROSION AND SEDIMENTATION CONTROL NOTES MIDDLETOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA		AFE NO. OLD DRAWING NO. DRAWING NO. 44-44116-D4-107 REV. NO. -	
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