



Legal Department

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

December 21, 2023

Ms. Tanowa Troupe, Secretary  
Ohio Power Siting Board  
180 East Broad Street  
Columbus, Ohio 43215-3793

**Hector Garcia**  
Senior Counsel –  
Regulatory Services  
(614) 716-3410 (P)  
[hgarcia1@aep.com](mailto:hgarcia1@aep.com)

**RE: Proof of Compliance with Condition  
Case No. 23-0531-EL-BLN  
Jerome 138 kV Station Project**

Dear Ms. Troupe:

In satisfaction of Condition (2) of the Staff Report for this Project, Ohio Power Company (the “Company”) submits this notice and attachment to inform you that the Ohio Environmental Protection Agency National Pollutant Discharge Elimination System-Construction Site Stormwater General Permit has been approved for the above-referenced Project. Also attached is the Storm Water Pollution Prevention Plan for the Project.

If you have any questions regarding this information, please do not hesitate to contact me.

Respectfully submitted,

/s/ Hector Garcia

Hector Garcia (0084517), Counsel of Record  
Counsel for Ohio Power Company

cc: John Jones, Counsel OPSB Staff  
Jon Pawley, OPSB Staff



November 9, 2023

AEP Ohio Transmission Company, Inc.  
Jennifer Walker  
8500 Smith Mill Road  
New Albany OH 43054

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) – Construction Site Stormwater General Permit – OHC000006

Dear Applicant,

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

<b>Facility Name:</b>	Jerome Station
<b>Facility Location:</b>	Columbus MarysvilleRd/Industrial Parkway
<b>City:</b>	Plain City
<b>County:</b>	Union
<b>Township:</b>	Jerome
<b>Ohio EPA Facility Permit Number:</b>	4GC09620*AG
<b>Permit Effective Date:</b>	November 9, 2023
<b>Permit Expiration Date:</b>	April 22, 2028

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. A copy of the general permit may be viewed or downloaded from [here](#). Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA.

If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this permit. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced General Permit. The placement to fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

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

Sincerely,

Anne M. Vogel  
Director



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

(Read accompanying instructions carefully before completing this form.)

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

### I. Applicant Information/Mailing Address

**Company (Applicant) Name:** AEP Ohio Transmission Company, Inc.

**Mailing (Applicant) Address:** 8500 Smith Mill Road

**City:** New Albany

**State :** OH

**Zip Code:** 43054

**Country:** USA

**Contact Person:** Jennifer Walker

**Phone:** (614) 477-5410

**Fax:**

**Contact E-mail Address:** jlwalker2@aep.com

### II. Facility/Site Location Information

**Facility/Site Name:** Jerome Station

**Facility Address:** Columbus MarysvilleRd/Industrial Parkway

**City:** Plain City

**State:** OH

**Zip Code:** 43064

**County:** Union

**Township:** Jerome

**Facility Contact Person:** Samuel Kwarteng

**Phone:** (614) 446-7421

**Fax:**

**Facility Contact E-mail Address:** sakwarteng@aep.com

**Latitude:** 40.133945

**Longitude:** -83.209253

**Facility/Map Attachment** Jerome Station location map.pdf

**Receiving Stream or MS4:** No unnamed tribs or stream on site

### III. General Permit Information

**General Permit Number:** OHC000006

**Coverage Type:** New

**Type of Activity:** Construction Site Stormwater General Permit

**SIC Code(s):**

**Existing NPDES Facility Permit Number:** 4GC09620\*AG

**ODNR Coal Mining Application Number:**

**If Household Sewage Treatment System, is system for:**

**New Home Construction:**

**Replacement of failed existing system:**

Outfall	Design Flow (MGD):	Associated Permit Effluent Table:	Receiving Water :	Latitude	Longitude

**Are These Permits Required?**

**PTI:** NO

**Individual 401 Water Quality Certification:** NO

**Individual NPDES:** NO

**Isolated Wetland:** NO

**U.S. Army Corp Nationwide Permit:** NO

**Proposed Project Start Date(if applicable):** November 30, 2023

**Estimated Completion Date(if applicable):** March 29, 2024

**Total Land Disturbance (Acres):** 5

**MS4 Drainage Area (Sq. Miles):**

**SWP3 Attachment(s):** <None>

### IV. Payment Information

**Check #:**

**For Ohio EPA Use Only**

**Check Amount:**

**Check ID(OFA):** \_\_\_\_\_ **ORG #:** \_\_\_\_\_

**Date of Check:**

**Rev ID:** \_\_\_\_\_ **DOC #:** \_\_\_\_\_

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

**Applicant Name:** Jennifer Walker

**Title:** Environmental Manager

**Signature:**

Electronically submitted by 78793785

**Date:**

Electronically submitted on 11/07/2023

### ADDITIONAL INFORMATION

Please add any additional comments or attachments below.

--



**JEROME STATION**  
**COLUMBUS MARYSVILLE ROAD**  
**LAT/LONG: 40.13394531, -83.20925373**  
**WORK ORDER # T10411816**  
**STORM WATER POLLUTION PREVENTION PLAN**  
**(SWP3)**



Prepared for:

AEP Ohio Transmission Company, Inc.  
8500 Smith's Mill Road  
New Albany, OH 43054

Prepared by:

BAIR, GOODIE AND ASSOCIATES, INC.  
153 North Broadway  
New Philadelphia, Ohio 44663

Site Contact: Samuel Kwarteng  
Phone: 614-446-7421  
E-mail: sakwarteng@aep.com

REV. 0 - NOVEMBER 2023

Project Start Date: NOVEMBER 2023  
Project End Date: MARCH 2024

# JEROME STATION

## CERTIFICATION

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

Name: Jennifer Walker

Title: Environmental Manager

Signature: *Jennifer Walker*

Date: 11-7-2023

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**APPENDIX 1** – Project Location Map, Soil Erosion and Sediment Control Plan, Watershed (HUC-12) Map, USDA Soils Map

**APPENDIX 2** – ODNR Rainwater and Land Development Manual Details

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

**APPENDIX 4** – Duty to Inform Contractors and Subcontractors Signature Form

**APPENDIX 5** – Construction Plans and Specifications

**APPENDIX 6** – Storm Water Calculations Report

**APPENDIX 7** – Long-term Maintenance Plan

## I. Site Description

### A. Description of Construction Activity

AEP Ohio Transmission Company, Inc. (AEP) is proposing to conduct construction activities for the Jerome Station Project located in Jerome Township, Union County, Ohio. The Project consists of modifying an existing gravel lot to create an approximate 2.55 acre gravel station pad and the construction of gravel access roads within an existing approved SWPPP project (Permit No. 4GC08755\*BG). Construction activities will include grading, gravel placement, and storm water management. A station fence will be put in place and access to the project is provided by the existing access road off of Columbus Marysville Road.

### B. Disturbed Area

Total Area of the Site – 44.53 acres

Total Disturbed Area – 5 acres

**Table 1: Disturbed Area**

County	Township/Village/City	Disturbance Acreage
Union	Jerome Township	5

### C. Impervious Area

The proposed station pad and access roads will result in 0.45 acres of additional impervious surface. Due to this project being planned development within an existing approved SWPPP, all permanent post-construction Best Management Practices (BMPs) have been implemented under permit (Permit No. 4GC08755\*BG). See Section II.D.5 of this SWP3 for post-construction storm water management requirements.

**Table 2: Impervious Area**

	Impervious Acreage	% Imperviousness
<b>Existing</b>	3.29	39%
<b>New</b>	0.45	6%
<b>Total</b>	3.74	45%

### D. Storm Water Calculations

Pre- and post-development runoff coefficients have been calculated based on the pre- and post-estimates for impervious surfaces within the drainage area southwest of the existing stormwater pond. The proposed station pad will be covered in clean, washed stone. This project does include the addition of impermeable materials in order to construct gravel access drives as well as slightly expand an existing gravel lot constructed under an existing approved SWPPP (Permit No. 4GC08755\*BG). Because this project lies within the existing approved SWPPP project (Permit No. 4GC08755\*BG), all permanent post-construction Best Management Practices (BMPs) have been implemented under permit (Permit No. 4GC08755\*BG). Therefore, this project does not warrant the need for additional post-construction Best Management Practices (BMPs).

Pre-development runoff coefficient – 0.48

Post-development runoff coefficient – 0.51

E. Existing Soil Data

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey was used to determine soil types within the Project area. A copy of the web-based soil map is included in Appendix 1. Soils in the Project area are shown in Table 3.

**Table 3: Soil Types**

Map Unit Symbol	Map Unit Description	Drainage Class	Hydric Soil?
Bs	Brookston silty clay loam, fine texture, 0 to 2 percent slopes	Poorly drained	Yes
CrA	Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	Somewhat poorly drained	Yes

F. Prior Land Uses

The Project is located in an urban area of Jerome Township, Union County, Ohio. Prior land use is agricultural and previously undeveloped land.

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

1. On-Site Waterbodies

**Table 4: Delineated Streams**

Stream ID	Stream Name	Flow Regime	Ohio EPA 401 Permitting Eligibility	Stream Stability
		No streams are present within the construction limits of this project		

**Table 5: Delineated Wetlands and Ponds**

Wetland ID	Cowardin Classification	ORAM Category
	No wetlands are present within the construction limits of this project	

2. Receiving Waters

The Project is located in the Indian Run Watershed (HUC-12: 050600011203) which ultimately drains to the Scioto River. The receiving streams may include Scioto Big Run and Marsh Run.

H. Implementation Schedule

A construction log will be kept at the Project site to record major dates of grading and stabilization. The general order of construction is provided in Table 6 below and will begin in November 2023 and is estimated to end in March 2024.

**Table 6: Implementation Schedule**

Task	Date
Identify environmental avoidance areas in the field [i.e. wetlands, 50' stream buffers, other environmental commitments]	November 2023
Mobilize construction equipment	November 2023
Forestry clearing/grubbing to begin	November 2023
Install [erosion controls/BMPs] filter sock, timber matting, and temporary construction entrances, as needed	December 2023
Construct gravel access roads and gravel station pad	December 2023
Install temporary seed and mulch, as needed, during Project activities	February 2023
Install permanent seed and mulch	February 2023
Remove matting and temporary BMPs	March 2024
Repair/restore all remaining disturbed areas	March 2024
Seed and mulch all remaining disturbed areas	March 2024
Construction demobilization	March 2024
Inspection with AEP and SWP3 contractor	March 2024

I. Subdivided Development Drawing

Not applicable.

J. Dedicated Asphalt and Concrete Plant Discharges

Not applicable.

K. Log of Grading and Stabilization Activities

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

L. Site Map

A vicinity of the Project area is included in Appendix 1, along with the Soil Erosion and Sediment Control Plan and details. The Soil Erosion and Sediment Control Plan shows the Project boundaries and contours, the limits of construction, and the locations of the erosion and sediment control features.

M. Permit Requirements

The permit requirements can be reviewed in the Ohio EPA General Permit No. OHC000006 which is available at <https://epa.ohio.gov/static/Portals/35/permits/OHC000006.pdf>.

## II. Storm Water Pollution Prevention Plan

The SWP3 was developed to meet the objectives in Part II. Non-numeric Effluent Limitations and Part III. Storm Water Pollution Prevention Plan (SWP3) of Ohio EPA General Permit No. OHC000006.

A. SWP3 Availability

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

B. Amendments

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

**AEP Environmental Services shall be notified prior to any significant modifications to the SWP3, such as changes to the access roads, disturbance acreage, culvert installations, etc., to ensure the Project remains in compliance with Ohio EPA General Permit No. OHC000006.**

C. Duty to Inform Contractors

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

D. Controls

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

The locations of the control methods are shown on the Soil Erosion and Sediment Control Plans in Appendix 1. Maintenance and inspections requirements for these controls can be found in Section II.D.6 of this SWP3. The control measures for this Project include the following:



1. Preservation Methods

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

2. Erosion, Sediment, and Runoff Controls

a. *Stabilization and Seeding*

Disturbed areas will be stabilized as specified in tables 7 and 8 below per the Soil Erosion and Sediment Control Plan and BMP detail sheets in Appendix 1. Mulch shall be applied to all exposed soil that has been seeded in an effort to facilitate seed germination and development.

**Table 7: Permanent Stabilization**

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

**Table 8: Temporary Stabilization**

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

b. *Sediment Barriers and Diversions*

Filter sock will be installed to encompass the entire site at all appropriate locations to filter sediment from site runoff. Orange barrier fencing will be used as needed and to protect wetland areas and 50-foot natural stream buffers. After Project completion, the posts, fencing, and ties shall be removed from the Project site and transported to an appropriate off-site disposal facility.

c. *Wetland and Stream Crossings*

Not applicable.

d. *Temporary Construction Entrances*

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

e. *Sediment Settling Ponds / Sediment Basins*

Sediment basins are included as a part of the existing approved SWPPP project (Permit No. 4GC08755\*BG). No additional sediment settling ponds and/or sediment basins are proposed as a part of this project.

3. Surface Water Protection

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

4. Other Controls

a. *Non-sediment Pollutant Controls*

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

b. *Off-site Traffic and Dust Control*

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

c. *Concrete Washouts*

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

d. *Wash Water*

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

e. *Compliance with Other Requirements*

This SWP3 is consistent with state and/or local waste disposal, sanitary sewer or septic system regulations including provisions prohibiting waste disposal by open burning. Spill response, disposal of suspect contaminated soils and clean-up activities are initiated by calling the AEP Regional Environmental Coordinator (REC).

f. *Trench and Groundwater Control and Dewatering*

Not applicable.

g. *Contaminated Sediment*

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

5. Post-Construction Storm Water Management Requirements

As this project is a planned development within an existing approved SWPPP, all permanent Best Management Practices (BMPs) have been implemented under permit (Permit No. 4GC08755\*BG).

6. Maintenance and Inspections Requirements

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

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

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

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

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

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

- Filter sock shall be inspected for depth of sediment, tears, and to ensure the anchor posts are firmly in the ground. Filter sock shall also be inspected to ensure they are maintained in the appropriate positions per the plans in Appendix 2. Built up sediment

shall be removed from the filter sock when it has reached one-third the height of the sock.

- Orange barrier fence shall be inspected to ensure the fence is erect and functioning as intended per the plans in Appendix 2.
- Temporary and permanent seeding shall be inspected for bare spots, washouts, and healthy growth. If seed does not germinate in an area on which it was placed, the area will either be re-seeded or an alternate erosion control method will be employed.
- Locations where vehicles and equipment enter or exit the site shall be inspected for evidence of off-site tracking of sediment. Sediment being tracked onto off-site roadways shall be cleaned up promptly.
- Detention basins shall be cleaned out when the site is stabilized to ensure the design elevation is restored.
- Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean out the structure. Prefabricated systems should also utilize this criterion unless the manufacturer has alternative specifications.

\*The permittee shall maintain the SWP3 Inspection Forms for three years following the submittal of a notice of termination (NOT) form. The Inspection Forms shall be signed in accordance with Part V.G of Ohio EPA General Permit OHC000006.

### **III. Approved State or Local Plans**

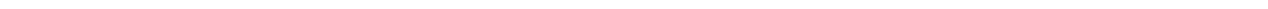
The erosion and sediment control plans were prepared in accordance with Ohio EPA Permit No. OHC000006.

### **IV. Exceptions**

There are no exceptions to the erosion and sediment control practices contained in the Ohio EPA General Permit No. OHC000006.

## **APPENDIX 1**

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



SITE CONTACT: Samuel Kwarteng  
PHONE : 614-446-7421  
E-MAIL: sakwarteng@aep.com

New California

33

MITCHELL DEWITT RD

TWP HWY 10

MALLARD CIR

MITCHELL DEWITT RD

CELTIC CROSSING DR

OAK MEADOW DR

PROJECT LOCATION  
LAT: 40.13394531  
LON: -83.20925373

COLUMBUS MARYSVILLE

RAUSCH DR

ESTATES CT

ESTATES PKWY

CORPORATE BLVD

INDUSTRIAL PKWY

Kile Ditch

PARK M

CO HWY 6

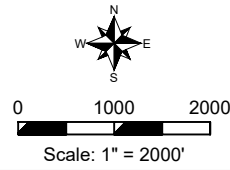
TWP HWY 9

TWP HWY 9

**BAIR  
GOODIE**



**AMERICAN  
ELECTRIC  
POWER**

Bair, Goodie and Associates, Inc.  
153 North Broadway, New Philadelphia, Ohio 44663  
P: 330.343.3499 / E: jpeltz@bairgoodie.com



LOCATED IN  
TOWNSHIP OF JEROME,  
COUNTY OF UNION  
STATE OF OHIO

### LEGEND

 LIMITS OF DISTURBANCE  
 PARCEL BOUNDARY

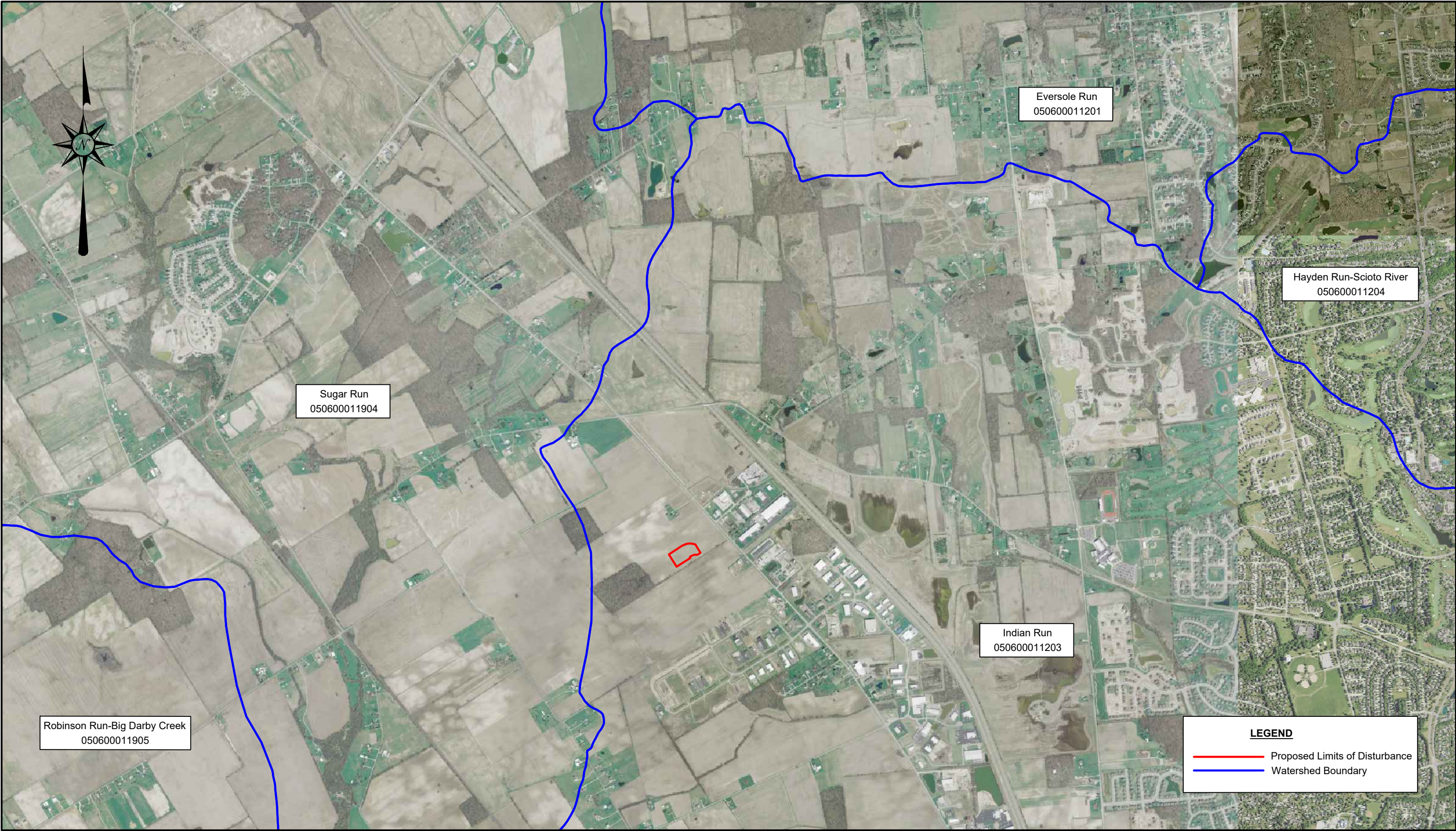
FILE: AEP-JRS102a | DATE: 11/10/2023 | SHEET: 1 OF 1  
AEP OHIO TRANSMISSION COMPANY, INC.

**APPENDIX 1**  
**PROJECT LOCATION MAP**  
**JEROME STATION**



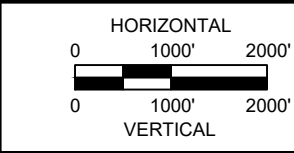






REV	DATE

BAIR, GOODIE AND ASSOCIATES, INC.  
153 NORTH BROADWAY STREET  
NEW PHILADELPHIA, OH 44663  
TEL: 330.343.3499 FAX: 330.343.9505  
WWW.BAIRGOODIE.COM



LOCATED IN  
TOWNSHIP OF JEROME,  
COUNTY OF UNION,  
STATE OF OHIO

**HUC-12 WATERSHED MAP**  
**JEROME STATION**

DATE: 10/30/2023
FILE ID: AEP-JRS102c
SCALE: AS NOTED
SHEET: 1 OF 1
REV 0



# Soil Map—Union County, Ohio (AEP, Jerome Station)




**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey


7/8/2023  
Page 1 of 3


## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Union County, Ohio

Survey Area Data: Version 21, Sep 12, 2022

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

Date(s) aerial images were photographed: Nov 12, 2009—Dec 26, 2016

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

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bs	Brookston silty clay loam, fine texture, 0 to 2 percent slopes	68.1	78.6%
CrA	Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	18.5	21.4%
<b>Totals for Area of Interest</b>		<b>86.7</b>	<b>100.0%</b>

## **APPENDIX 2**

### **ODNR Rainwater and Land Development Manual Details**

#### **BMP Detail Sheets**

Filter Sock

Clearing and Grubbing

Construction Entrance

Dust Control

Topsoiling

Temporary Seeding

Mulching

Permanent Seeding

Concrete Washout

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## 6.6 Filter Sock

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### Description

Filter socks are sediment-trapping devices using compost inserted into a flexible, permeable tube with a pneumatic blower device or equivalent. Filter socks trap sediment by filtering water passing through the berm and allowing water to pond, creating a settling of solids.

### Conditions where practice applies

Filter socks are appropriate for limited drainage areas, requiring sediment control where runoff is in the form of sheet flow or in areas that silt fence is normally considered acceptable. The use of filter socks is applicable to slopes up to 2:1 (H:V), around inlets, and in other disturbed areas of construction sites requiring sediment control. Filter socks also may be useful in areas, where migration of aquatic life such as turtles, salamanders and other aquatic life would be impeded by the use of silt fence.

### Planning Considerations

Filter socks are sediment barriers, capturing sediment by ponding and filtering water through the device during rain events. They may be a preferred alternative where equipment may drive near or over sediment barriers, as they are not as prone to complete failure as silt fence if this occurs during construction. Driving over filter socks is not recommended; but if it should occur, the filter sock should be inspected immediately, repaired and moved back into place as soon as possible.

## Design Criteria

Typically, filter socks can handle the same water flow or slightly more than silt fence. For most applications, standard silt fence is replaced with 12" diameter filter socks. However, proper installation is especially important for them to work effectively.

**Materials** – Compost/mulch used for filter socks shall be weed free and derived from a well-decomposed source of organic matter. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations, including time and temperature data indicating effective weed seed, pathogen and insect larvae kill. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products are not acceptable.

Materials should meet the following requirements: pH between 5.0-8.0; 100% passing a 2" sieve and a minimum of 70% greater than the 3/8" sieve; moisture content is less than 60%; material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.

**Level Contour** – Place filter socks on the level contour of the land so that flows are dissipated into uniform sheet flow. Flow coming to filter socks must not be concentrated and the filter sock should lie perpendicular to flows.

**Flat Slopes** – When possible, place filter socks at a 5' or greater distance away from the toe of the slopes in order for the water coming from the slopes to maximize space available for sediment deposit (see the illustration). When this is not possible due to construction limitations, additional filter socks may be required upslope of the initial filter sock (see the chart below for appropriate slope lengths and spacing).

**Flow Around Ends** – In order to prevent water flowing around the ends of filter socks, the ends of the filter socks must be constructed pointing upslope so the ends are at a higher elevation.

**Vegetation** – For permanent areas, seeding filter socks is recommended to establish vegetation directly in the sock and immediately in front and back of the sock at a distance of 5 feet. Vegetating on and around the filter socks will assist in slowing down water for filtration creating a more effective longer-term sediment control.

**Drainage Area:** Generally filter socks are limited to ¼ to ½ acre drainage area per 100 foot of the sediment barrier. Specific guidance is given in the chart below.

**Table 6.6.1 Maximum Slope Length Above Filter Sock and Recommended Diameter**

Slope	Ratio (H:V)	8"	12"	18"	24"
0% - 2%	10% - 20%	125	250	300	350
10% - 20%	50:1 - 10:1	100	125	200	250
2% - 10%	10:1 - 5:1	75	100	150	200
20% - 33%	5:1 - 2:1		50	75	100
>50%	>2:1		25	50	75

Note: For larger drainage areas, see standards for temporary diversions, sediment traps and sediment basins.

*Dispersing flow* – Sheet flow and runoff should not exceed berm height or capacity in most storm events. If overflow of the berm is a possibility, a larger filter sock should be installed or an alternative sediment control should be used.

*Maintenance* – Filter socks should be regularly inspected to make sure they hold their shape, are ponding, and allowing adequate flow through. If ponding becomes excessive, filter socks should be replaced. Used filter socks may be cut and the compost dispersed and seeded to prevent captured sediment from being resuspended.

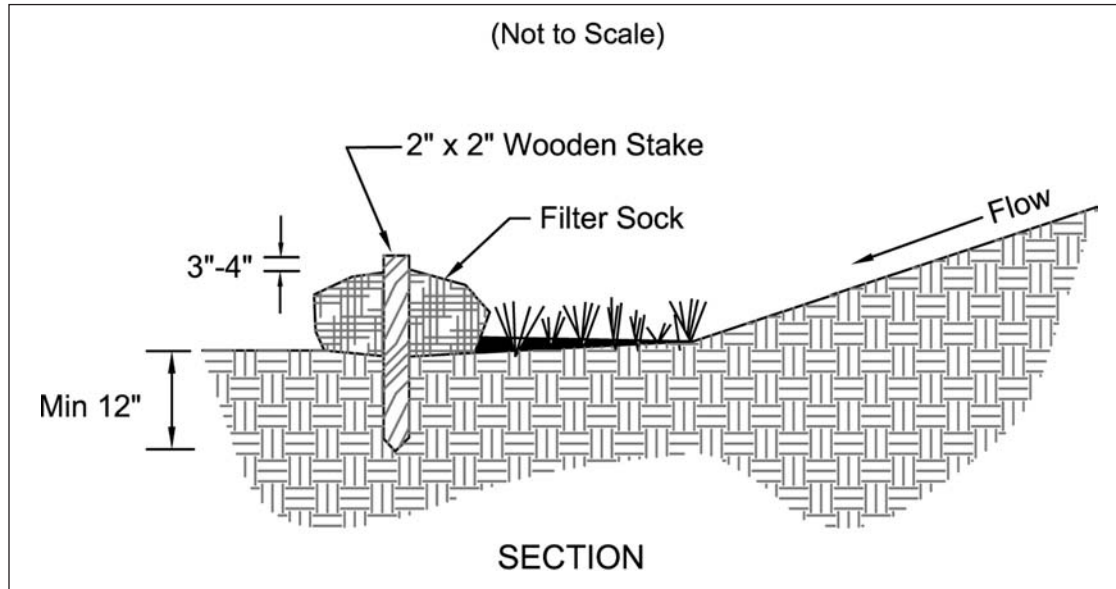
*Removal* – When construction is completed on site, the filter socks may be cut and dispersed with a loader, rake, bulldozer or other device to be incorporated into the soil or left on top of the soil for final seeding. The mesh netting material will be disposed of in normal trash container or removed by the contractor.

## References

Standard Specification for Compost for Erosion/Sediment Control (Filter Berms) AASHTO Designation: MP-9 <http://www.iaasla.org/NEWS/FILES/AASHTO-Filterberm6.doc>

Specifications  
for  
**Filter Sock**

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

**INSTALLATION:**

3. Filter socks will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. On slopes approaching 2:1, additional socks shall be provided at the top and as needed mid-slope.
4. Filter socks intended to be left as a permanent filter or part of the natural landscape, shall be seeded at the time of installation for establishment of permanent vegetation.

5. Filter Socks are not to be used in concentrated flow situations or in runoff channels.

**MAINTENANCE:**

6. Routinely inspect filter socks after each significant rain, maintaining filter socks in a functional condition at all times.
7. Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
8. Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.
9. Removal – Filter socks will be dispersed on site when no longer required in such as way as to facilitate and not obstruct seedings.



## 7.2 Clearing and Grubbing

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### Description

Clearing and grubbing is the removal of trees, brush and other unwanted material in order to develop land for other uses or provide access for site work. Clearing generally describes the cutting and removal of above ground material while grubbing is the removal of roots, stumps, and other unwanted material below existing grade.

Clearing and grubbing includes the proper disposal of materials and the implementation of best management practices in order to minimize exposure of soil to erosion and causing downstream sedimentation.

### Condition Where Practice Applies

This practice may be applied anywhere existing trees and other material must be removed for development to occur. The potential for erosion and sedimentation increases as: the vegetation removed; area disturbed or watercourses encountered increases.

### Planning Considerations

#### *Site assessment, selection and marking*

Sites should be assessed to determine areas to be left undisturbed as well as trees or vegetated areas to be saved (see tree preservation area ). These areas need to be clearly marked on plans and in the field. Land clearing activities should not begin until the site assessment and the field marking is concluded.

#### *Timing and Phasing*

Large-scale sites should be cleared in phases, with initiation of each phase delayed until actual construction is scheduled for that area of the site.

### ***Erosion, sediment and stream instability potential***

Clearing in some areas should be avoided or delayed due to the potential for destabilization. Cleared sites on heavy soils and steep slopes are subject to excessive erosion and may require additional practices to keep the soil in place. Land clearing during dry or frozen times will decrease compaction and potential water quality problems from runoff.

Stream corridors should be left in tact unless and until plans have been made to immediately restore stable conditions. These areas are subject to rapid erosion once vegetation is removed and soon become a source of sediment downstream. Alternatively naturally vegetated stream corridors help protect water resources from pollution generated during grubbing and grading operations.

## **Design Criteria**

**Timber Salvage** – Develop plans specifying the kind and location of timber to be salvaged, the location of haul roads and skid trails, location and width of natural buffer zones around water bodies, and the location and methods of stream crossings. The method of disposing of all material that will not be salvaged should also be specified. Plans should also include the best management practices that will be used to protect the cleared area from erosion.

Identify and protect healthy trees following specifications in the **Tree and Natural Area Preservation** practice. Where possible, preserve a natural buffer/filter strip adjacent to all water bodies. Avoid clearing to the water bodies' edge.

1. Where it is necessary to clear to the water's edge, appropriate sediment control should be used and seeding and other stabilization should be initiated within 2 days of work becoming idle.
2. Phase work so that only part of the site is being cleared at any given time. This will reduce the amount of time soil is exposed to erosive forces. Follow examples in the **Phased Disturbance** practice.
3. Install earth diversions to intercept and divert runoff to stable outlets and appropriate sediment ponds.
4. All debris should be kept out of surface water resources. If possible, leave mulch or vegetation on the ground to decrease runoff and potential runoff. See the "Disposal Options" section, below.
5. Exposed areas not planning for immediate earthwork should be temporarily seeded to prevent further erosion at the site. See the **Temporary Seeding** practice. Additional stabilization or sediment control practices may be necessary to keep soil on the site.

**Grubbing** – Grubbing removes roots and stumps by digging or pushing over with earth moving equipment. Grubbing should be carefully monitored near lakes and streams to protect the water's edge. Removing root systems near the banks of streams and lakes make cause the area to become unstable and erode. If possible, avoid grubbing at all near the water's edge.

### ***Tree Removal*** –

1. Where trees and stumps are removed in separate operations, trees may be used for commercial purposes such as lumber, firewood, or mulch.

2. Trees and stumps may be removed in one operation. This method leaves materials that can be useful in stream restoration and stabilization (e.g rootwads, vanes). may be used as a rootwads for streambank restoration work. Be certain that sufficient trunk is left for effective anchoring in the bank. Tops of trees should be removed and chipped for mulch.
3. Operating heavy equipment too close to trees will result in damage or loss due to soil disruption, compaction and trunk damage. It is recommended that all heavy equipment operations be limited to outside the drip line of all trees to be preserved. The drip line is the area from the trunk of the tree outward to a point at which there is no longer any overhanging vegetation.
4. In forested wetlands, shallow-rooted species are protected by each other from potential wind damage. Whenever trees are removed from a forested wetland, the possibility of blow downs or windthrow increases. Shallow rooted species are also protected by edge trees, which shield the prevailing wind side of the woodlot. It is helpful to leave as many edge trees as possible on the prevailing wind side of the cleared area.

#### ***Disposal Options –***

Where possible, all stumps, roots, logs, brush, limbs, tops and other debris resulting from the clearing or thinning operation should be disposed of by processing through a chipping machine. The chips can then be utilized as mulch (see Mulching practice), as part of a site stabilization or final landscaping plan. Organic material may also be disposed of at an approved composting facility.

Note that treetops, stumps and field stone which are cleared and piled/windrowed in suitable areas can improve habitat for wildlife such as rabbits, raccoons, snakes, salamanders, toads and frogs.

#### **Maintenance**

Land clearing itself requires no maintenance except maintenance of the equipment used in the land clearing operation. Tree protection that utilizes fencing and signage should be maintained throughout the clearing stages. It is also important to maintain all other temporary and permanent practices that are used in conjunction with the land clearing to prevent soil erosion and sedimentation.

#### **Common Problems / Concerns**

Clearing of areas planned for preservation may occur and desirable species may be damaged, therefore preservation areas should be well marked.

During construction, naturally vegetated banks of stream and lakes may become destabilized. Clearly mark areas where natural vegetation must be maintained, and immediately implement stabilization plans of denuded areas.

As large areas are disturbed, site erosion potential drastically increases until cover is re-established. Establish temporary seedings as soon as clearing/grubbing and grading activities stop or become idle.

## 7.4 Construction Entrance

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### Description

A construction entrance is a stabilized pad of stone underlain with a geotextile and is used to reduce the amount of mud tracked off-site with construction traffic. Located at points of ingress/egress, the practice is used to reduce the amount of mud tracked off-site with construction traffic.

### Conditions Where Practice Applies

A construction entrance is applicable where:

- Construction traffic leaves active construction areas and enters public roadways or areas unchecked by effective sediment controls;
- Areas where frequent vehicle and equipment access is expected and likely to contribute sediment to runoff, such as at the entrance to individual building lots.

### Planning Considerations

Construction entrances address areas that contribute significant amounts of mud to runoff by providing a stable area for traffic. Although they allow some mud to be removed from construction vehicle tires before they enter a public roads, they should not be the only practice relied upon to manage off-site tracking. Since most mud is flung from tires as they reach higher speeds, restricting traffic to stabilized construction roads, entrances and away from muddy areas is necessary.



If a construction entrance is not sufficient to remove the majority of mud from wheels or there is an especially sensitive traffic situation on adjacent roads, wheel wash areas may be necessary. This requires an extended width pad to avoid conflicts with traffic, a supply of wash water and sufficient drainage to assure runoff is captured in a sediment pond or trap.

Proper installation of a construction entrance requires a geotextile and proper drainage to insure construction site runoff does not leave the site. The use of geotextile under the stone helps to prevent potholes from developing and will save the amount of stone needed during the life of the practice. Proper drainage may include culverts to direct water under the roadway or water bars to direct muddy water off the roadway toward sediment traps or ponds.

### **Design Criteria**

The area of the entrance must be cleared of all vegetation, roots, and other objectionable material. Geotextile will then be placed the full width and length of the entrance.

Stone shall be placed to a depth of at least 6 inches. Roads subject to heavy duty loads should be increased to a minimum of 10 inches. Surface water shall be conveyed under the entrance, through culverts, or diverted via a water bars or mountable berms (minimum 5:1 slopes) so as to convey sediment laden runoff to sediment control practices or to allow clean water to pass by the entrance.

The stabilized construction entrance shall meet the specifications that follow.

### **Maintenance**

The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.

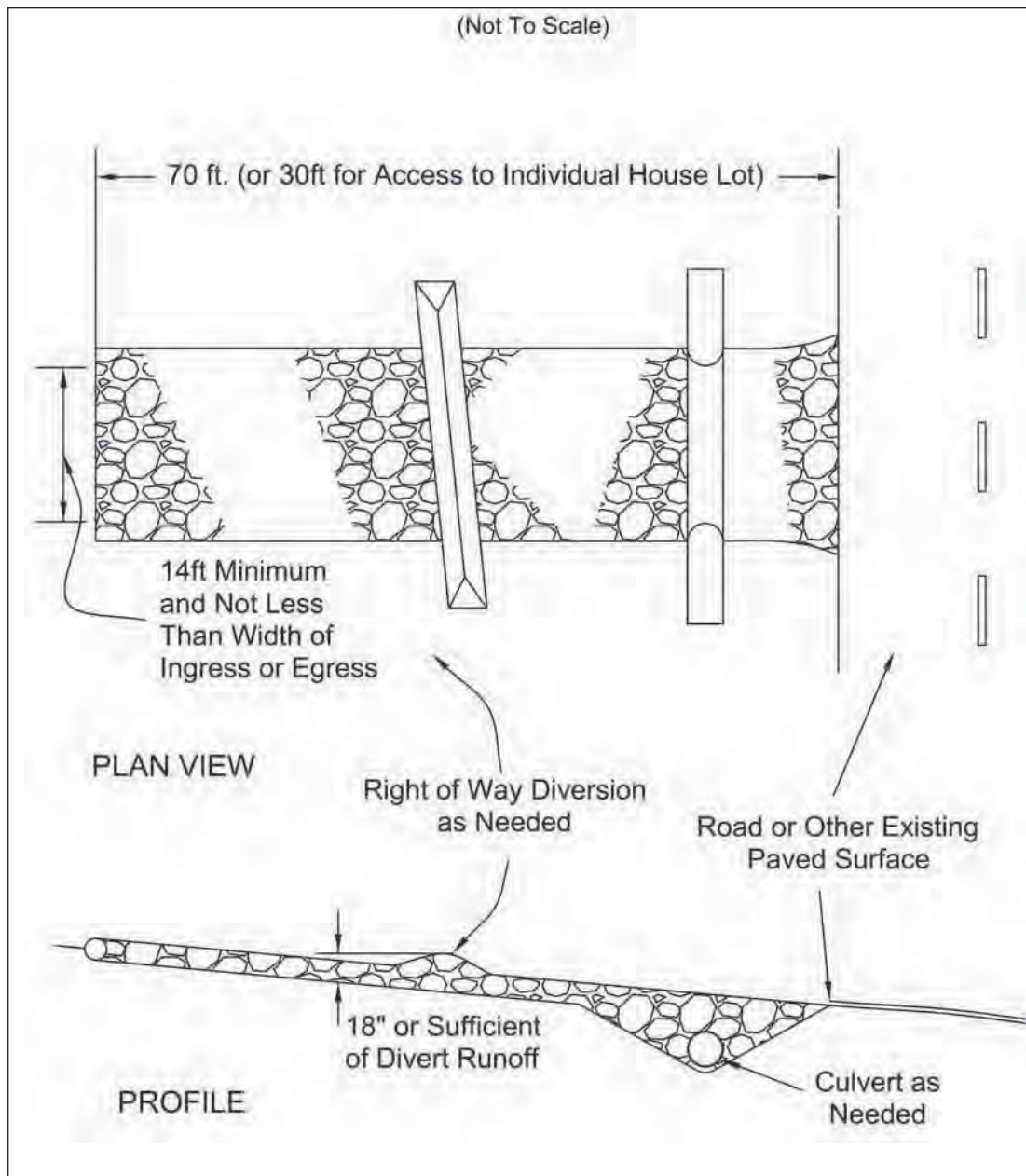
### **Common Problems / Concerns**

Mud is allowed to accumulate and is tracked on to public right-of-ways. The entrance and associated construction roads may need dressing with additional stone.

Soft depression areas develop in entrance area. Stone may not have been underlain with geotextile or insufficient stone base has been provided.

Specifications  
for  
**Construction Entrance**

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# Specifications for **Construction Entrance**

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1. **Stone Size**—ODOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.
2. **Length**—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
3. **Thickness** -The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. **Width** -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. **Geotextile** -A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:
  6. **Timing**—The construction entrance shall be installed as soon as is practicable before major grading activities.
  7. **Culvert** -A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
  8. **Water Bar** -A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
  9. **Maintenance** -Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
  10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.
  11. **Removal**—the entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

**Figure 7.4.1**

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1×10 <sup>-3</sup> cm/sec.

## 7.5 Dust Control

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### Description

Dust control involves preventing or reducing dust from exposed soils or other sources during land disturbing, demolition and construction activities to reduce the presence of airborne substances which may present health hazards, traffic safety problems or harm animal or plant life.

### Conditions Where Practice Applies

In areas subject to surface and air movement of dust where on-site and off-site damage is likely to occur if preventive measures are not taken.

### Planning Considerations

Construction activities inevitably result in the exposure and disturbance of soil. Fugitive dust results from both construction activities and as a result of wind erosion over the exposed earth surfaces. Large quantities of dust are typically generated in heavy construction activities, such as road construction and subdivision, commercial or industrial development, which involve disturbing significant areas of the soil surface. Research of construction sites has established an average dust emission rate of 1.2 tons/acre/month for active construction. Earth-moving activities comprise the major source of construction dust emissions, but traffic and general disturbance of the soil also generate significant dust emissions.

Planning for dust control involves limiting the amount of soil disturbance at any one time as a key objective. Therefore, phased clearing and grading operations (minimize disturbance-phasing) and the utilization of other stabilization practices can significantly reduce dust emissions. Undisturbed vegetative buffers (minimum 50-foot widths) left between graded areas and protected areas can also be very helpful in dust control by providing windbreaks and non-erosive areas.



## Design Criteria

A number of measures can be utilized to limit dust either during or between construction stages or once construction is complete. Generally the same methods that are used to limit erosion by limiting exposure of soils to rainfall can be used to limit dust including: stabilizing exposed soils with mulch, vegetation or permanent cover. Additional methods particular to dust control include managing vehicles and construction traffic, road treatment and treatment of exposed soil with chemical stabilizers.

**Vegetative Cover** – The most effective way to prevent dust from exposed soil is to provide a dense cover of vegetation. In areas subject to little or no construction traffic, vegetative stabilization reduces dust drastically. Timely temporary and permanent seedings must be utilized to accomplish this. See TEMPORARY SEEDING & PERMANENT SEEDING.

**Mulch** - When properly applied, mulch offers a fast, effective means of controlling dust. Mulching is not recommended for areas within heavy traffic pathways. Binders or tackifiers should be used to tack organic mulches. See MULCHING.

**Rough Graded Soils** – Leaving the soil in a temporary state of rough grade, where clods rather than flattened soils predominate the surface can reduce the amount of dust generated from areas during periods of higher winds. This must be balanced by the need to reach a stage where the soil can be stabilized and may be only be necessary when high winds are predicted.

**Watering** - This is the most commonly used dust control practice. The site is sprinkled with water until the surface is wet before and during grading and is repeated as needed. It offers fast protection for haul roads and other heavy traffic routes. Watering should be done at a rate that prevents dust but does not cause soil erosion. Wetting agents are also available to increase the effectiveness of watering and must follow manufacturers instructions.

**Chemical Stabilizers/Wetting Agents** – Many products of this type are available and are usually most effective on typical mineral soils but may not be on predominantly organic soils such as muck. Users are advised to pay attention to the limitations and instructions regarding each product. The following table lists various adhesives and provides corresponding information on mixing and application:

Table 7.5.1 Adhesives for Dust Control

Adhesive	Water Dilution (Adhesive: Water)	Nozzle Type	Application Rate Gallon/Acre
Latex Emulsion	12.5:1	Fine	235
Resin in Water	4:1	Fine	300
Acrylic Emulsion (No-traffic)	7:1	Coarse	450
Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

**Stone** - Stone can be used to stabilize roads or other areas during construction using crushed stone or coarse gravel. Research has shown the addition of bentonite to limestone roads (not igneous gravel) has shown benefits in reducing dust.

***Windbreaks and Barriers*** – Where dust is a known problem, existing windbreak vegetation should be preserved. Maintaining existing rows of trees or constructing a wind fence, sediment fence, or similar barrier can help to control air currents and blowing soil. Place barriers perpendicular to prevailing air currents at intervals of about 15 times the barrier height.

***Calcium Chloride*** - This chemical may be applied by mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so high as to cause water pollution or plant damage. Liquid application of a 35% calcium chloride solution is common. Note: application rates should be strictly in accordance with suppliers' specified rates.

***Street Cleaning*** - Paved areas that have accumulated sediment from construction sites should be cleaned daily, or as needed, utilizing a street sweeper or bucket -type loader or scraper.

### **Operation and Maintenance**

Most dust control measures, such as applications of water or road treatments will require monitoring and repeat applications as needed to accomplish good control.

### **Common Problems / Concerns**

Vegetation is removed from large areas of the construction site and left barren for long periods of time.

Continuous, scheduled monitoring of the construction site conditions is not made.

# Specifications for **Dust Control**

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1. Vegetative Cover and/mulch – Apply temporary or permanent seeding and mulch to areas that will remain idle for over 21 days. Saving existing trees and large shrubs will also reduce soil and air movement across disturbed areas. See Temporary Seeding; Permanent Seeding; Mulching Practices; and Tree and Natural Area Protection practices.
2. Watering – Spray site with water until the surface is wet before and during grading and repeat as needed, especially on haul roads and other heavy traffic routes. Watering shall be done at a rate that prevents dust but does not cause soil erosion. Wetting agents shall be utilized according to manufacturers instructions.
3. Spray-On Adhesives – Apply adhesive according to the following table or manufacturers' instructions.
4. Stone – Graded roadways and other suitable areas will be stabilized using crushed stone or coarse gravel as soon as practicable after reaching an interim or final grade. Crushed stone or coarse gravel can be used as a permanent cover to provide control of soil emissions.
5. Barriers – Existing windbreak vegetation shall be marked and preserved. Snow fencing or other suitable barrier may be placed perpendicular to prevailing air currents at intervals of about 15 times the barrier height to control air currents and blowing soil.
6. Calcium Chloride - This chemical may be applied by mechanical spreader as loose, dry granules or flakes at a rate that keeps the surface moist but not so high as to cause water pollution or plant damage. Application rates should be strictly in accordance with suppliers' specified rates.
7. Operation and Maintenance - When Temporary Dust Control measures are used; repetitive treatment should be applied as needed to accomplish control.

**Table 7.5.1 – Adhesives for Dust Control**

Adhesive	Water Dilution (Adhesive: Water)	Nozzle Type	Application Rate Gal./Ac.
Latex Emulsion	12.5:1	Fine	235
Resin in Water Acrylic Emulsion (No-traffic)	4:1	Fine	300
Acrylic Emulsion (No-traffic)	7:1	Coarse	450
Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

Street Cleaning - Paved areas that have accumulated sediment from construction should be cleaned daily, or as needed, utilizing a street sweeper or bucket -type endloader or scraper.

## 7.7 Topsoiling

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### Description

Topsoiling occurs during grading operations as the upper most organic layer of soil is stripped and stockpiled from areas being graded and subsequently replaced on the newly graded areas. Topsoil provides a more suitable growing medium than subsoil or on areas with poor moisture, low nutrient levels, undesirable pH, or in the presence of other materials that would inhibit establishment of vegetation. Replacing topsoil helps plant growth by improving the water holding capacity and nutrient content and consistency of the soils.

### Conditions Where Practice Applies

This practice applies anywhere a good stand of vegetation is desired, whether turf, ornamental plants, and/ or vegetative cover especially in areas where high-quality turf is desirable to withstand intense use or meet aesthetic requirements, although it may not be appropriate for areas with slopes greater than 2:1.

This practice is especially applicable to areas where:

- existing soil structure, pH, or nutrient balance cannot be easily improved with soil amendments to be a suitable growth medium.
- existing soils are too shallow to provide adequate rooting depth or;
- the existing soil contains substances toxic to the desired vegetation.

## **Planning Considerations**

Topsoil is the upper layer of natural soil (A horizon), which is typically darker and more fertile than the subsoil due to increased amounts of organic material. This layer is typically very evident as a person excavates through soil horizons. Project sites will have varying degrees of topsoil resources prior to construction, with some historically eroded sites having limited topsoil resources. These sites may have less justification for moving, stockpiling and re-spreading the top horizon of soil. If in question, assistance by a trained soils professional should be sought to determine the extent of topsoil resources on the project site.

Although replacing topsoil is critical to establishing good vegetation and limiting runoff from development sites, it comes with additional costs. Stripping, stockpiling and reapplying topsoil or importing topsoil will require greater work in grading operations and therefore will increase costs. Topsoiling will also add time to grading operations and may increase the exposure time of denuded areas. Additionally, depending on the original vegetative cover, topsoil often contains weed seeds that may compete with desirable species.

In site planning, the option of topsoiling should be compared with that of preparing a seedbed in subsoil. The clay content of subsoil does provide high moisture availability and deters leaching of nutrients. When adjusted for optimal pH and nutrient availability, subsoil may provide an adequate growth medium that is generally free of weeds. Topsoiling may not be required to establish less demanding, lower maintenance plants, although runoff will be increased due to the lack of topsoil from the site.

If topsoiling is planned, locations for topsoil stockpiles must be determined where drainage and site work will not be encumbered. Construction scheduling must be adjusted to allow sufficient time for moving, stockpiling and spreading topsoil between grading and re-vegetation operations.

## **Design Criteria**

These are provided in the specifications that follow.

## **Maintenance**

Topsoil stockpiles should be stabilized with temporary vegetation and provided sufficient sediment controls. Sediment Controls will need regular inspection and appropriate repairs as needed.

## **Common Problems / Concerns**

- Care must be taken not to apply topsoil to subsoil if the two soils have contrasting textures. Clayey topsoil over sandy subsoil is a particularly poor combination, as water may creep along the junction between the soil layers, leading to sloughing of the topsoil. Sandy topsoil over clay subsoil is equally likely to fail.
- If topsoil and subsoil are not properly bonded, water will not infiltrate the soil profile evenly and it will be difficult to establish vegetation. Topsoiling of steep slopes is highly discouraged, unless good bonding of soils can be achieved.
- Topsoil should not be applied in excessively wet/moist conditions.

Specifications  
for  
**Topsoiling**

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**Salvaging and Stockpiling**

1. Determine the depth and suitability of topsoil at the site. (For help, contact your local SWCD office to obtain a county soil survey report).
2. Prior to stripping topsoil, install appropriate downslope erosion and sedimentation controls such as sediment traps and basins.
3. Remove the soil material no deeper than what the county soil survey describes as “surface soil” (ie. A or Ap horizon).
4. Construct stockpiles in accessible locations that do not interfere with natural drainage. Install appropriate sediment controls to trap sediment such as silt fence immediately adjacent to the stockpile or sediment traps or basins downstream of the stockpile. Stockpile side slopes shall not exceed a ratio of 2:1.
5. If topsoil is stored for more than 21 days, it should be temporary seeded, or covered with a tarp.

**Spreading the Topsoil**

1. Prior to applying topsoil, the topsoil should be pulverized.
2. To ensure bonding, grade the subsoil and roughen the top 3-4 in. by disking.
3. Do not apply when site is wet, muddy, or frozen, because it makes spreading difficult, causes compaction problems, and inhibits bonding with subsoil.
4. Apply topsoil evenly to a depth of at least 4 inches and compact slightly to improve contact with subsoil.
5. After spreading, grade and stabilize with seeding or appropriate vegetation.



## 7.8 Temporary Seeding

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### Description

Temporary seedings establish temporary cover on disturbed areas by planting appropriate rapidly growing annual grasses or small grains. Temporary seeding provides erosion control on areas in between construction operations. Grasses, which are quick growing, are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of a construction site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

### Conditions Where the Practice Applies

Temporary seeding should be applied on exposed soil where additional work (grading, etc.) is not scheduled for more than 21 days. Permanent seeding should be applied if the areas will be idle for more than one year.

### Planning Considerations

This practice has the potential to drastically reduce the amount of sediment eroded from a construction site. Erosion control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even on areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction sites, its liberal use is highly recommended.

## Design Criteria

Specifications follow these explanations of important aspects of temporary seeding.

**Plant Selection:** Select the plants appropriate from the table in the Specifications for Temporary seeding. Choose varieties of tall fescue that are endophyte free or have non-toxic endophytes. Seeding rates for dormant seedings are increased by 50 percent. More information on dormant seedings is given in the permanent seeding section.

The length of time the area will idle and the season in which seeding occurs should influence the selection of seeding species. For areas remaining idle for over a year, a mixture containing perennial ryegrass is recommended. Cereal grains (rye, oats and wheat) are included in some of the mixtures as cover crops. These are annual plants that will die after producing seed. Realize that oats will not over-winter and continue to grow as wheat and rye do.

**Site preparation:** Temporary seeding is best done on a prepared soil seedbed of loose pulverized soil. However, seedings should not be delayed, if additional grading operations are not possible. At a minimum, remove large rock or debris that will interfere with seeding operations. If the ground has become crusted, a disk or a harrow should be used to loosen the soil. Overall the best soil conditions will exist immediately after grading operations cease, when soils remain loose and moist.

**Soil amendments:** A soil test is necessary to adequately predict the need for lime and fertilizer. Seedings that are expected to be long lasting (over 1-3 months), should have lime and fertilizer applied as recommended by a soil test. In lieu of a soil test, fertilizer can be broadcast and worked into the top inch of soil at the rate of 6 pounds/1000 ft<sup>2</sup> or 250 pounds per acre of 10-10-10 or 12-12-12.

**Seeding Methods:** Seed shall be applied uniformly with a cyclone spreader, drill, culti-packer seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

## Maintenance

Areas failing to establish vegetative cover adequate to prevent erosion shall be reseeded as soon as such areas are identified.

Seeding performed during hot and dry summer months shall be watered at a rate of 1 inch per week.

## Common Problems / Concerns

- Insufficient topsoil or inadequately tilled, limed, and/ or fertilized seedbed results in poor establishment of vegetation.
- An overly high seeding rate of nurse crop (oat, rye or wheat) in the seed mixture results in over competition with the perennials.
- Seeding outside of seeding dates results in poor vegetation establishment and a decrease in plant hardiness.
- An inadequate rate of mulch results in poor germination and failure.



## Temporary Seeding

Table 7.8.1 Temporary Seeding Species Selection

Lbs/Ac	Botanical Name	Common Name	Lb./1000 ft <sup>2</sup>	Lb./Acre
32	Avena sativa	Seed Oats	1	1
10	Lolium multiflorum	Annual Ryegrass	1	1
			1	
			1	
			1	
			1.25	
				142
				17
				17
			1	
			1	
			1	
			1	
			1	
			1	
			1.25	

1. Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or greater. These idle areas shall be seeded within 7 days after grading.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments—Temporary vegetation seeding rates shall establish adequate stands of vegetation, which may require the use of soil amendments. Base rates for lime and fertilizer shall be used.
5. Seeding Method—Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

## Temporary Seeding

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### Mulching Temporary Seeding

1. Applications of temporary seeding shall include mulch, which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.
2. Materials:
  - Straw—If straw is used, it shall be unrotted small-grain straw applied at a rate of 2 tons per acre or 90 lbs./ 1,000 sq. ft. (2-3 bales)
  - Hydroseeders—If wood cellulose fiber is used, it shall be used at 2000 lbs./ ac. or 46 lb./ 1,000-sq.-ft.
  - Other—Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 ton/ ac.
3. Straw Mulch shall be anchored immediately to minimize loss by wind or water. Anchoring methods:
  - Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left to a length of approximately 6 inches.
  - Mulch Netting—Netting shall be used according to the manufacturers recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
  - Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Track or equivalent may be used at rates recommended by the manufacturer.
  - Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry wt. of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb. / 100 gal.

## 7.9 Mulching

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### Description

A protective layer of mulch, usually of straw, applied to bare soil is used to abate erosion by shielding it from raindrop impact. Mulch also helps establish vegetation by conserving moisture and creating favorable conditions for seeds to germinate.

### Conditions Where Practice Applies

Mulch should be used liberally throughout construction to limit the areas that are bare and susceptible to erosion. Mulch can be used in conjunction with seeding to establish vegetation or by itself to provide erosion control when the season does not allow grass to grow. Mulch and other vegetative practices must be applied on all disturbed portions of construction-sites that will not be re-disturbed for more than 21 days.

### Design Criteria

See specifications for Mulching.

### Maintenance

Additional mulching is necessary to cover exposed soil conditions when observed during routine maintenance inspections.

### **Common Problems / Concerns**

The application of synthetic binders must be conducted in such a manner as to not be introduced into watercourses.

Weather considerations must be addressed to ensure the application of synthetic binders are not washed away and introduced into watercourses.

The use of a mulch cover is not recommended for areas, which will exhibit higher velocities than 3.5 feet/second. An erosion control matting is recommended for areas which will exhibit higher velocities.

Areas which have been mulched should be inspected and maintained if necessary every 7 days or within 24 hours of a rain event greater than or equal to 0.5 inches to ensure adequate protection.

Specifications  
for  
**Mulching**

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1. Mulch and other appropriate vegetative practices shall be applied to disturbed areas within 7 days of grading if the area is to remain dormant (undisturbed) for more than 21 days or on areas and portions of the site which can be brought to final grade.
2. Mulch shall consist of one of the following:
  - Straw - Straw shall be unrotted small grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq.ft. sections and place two 45-lb. bales of straw in each section.
  - Hydroseeders - Wood cellulose fiber should be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
  - Other - Acceptable mulches include mulch mattings and rolled erosion control products applied according to manufacturer's recommendations or wood mulch/chips applied at 10-20 tons/ac.
3. Mulch Anchoring - Mulch shall be anchored immediately to minimize loss by wind or runoff. The following are acceptable methods for anchoring mulch.
  - Mechanical - Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but be left generally longer than 6 inches.
  - Mulch Nettings - Use according to the manufacturer's recommendations, following all placement and anchoring requirements. Use in areas of water concentration and steep slopes to hold mulch in place.
  - Synthetic Binders - For straw mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer. All applications of Sythetic Binders must be conducted in such a manner where there is no contact with waters of the state.
  - Wood Cellulose Fiber - Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.



## 7.10 Permanent Seeding

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### Description

Perennial vegetation is established on areas that will not be re-disturbed for periods longer than 12 months. Permanent seeding includes site preparation, seedbed preparation, planting seed, mulching, irrigation and maintenance.

Permanent vegetation is used to stabilize soil, reduce erosion, prevent sediment pollution, reduce runoff by promoting infiltration, and provide stormwater quality benefits offered by dense grass cover.

### Conditions Where Practice Applies

Permanent seeding should be applied to:

- Any disturbed areas or portions of construction sites at final grade. Permanent seeding should not be delayed on any one portion of the site at final grade while construction on another portion of the site is being completed. Permanent seeding shall be completed in phases, if necessary.
- Areas subject to grading activities but will remain dormant for a year or more.

### Planning Considerations

Vegetation controls erosion by reducing the velocity and the volume of overland flow and protects bare soil surface from raindrop impact. A healthy, dense turf promotes infiltration and reduces the amount of runoff. The establishment of quality vegetation requires selection of the right plant materials for the site, adequate soil amendments, careful seedbed preparation, and maintenance.

**Soil Compaction**—Storm water quality and the amount of runoff both vary significantly with soil compaction. Non-compacted soils improve stormwater infiltration by promoting:

- dense vegetative growth;
- high soil infiltration & lower runoff rates;
- pollutant filtration, deposition & absorption; and
- beneficial biologic activity in the soil.

Construction activity creates highly compacted soils that restrict water infiltration and root growth. The best time for improving soil condition is during the establishment of permanent vegetation. It is highly recommended that subsoilers, plows, or other implements are specified as part of final seedbed preparation. Use discretion in slip-prone areas.

**Minimum Soil Conditions**—Vegetation cannot be expected to stabilize soil that is unstable due to its texture, structure, water movement or excessively steep slope. The following minimum soil conditions are needed for the establishment and maintenance of a long-lived vegetative cover. If these conditions cannot be met, see the standards and specifications for Topsoiling.

- Soils must include enough fine-grained material to hold at least a moderate amount of available moisture.
- The soil must be free from material that is toxic or otherwise harmful to plant growth.

## **Design Criteria**

See specifications for permanent seeding below.

## **Maintenance**

1. Expect emergence within 4 to 28 days after seeding, with legumes typically following grasses. Check permanent seedlings within 4 to 6 weeks after planting. Look for:
  - Vigorous seedlings;
  - Uniform ground surface coverage with at least 30% growth density;
  - Uniformity with legumes and grasses well intermixed;
  - Green, not yellow, leaves. Perennials should remain green throughout the summer, at least at the plant bases.
2. Permanent seeding shall not be considered established for at least 1 full year from the time of planting. Inspect the seeding for soil erosion or plant loss during this first year. Repair bare and sparse areas. Fill gullies. Re-fertilize, re-seed, and re-mulch if required. Consider no-till planting. A minimum of 70% growth density, based on a visual inspection, must exist for an adequate permanent vegetative planting.
  - If stand is inadequate or plant cover is patchy, identify the cause of failure and take corrective action: choice of plant materials, lime and fertilizer quantities, poor seedbed preparation, or weather. If vegetation fails to grow, have the soil tested to determine whether pH is in the correct range or nutrient deficiency is a problem.
  - Depending on stand conditions, repair with complete seedbed preparation, then over-seed or re-seed.
  - If it is the wrong time of year to plant desired species, over-seed with small grain cover crop to thicken the stand until timing is right to plant perennials or use temporary seeding. See Temporary Seeding standard.



3. Satisfactory establishment may require re-fertilizing the stand in the second growing season.
  - Do not fertilize cool season grasses in late May through July (i.e. Kentucky Bluegrass, Orchardgrass, Perennial Ryegrass, Smooth Brome, Fescues, Timothy, Reed Canarygrass and Garrison Grass)
  - Grass that looks yellow may be nitrogen deficient. In lieu of a soil test, an application of 50 lbs. of N-P-K per acre in early spring will help cool season grasses compete against weeds or grow more successfully.
  - Do not use nitrogen fertilizer if the stand contains more than 20 percent legumes.
4. Long-term maintenance fertilization rates shall be established by following soil test recommendations or by using the rates shown in Table 2.

**Table 7.10.1 Maintenance for Permanent Seedings Fertilization and Mowing**

Mixture	Formula	Lbs./ Acre	Lbs./1,000 sq.ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12	Fall, yearly or as needed	Not closer than 3"
Tall Fescue	10-10-10	500	12		Not closer than 4"
Turf-type Fescue	10-10-10	500	12		
Crown Vetch Fescue	0-20-20	400	10	Spring, yearly following establishment and every 4-7 years thereafter	Do not mow
Flat Pea Fescue	0-20-20	400	10		Do not mow

Note: Following soil test recommendations is preferred to fertilizer rates shown above.

5. Consider mowing after plants reach a height of 6 to 8 inches. Mow grasses tall, at least 3 inches in height and minimize compaction during the mowing process. Vegetation on structural practices such as embankments and grass-lined channels need to be mowed only to prevent woody plants from invading the stand.

### **Common Problems / Concerns**

- Insufficient topsoil or inadequately tilled, limed, and/or fertilized seedbed - results in poor establishment of vegetation.
- Unsuitable species or seeding mixture - results in competition with the perennials.
- Nurse crop rate too high in the mixture - results in competition with the perennials.
- Seeding done at the wrong time of year - results in poor establishment of vegetation, also plant hardiness is significantly decreased.
- Mulch rate inadequate - results in poor germination and failure.

# Specifications for Permanent Seeding

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## Site Preparation

1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Topsoil shall be applied where needed to establish vegetation.

## Seedbed Preparation

1. Lime—Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000-sq. ft. or 2 tons per acre.
2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000-sq. ft. or 1000 pounds per acre of a 10-10-10 or 12-12-12 analyses.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, the soil shall be worked on the contour.

## Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the above-specified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage for seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

## Dormant Seedings

1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for “Dormant Seeding”:

- From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
- From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
- Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
- Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

## Mulching

1. Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an approved material.
2. Materials
  - Straw—If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000-sq. ft. The mulch shall be spread uniformly by hand or mechanically applied so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
  - Hydroseeders—If wood cellulose fiber is used, it shall be applied at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
  - Other—Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer's recommendations or wood chips applied at 6 tons per acre.

### 3. Straw and Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

- **Mechanical**—A disk, crimper or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 inches.
- **Mulch Netting**—Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- **Asphalt Emulsion**—Asphalt shall be applied as recommended by the manufacture or at the rate of 160 gallons per acre.

- **Synthetic Binders**—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.
- **Wood Cellulose Fiber**—Wood cellulose fiber shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

#### **Irrigation**

Permanent seeding shall include irrigation to establish vegetation during dry weather or on adverse site conditions, which require adequate moisture for seed germination and plant growth.

Irrigation rates shall be monitored to prevent erosion and damage to seeded areas from excessive runoff.

## AEP PERMANENT SEED MIXES

### Slope Stability & Natural Corridors Seed Mix

Temporary Matrix		
oz/ac	Grasses	
512	<i>Avena sativa</i>	Seed Oats
160	<i>Lolium multiflorum</i>	Annual Ryegrass
Permanent Matrix		
oz/acre	Grasses	
16	<i>Andropogon gerardii</i>	Big Bluestem
16	<i>Bouteloua curtipendula</i>	Side-Oats Grama
48	<i>Elymus canadensis</i>	Canada Wild Rye
48	<i>Elymus virginicus</i>	Virginia Wild Rye
32	<i>Schizachyrium scoparium</i>	Little Bluestem
16	<i>Sorghastrum nutans</i>	Indian Grass
oz/acre	Forbs	
1	<i>Monarda fistulosa</i>	Bergamot
2	<i>Coreopsis lanceolata</i>	Lanceleaf coreopsis
4	<i>Rudbeckia hirta</i>	Black-eyed Susan
2	<i>Solidago nemoralis</i>	Grey Goldenrod
2	<i>Solidago speciosa</i>	Showy Goldenrod

### Lawn Mix – Sun to partial shade

lbs/acre	Grasses	
20	<i>Lolium multiflorum</i>	Annual Ryegrass
100	<i>Poa pratensis</i>	Kentucky Bluegrass
100	<i>Lolium perenne</i>	Perennial Ryegrass

### Lawn Mix –Shade

lbs/acre	Grasses	
20	<i>Lolium multiflorum</i>	Annual Ryegrass
100	<i>Poa pratensis</i>	Kentucky Bluegrass
100	<i>Festuca rubra</i>	Creeping Red Fescue

### Swale and Retention Area Seed Mix

Temporary Matrix		
oz/ac	Grasses	
512	<i>Avena sativa</i>	Seed Oats
160	<i>Lolium multiflorum</i>	Annual Ryegrass
Permanent Matrix		
oz/acre	Grasses	
8	<i>Carex frankii</i>	Frank's Sedge
2	<i>Eleocharis obtusa</i>	BluntSpike Rush
8	<i>Carex vulpinoidea</i>	Fox Sedge
32	<i>Panicum virgatum</i>	Switchgrass
2	<i>Scirpus acutus</i>	Hard Stem Rush
oz/acre	Forbs	
2	<i>Asclepias incarnata</i>	Swamp milkweed
2	<i>Aster novae-angliae</i>	New England Aster
2	<i>Eupatorium perfoliatum</i>	Boneset
1	<i>Helenium autumnale</i>	Autumn Sneezeweed
2	<i>Monarda fistulosa</i>	Bergamot
2	<i>Ratibida pinnata</i>	Yellow Coneflower
2	<i>Rudbeckia subtomentosa</i>	Sweet Black-Eyed Susan

### Farm Lane Area Seed Mix

Temporary Matrix		
oz/ac	Grasses	
512	<i>Avena sativa</i>	Seed Oats
160	<i>Lolium multiflorum</i>	Annual Ryegrass
Permanent Matrix		
oz/acre		
64	<i>Trifolium pratense</i>	Red Clover
32	<i>Trifolium repens</i>	White Clover

## SITE MANAGEMENT MEASURES

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### Concrete Washout



*Concrete washout areas are designated locations within a construction site that are either a prefabricated unit or a designed measure that is constructed to contain concrete washout. Concrete washout systems are typically used to contain washout water when chutes and hoppers are rinsed following delivery.*

### Purpose

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Concrete washout systems are implemented to reduce the discharge of pollutants that are associated with concrete washout waste through consolidation of solids and retention of liquids. Uncured concrete and associated liquids are highly alkaline which may leach into the soil and contaminate ground water or discharge to a waterbody or wetland which can elevate the pH and be harmful to aquatic life. Performing concrete washout in designated areas and into specifically designed systems reduces the impact concrete washout will have on the environment.

### Specifications

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#### Site Management

Complete construction/installation of the system and have washout locations operational prior to concrete delivery.

Do not wash out concrete trucks or equipment into storm drains, wetlands, streams, rivers, creeks, ditches, or streets.

Never wash out into a storm sewer drainage system. These systems are typically connected to a natural conveyance system.

Where necessary, provide stable ingress and egress (see **Temporary Construction Ingress/Egress Pad** on page 17).

It is recommended that washout systems be restricted to washing concrete from mixer and pump trucks and not used to dispose of excess concrete or

residual loads due to potential to exceed the design capacity of the washout system. Small amounts of excess or residual concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.

Install systems at strategic locations that are convenient and in close proximity to work areas and in sufficient number to accommodate the demand for disposal.

Install signage identifying the location of concrete washout systems.

### Location

Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drains/manmade conveyance systems.

To the extent practical, locate concrete washout systems in relatively flat areas that have established vegetative cover and do not receive runoff from adjacent land areas.

Locate in areas that provide easy access for concrete trucks and other construction equipment.

Locate away from other construction traffic to reduce the potential for damage to the system.

### General Design Considerations

The structure or system shall be designed to contain the anticipated washout water associated with construction activities.

The system shall be designed, to the extent practical, to eliminate runoff from entering the washout system.

Runoff from a rainstorm or snowmelt should not carry wastes away from the washout location.

Washout will not impact future land uses (i.e., open spaces, landscaped areas, home sites, parks).

Washout systems/containment measures may also be utilized on smaller individual building sites. The design and size of the system can be adjusted to accommodate the expected capacity.

### Prefabricated Washout Systems/Containers

Self-contained sturdy containment systems that are delivered to a site and located at strategic locations for concrete disposal.

These systems are manufactured to resist damage from construction equipment and protect against leaks or spills.

Manufacturer or supplier provides the containers. The project site manager maintains the system or the supplier provides complete service that includes maintenance and disposal.

Units are often available with or without ramps. Units with ramps lend themselves to accommodate pump trucks.

Maintain according to the manufacturer's recommendations.

### Designed and Installed Units

These units are designed and installed on site. They tend to be less reliable than prefabricated systems and are often prone to failure. Concrete washout systems can be constructed above or below grade. It is not uncommon to have a system that is partly below grade with an additional containment structure above grade.

Washout systems shall utilize a pit or bermed area designed and maintained at a capacity to contain all liquid and concrete waste generated by washout operations.

The volume of the system must also be designed to contain runoff that drains to the system and rainfall that enters the system for a two-year frequency, 24-hour storm event.

### Below Grade System

- ◆ A washout system installed below grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanout periods. The size of the pit may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the entire excavation.
- ◆ Include a minimum 12-inch freeboard to reasonably ensure that the structure will not overtop during a rain event.
- ◆ Line the pit with ten millimeter polyethylene lining to control seepage.
- ◆ The bottom of excavated pit should be above the seasonal high water table.

### Above Grade System

- ◆ A system designed and built above grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanout periods. The size of the containment system may be limited by the size of



polyethylene available. The polyethylene lining should be of adequate size to extend over the berm or containment system.

- ◆ The system design may utilize an earthen berm, straw bales, sandbags, or other acceptable barriers that will maintain its shape and integrity and support the polyethylene lining.
- ◆ Include a minimum four-inch freeboard as part of the design.

### Washout Procedures

Do not leave excess mud in the chutes or hopper after the pour. Every effort should be made to empty the chutes and hopper at the pour. The less material left in the chutes and hopper, the quicker and easier the cleanout. Small amounts of excess concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.

At the washout location, scrape as much material from the chutes as possible before washing them. Use non-water cleaning methods to minimize the chance for waste to flow off site.

Remove as much mud as possible when washing out.

Stop washing out in an area if you observe water running off the designated area or if the containment system is leaking or overflowing and ineffective.

Do not back flush equipment at the project site. Back flushing should be restricted to the plant as it generates large volumes of waste that more than likely will exceed the capacity of most washout systems. If an emergency arises, back flush should only be performed with the permission of an on-site manager for the project.

Do not use additives with wash water. Do not use solvents or acids that may be used at the target plant.

### Materials

Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining (**designed and installed systems**).

Signage.

Orange safety fencing or equivalent.

Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (**above grade systems**).

Metal pins or staples at a minimum of six inches in length, sandbags, or alternative fastener to secure polyethylene lining to the containment system.

Non-collapsing and non-water holding cover for use during rain events (optional).

### Installation

---

#### Prefabricated Washout Systems/Containers

Install and locate according to the manufacturer's recommendations.

#### Designed and Installed Systems

Utilize and follow the design in the storm water pollution prevention plan to install the system.

Dependent upon the type of system, either excavate the pit or install the containment system.

A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.

Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.

Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.

Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).

Install signage that identifies concrete washout areas.

Post signs directing contractors and suppliers to designated locations.

Where necessary, provide stable ingress and egress (see **Temporary Construction Ingress/Egress Pad** on page 17) or alternative approach pad for concrete washout systems.

## Maintenance

---

Inspect daily and after each storm event.

Inspect the integrity of the overall structure including, where applicable, the containment system.

Inspect the system for leaks, spills, and tracking of soil by equipment.

Inspect the polyethylene lining for failure, including tears and punctures.

Once concrete wastes harden, remove and dispose of the material.

Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.

Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.

Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.

The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.

The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.

Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.

Prefabricated units are often pumped and the company supplying the unit provides this service.

Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.

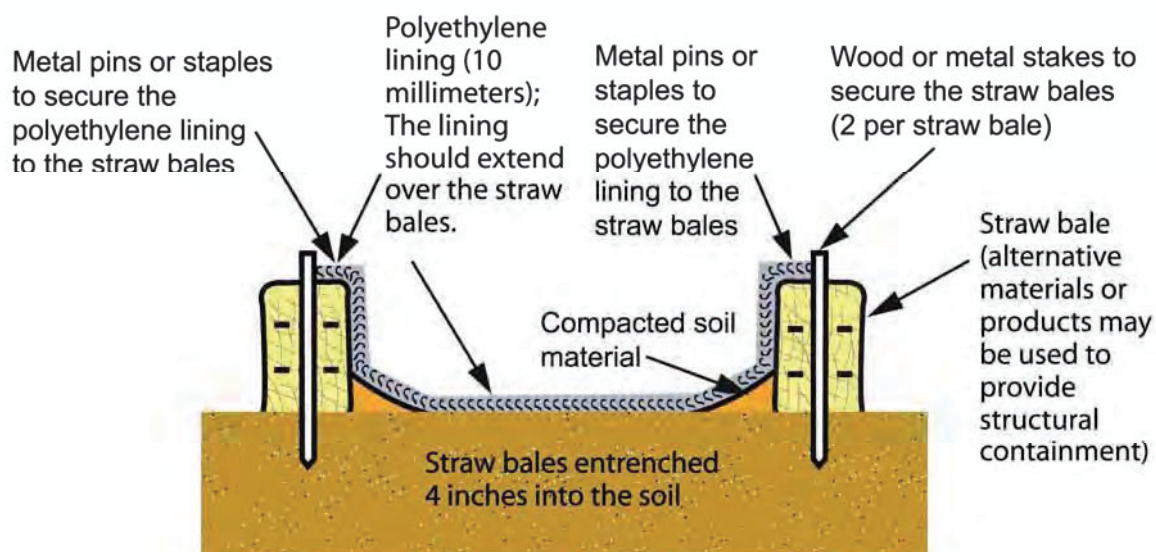
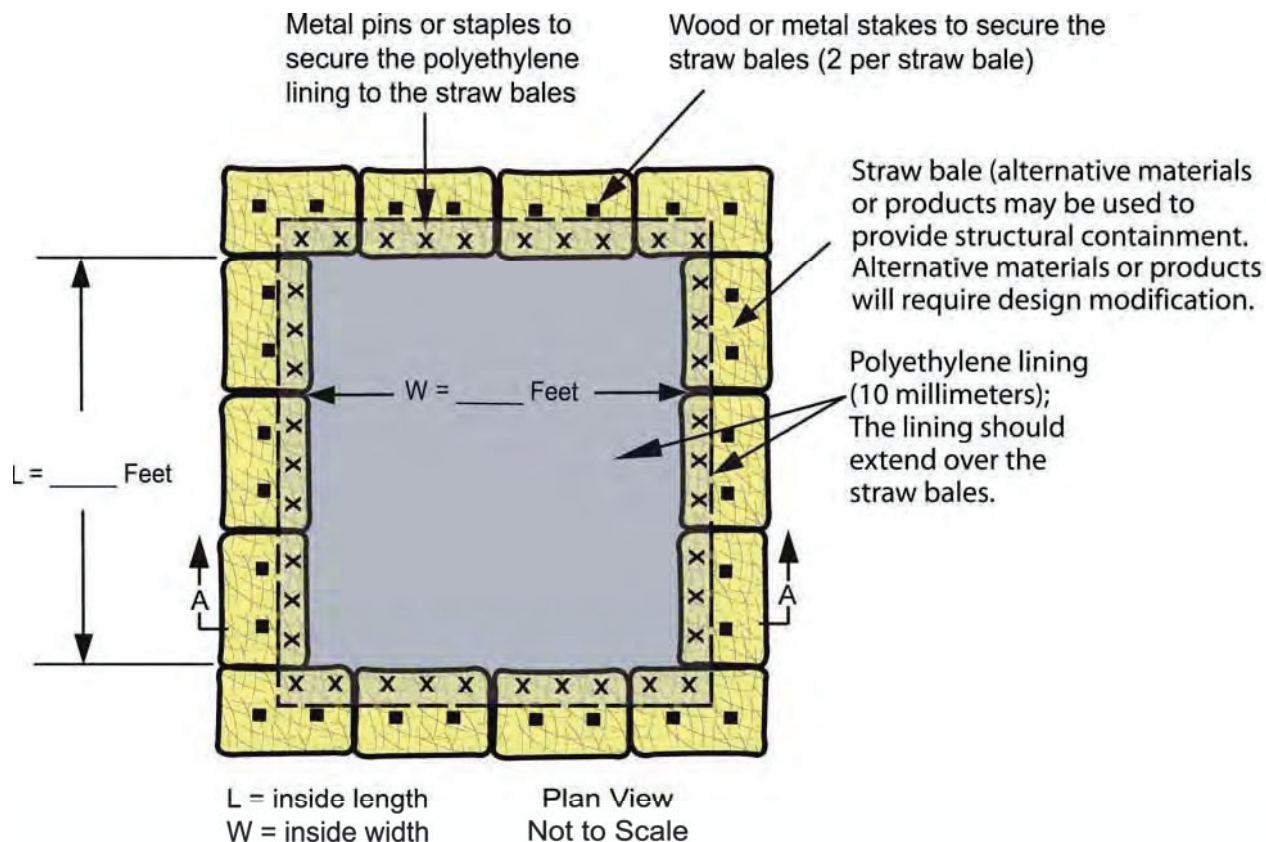
## **CONCRETE WASHOUT**

---

When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other materials used to construct the system.

Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.

## Concrete Washout (Above Grade System) Worksheet

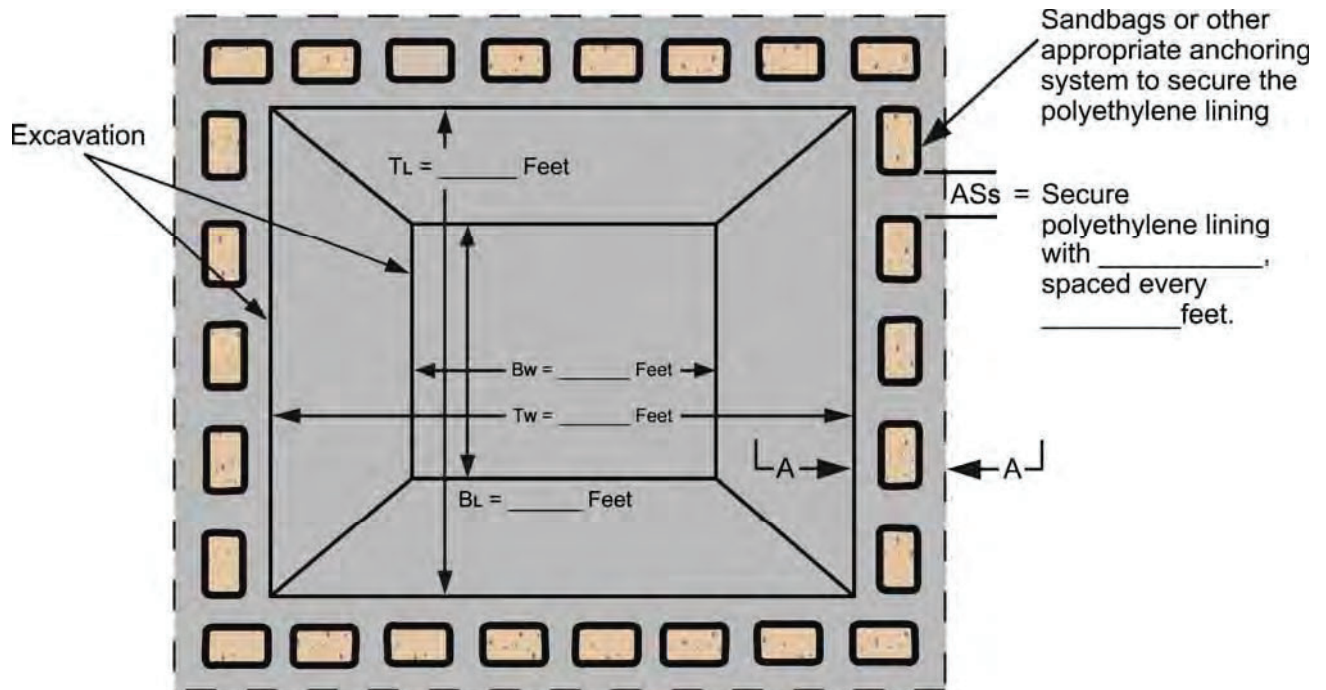


Section A-A  
Not to scale

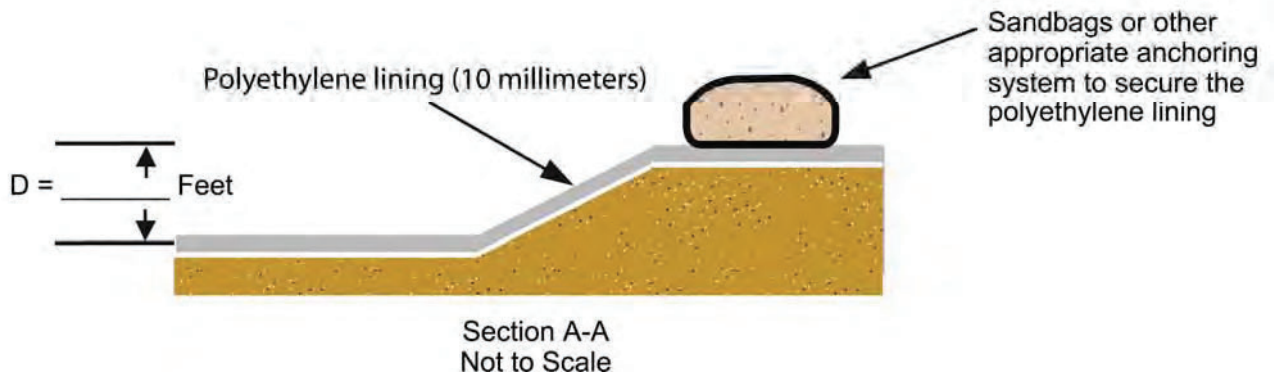


## CONCRETE WASHOUT

### Concrete Washout (Below Grade System) Worksheet



TL = Top Length of Excavation  
BL = Bottom Length of Excavation  
Tw = Top Width of Excavation  
Bw = Bottom Width of Excavation  
ASs = Anchoring System  
type and spacing





## **APPENDIX 3**

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

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

Date: \_\_\_\_\_ Inspector's Name/Title: \_\_\_\_\_

Inspector's Company: \_\_\_\_\_

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

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

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

Rain Event(s) Since Last Inspection:

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

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

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

Current Discharges: ☐ No ☐ Yes, Location: \_\_\_\_\_

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

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

**Erosion and Sediment Control Features / BMPs Inspected:**

☐ **Silt Fence / Filter Sock (Mark which one applies)**

Location(s) (Structure # (STR#)): \_\_\_\_\_

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

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

Action Required/Taken/Location(s): \_\_\_\_\_

☐ **Orange Barrier Fence**

Location(s) (Wetland / Access Road / STR#): \_\_\_\_\_

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

Action Required/Taken/Location(s): \_\_\_\_\_

☐ **Construction Entrance**

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

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

Action Required/Taken/Location(s): \_\_\_\_\_

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

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

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

Action Required/Taken/Location(s): \_\_\_\_\_

☐ **Concrete Washouts**

Location(s) (Access Road / STR#): \_\_\_\_\_

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

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

Action Required/Taken/Location(s): \_\_\_\_\_

**Comments / Additional Control Measures Recommended:** \_\_\_\_\_

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

Inspector's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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

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

Date: \_\_\_\_\_ Inspector's Name/Title: \_\_\_\_\_

Location and Description of Grading and Stabilization Activities

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---

Amendments to SWP3:

---

---

---

Date: \_\_\_\_\_ Inspector's Name/Title: \_\_\_\_\_

Location and Description of Grading and Stabilization Activities

---

---

---

---

Amendments to SWP3:

---

---

---

Date: \_\_\_\_\_ Inspector's Name/Title: \_\_\_\_\_

Location and Description of Grading and Stabilization Activities

---

---

---

---

Amendments to SWP3:

---

---

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

**SUMMARY SWP3 INSPECTION RECORDS – FOR TCRs**

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

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

**Inspector Qualifications:**

☐ The inspections were performed by “qualified inspection personnel” knowledgeable in the principles of erosion and sediment control and skilled in assessing the effectiveness of control measures.

☐ The inspections were NOT performed by “qualified inspection personnel” knowledgeable in the principles of erosion and sediment control and skilled in assessing the effectiveness of control measures.

☐ Corrective Measures were taken on \_\_\_\_\_ to provide “qualified inspection personnel” at the site.

**Permit Compliance Observations:**

☐ The project was in compliance with the SWP3 and permit during the review period.

☐ The project was NOT in compliance with the SWP3 and permit during the review period as noted below:

☐ Non-compliance issues included:

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

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

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

---



## **APPENDIX 4**

Duty to Inform Contractors and Subcontractors Signature Form

## DUTY TO INFORM CONTRACTORS AND SUBCONTRACTORS SIGNATURE FORM

[illegible]

## **APPENDIX 5**

### Construction Plans and Specifications



DRAWING INDEX:

E-1110	COVER SHEET	SHEET 1 OF 7
E-1111	EXISTING CONDITIONS	SHEET 2 OF 7
E-1112	SITE DIMENSION PLAN	SHEET 3 OF 7
E-1113	GRADING / EROSION & SEDIMENT CONTROL PLAN	SHEET 4 OF 7
E-1114	PROFILES, CROSS SECTIONS & DETAILS	SHEET 5 OF 7
E-1115	EROSION & SEDIMENT CONTROL DETAILS - SHEET 1	SHEET 6 OF 7
E-1116	EROSION & SEDIMENT CONTROL DETAILS - SHEET 2	SHEET 7 OF 7

OWNER / APPLICANT:

AMERICAN ELECTRIC POWER  
8600 SMITHS MILL ROAD  
NEW ALBANY, OHIO 43054  
CIVIL ENGINEER: BRADLEY J. BONHAM  
614-216-2274 CELL  
BJBONHAM@AEP.COM

SURVEY:

CENTRAL SURVEYING CO., LTD.  
7563 EAST MAIN STREET  
REYNOLDSBURG, OHIO 43068  
614-864-1100 OFFICE

BENCHMARKS:

BM-1  
5/8-INCH REBAR - NO CAP  
ELEV: 946.73'  
NORTHING: 171,325.86'  
EASTING: 1,770,753.54'

GEOTECHNICAL REPRESENTATIVE:

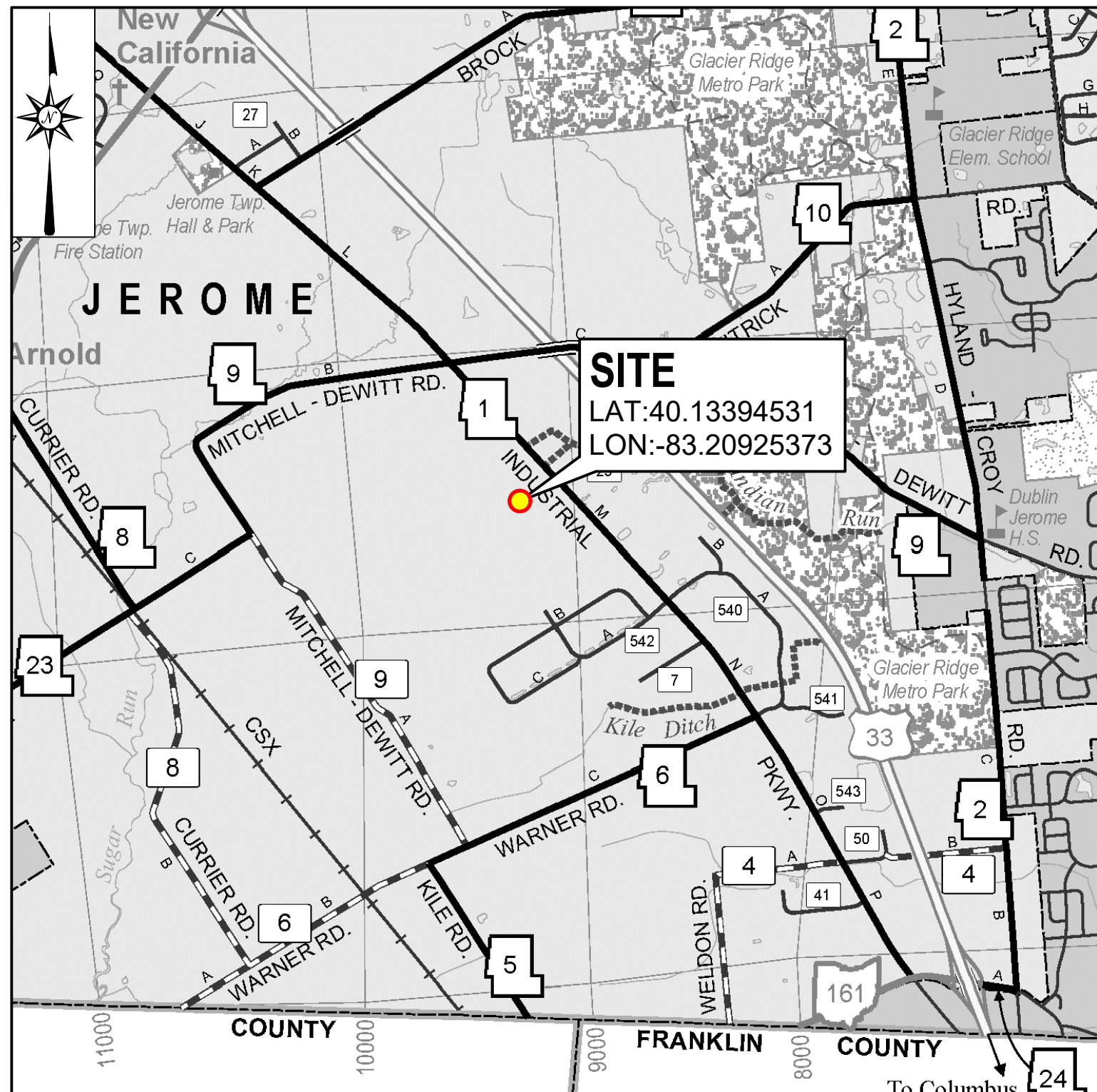
TO BE PROVIDED BY OTHERS - INFORMATION NOT AVAILABLE AT THE TIME THESE PLANS WERE PREPARED.

FLOODPLAIN NOTE:

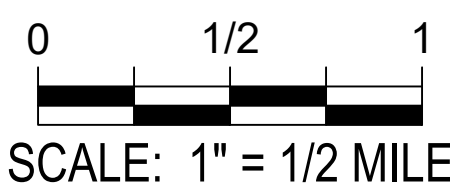
SUBJECT PROPERTY IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) IN ACCORDANCE WITH THE FEMA FLOOD INSURANCE RATE MAP: UNION COUNTY, OHIO (AND INCORPORATED AREAS), PANEL 390 OF 500, MAP NUMBER: 39159C0390D, EFFECTIVE DATE: DECEMBER 16, 2008.

AMERICAN ELECTRIC POWER  
JEROME STATION  
COLUMBUS MARYSVILLE ROAD (CR-1)  
PLAIN CITY, OH 43064

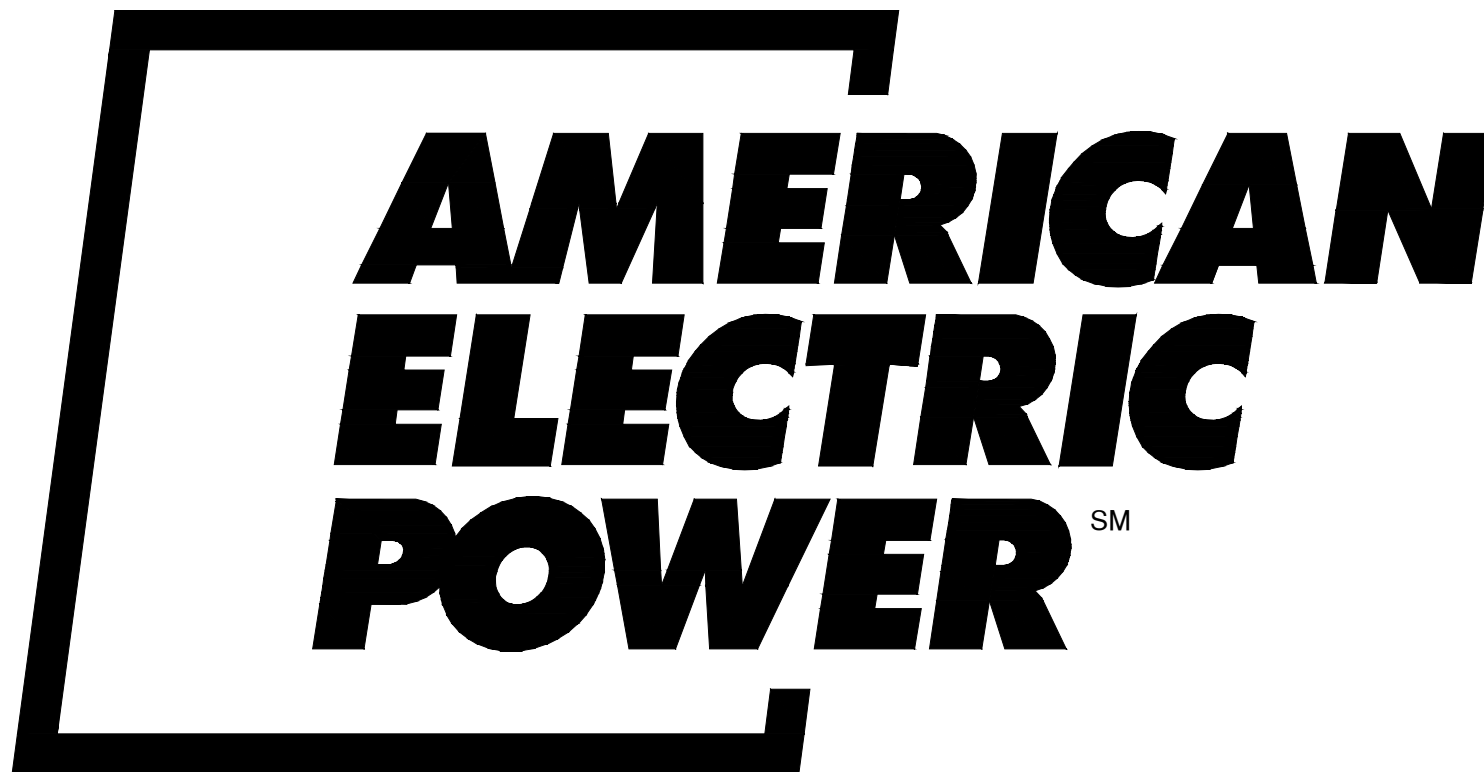
LOCATED IN  
TOWNSHIP OF JEROME,  
COUNTY OF UNION,  
STATE OF OHIO



LOCATION MAP



WO # T10411816



GENERAL NOTES:

- (1.) All work shall be performed in accordance with the appropriate articles of the AEP "Technical Specification for Substation and Switching Station Construction" #SS-160102 (**Specification**) and "Site Preparation Guidelines" #SS-710000.
- (2.) The Cut and Fill Earthwork Quantities shown below reflect the minimum earthwork required. This calculation does not include 4" of #57 stone (by others) above the station pad or the removal of topsoil. The actual depth of stripping may increase under the station pad depending on site conditions.
- (3.) All soft, wet, organic, or otherwise unsuitable material shall be removed and replaced in accordance with the **Specification**.
- (4.) All disturbed areas that will not be stoned shall be seeded in accordance with the **Specification**.
- (5.) Side slopes shall have a maximum gradient of three horizontal to one vertical unless otherwise noted.
- (6.) The station pad area shall be covered with 8 inches of ODOT #304 aggregate to 5 feet outside the station fence followed by 4" of #57 stone (by others) to 4' outside the station fence.
- (7.) The elevations shown for all graded areas are final elevations (top of pad #304). The contour interval shown is one foot.
- (8.) All trees and shrubs located within the construction limits shall be removed. All trees and shrubs are not shown on the grading plan for clarity.
- (9.) All debris shall be removed from the site.
- (10.) All grading work shall be within property lines or the right of way line. Do not disturb adjacent properties.
- (11.) Contractor is responsible for construction and maintenance of all erosion control measures.
- (12.) Contractor initiated changes shall be submitted in writing to the owners representative for approval prior to fabrication or construction.
- (13.) Scales as noted on the details are shown for 30"x46" size sheets.
- (14.) Locations of all existing utilities shown on the plan are approximate. Contractor shall verify all existing utility locations prior to construction. Repair of any damaged utility shall be the responsibility of the contractor. Prior to excavation work, contractor shall have all utilities marked in the field.
- (15.) At the time these plans were prepared, there was no indication of any wetlands or streams within the project boundary.

CONSTRUCTION LIMIT AREA / DISTURBED AREA = 4.24 ACRES (184,893 SQ. FT.)  
STATION PAD AREA = 2.55 ACRES (110,880 SQ. FT.)

ESTIMATED QUANTITIES:

NOTE: QUANTITIES SHOWN ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL PERFORM THEIR OWN QUANTITY ESTIMATES.

EARTHWORK:

AREA OF DISTURBANCE	4.24 AC.
CLEARING AND GRUBBING	1.80 AC.
TOPSOIL REMOVAL (ASSUMED 6" THICK)	1450 C.Y.
TOPSOIL PLACEMENT (4" TO BE SPREAD IN AREAS TO BE SEEDED)	740 C.Y.
TOPSOIL (EXCESS)	710 C.Y.
CUT* (INCLUDES 20% SWELL FACTOR)	380 C.Y.
FILL* (INCLUDES 30% COMPACTION)	220 C.Y.
EXPORT CUT	160 C.Y.

\*CUT / FILL QUANTITIES DO NOT INCLUDE STRIPPING OR PLACEMENT OF TOPSOIL.

MATERIALS:

ODOT #304 AGGREGATE, 8" THICK FOR STATION PAD & 4-1/2" THICK THICK FOR ACCESS ROADS*	670 TONS
ODOT #57 WASHED LIMESTONE AGGREGATE, 4" THICK FOR STATION PAD (BY OTHERS)*	2040 TONS
ODOT #2 AGGREGATE, 4-1/2" THICK FOR ACCESS ROAD	290 TONS
MIRAFI 600X GEOTEXTILE FABRIC FOR ACCESS ROAD	1550 S.Y.
CHAIN LINK FENCE AND APPURTENANCES	1300 LIN. FT.
24' GATE	2 EA.
FILTER SOCK (12"Ø MIN.)	1760 LIN. FT.
SEEDING & MULCHING	1.38 AC.
CONCRETE WASHOUT	1 EA.

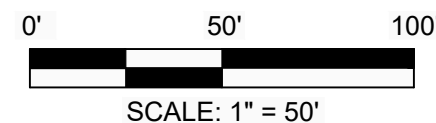
\*Quantities assume existing pad consists of 8" ODOT #304 aggregate as constructed.  
\*Quantities assume 4" of ODOT #57 will need to be added (by others) to the entire existing pad.



ISSUED FOR  
CONSTRUCTION  
10/31/2023

<b>BAIR GOODIE</b>		BAIR, GOODIE AND ASSOCIATES, INC. 153 NORTH BROADWAY STREET NEW PHILADELPHIA, OH 44663 TEL. 330.343.3499 FAX. 330.343.9505 WWW.BAIRGOODIE.COM		UNDERGROUND UTILITIES TWO WORKING DAYS CALL BEFORE YOU DIG CALL 800-245-4688 (TOLL FREE) OHIO 811	
OLD DWG #:		STD DWG #:			
THIS DRAWING IS THE PROPERTY OF AMERICAN ELECTRIC POWER AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE COPIED OR REPRODUCED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF AMERICAN ELECTRIC POWER, OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.					
OHIO POWER COMPANY JEROME STATION PLAIN CITY OHIO					
COVER SHEET					
SCALE: 1" = 50'	DR: DB/BGA	ENG: JP/BGA	CH: JP/BGA		
	WO#: T10411816	APPD: JP/BGA	DATE: 10/31/2023		
1 RIVERSIDE PLAZA COLUMBUS, OH 43215		DWG. NO. E-1110	REV 0		





AMAZON DATA SERVICES, INC.  
PIN: 150022039000  
(53.90 AC. TR. PER AUDITOR)

ZONE X

AMAZON DATA SERVICES, INC.  
PIN: 1500260041000  
(44.53 AC. TR. PER AUDITOR)

#### SURVEY CONTROL POINT DATA

POINT NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
CP-1/BM-1	5/8-INCH REBAR - NO CAP	171325.86'	1770753.54'	946.73'

LEGEND - EXISTING FEATURES

	SUBJECT PROPERTY
	PROPERTY LINE PER COUNTY
	OVERHEAD LINE
	POWER POLE
	GY WIRE
	EDGE OF ROAD
	EDGE OF DRIVE
	CONCRETE CURB
	1FT CONTOUR
	5FT CONTOUR
	ELECTRIC PULL BOX
	UNDERGROUND TELEPHONE LINE
	TELEPHONE PEDESTAL
	UNDERGROUND UTILITY COVER
	FIBEROPTIC RISER
	UNDERGROUND WATER LINE
	WATER VALVE
	FIRE HYDRANT
	UNDERGROUND PIPELINE
	PIPELINE MARKER
	UNDERGROUND STORM SEWER
	CATCH BASIN
	MISCELLANEOUS UTILITY COVER
	MISCELLANEOUS UTILITY MARKER
	CONIFEROUS TREE
	DECIDUOUS TREE
	TREE LINE
	EDGE OF WATER
	FENCE
	GUARDRAIL
	CORRUGATED PLASTIC PIPE
	CORRUGATED METAL PIPE
	REINFORCED CONCRETE PIPE
	POLYVINYL CHLORIDE PIPE
	CULVERT
	FLOW LINE ELEVATION
	BOLLARD
	BOLLARD
	LIGHT POLE
	MAILBOX
	SIGN
	GRAVEL
	CONCRETE
	ASPHALT
	CONTROL POINT / BENCHMARK

LEGEND - FEMA FLOOD INSURANCE RATE MAP FEATURES

ZONE X - OTHER AREAS. AREAS OF ANNUAL CHANGE EXCEED 1 IN.

LEGEND - SOIL TYPES

Bs	Brookston silty clay loam, fine texture, 0 to 2 percent slopes
CrA	Crosby silt loam, Southern Ohio till plain, 0 to 2 percent slopes

## NOTES

1) BEARINGS ARE ORIENTED TO THE STATE PLANE COORDINATE SYSTEM: OHIO NORTH (2401);  
HORIZONTAL DATUM: NAD83 (2011); VERTICAL DATUM: NAVD83

2) UTILITIES LOCATED IN THE FIELD BY OBSERVED EVIDENCE COMBINED WITH SOURCE INFORMATION FROM PLANS AND MARKINGS (IF PROVIDED). HOWEVER, LACKING EVIDENCE, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DETERMINED. ACQUISITION IN SOME JURISDICTIONS MAY BE REQUIRED TO OBTAIN OTHER SIMILAR UTILITY DATA REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE.

3) DOCUMENTS USED: TAX MAPS, RECORDS AND NOTED, AND PLATS OF SURVEYS.

4) SUBJECT PROPERTY IS LOCATED IN ZONE A (X-AXIS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) IN ACCORDANCE WITH THE FEMA FLOOD INSURANCE RATE MAP: UNITED COUNTY, OHIO (AND INCORPORATED AREAS), PANEL: 390 OF 500. MAP NUMBER: 39100300300; EFFECTIVE DATE: DECEMBER 16, 2008.

5) DEPTED EXISTING ELEVATIONS DETERMINED BY CENTRAL SURVEYING CO., LTD RECEIVED FROM AEP (2010) ON SEPTEMBER 5, 2011

## DRAWING INDEX


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EROSION & SEDIMENT CONTROL DETAILS - SHEET 2.....	E-1116



OLD DWG #:	STD DWG #:
------------	------------

PLAIN CITY	OHIO POWER COMPANY JEROME STATION	OHIO
------------	--------------------------------------	------

## EXISTING CONDITIONS

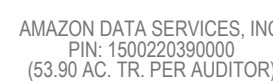
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	WO#: T10411816	APPD: JP/BGA	DATE: 10/31/2023
	1 RIVERSIDE PLAZA COLUMBUS, OH 43215	DWG. NO. E-1111	REV 0



ISSUED FOR  
CONSTRUCTION  
10/31/2023


















AMAZON DATA SERVICES, INC.  
PIN: 1500260041000  
(44.53 AC. TR. PER AUDITOR)





LEGEND - EXISTING FEATURES

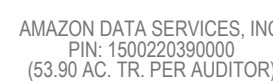
### LEGEND - PROPOSED FEATURES

	PROPOSED EDGE OF PAD
	PROPOSED EDGE OF ACCESS ROAD
	PROPOSED CENTERLINE OF ACCESS ROAD
	PROPOSED FENCE
	PROPOSED CORNER POST / GATE POST
	PROPOSED GATE
	PROPOSED SLOPE/DIRECTION
	PROPOSED CONSTRUCTION LIMITS - 4.24 ACRES
	PROPOSED STATION PAD STONE
	PROPOSED ACCESS ROAD STONE
	PROPOSED SEEDING AREA





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	BAIR, GOODIE AND ASSOCIATES, INC. 151 NORTH GOODWAY STREET NEW PHILADELPHIA, OH 44663 TEL: 330.343.3499 FAX: 330.343.9505 WWW.BAIRGOODIE.COM	UNDERGROUND UTILITIES TWO WORKING DAYS <b>CALL BEFORE YOU DIG</b> CALL 800-245-4848 (TOLL FREE) QHD 811
	OLD DWG #: _____ STD DWG #: _____	
CHIO POWER COMPANY <b>JEROME STATION</b>		
PLAIN CITY OHIO		
SITE DIMENSION PLAN		
SCALE: 1" = 50'  	DR/D8BGA WOF: T10411816 1 RIVERSIDE, OH PLAZA CLEVELAND, OH 44123	ENG: JP/BGA APPD: JP/BGA DWG. NO. <b>E-1112</b> <div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 5px;">REV</div> <div style="font-size: 2em; font-weight: bold; margin-left: 10px;">0</div> </div>
		DATE: 10/31/2023






LEGEND - EXISTING FEATURES

	GRAVEL
	CONCRETE
	ASPHALT
 CP-1/BM-1	CONTROL POINT / BENCHMARK

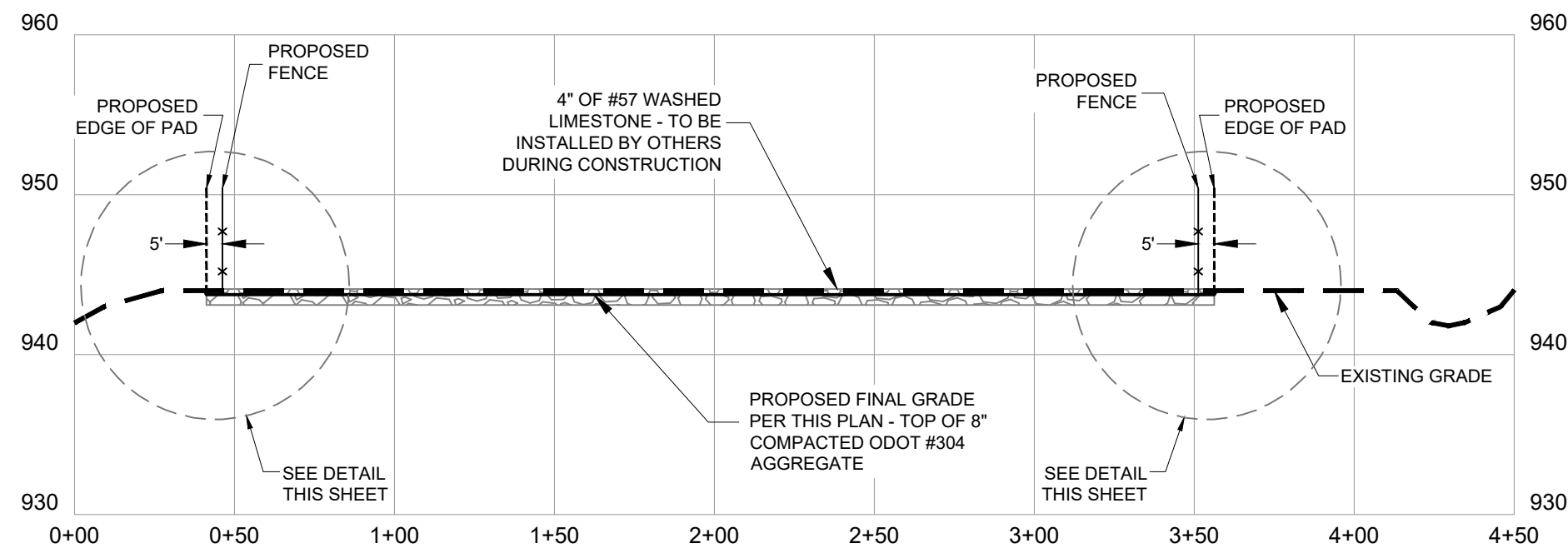
**NOTES**

1. BEARINGS ARE ORIENTED TO THE STATE PLANE COORDINATE SYSTEM: OHIO NORTH (3401); HORIZONTAL DATUM: NAD83 (2011); VERTICAL DATUM: NAVD83
2. UTILITIES LOCATED IN THE FIELD BY OBSERVED EVIDENCE COMBINED WITH SOURCE INFORMATION FROM PLANS AND MARKINGS (IF PROVIDED). HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, BE IT OR NOT, ANOTHER UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN COMPLETE RESPONSE.
3. DOCUMENTS USED: TAX MAPS, RECORDS AND NOTED, AND PLATS OF SURVEYS.
4. SUBJECT PROPERTY IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN IN ACCORDANCE WITH THE FEMA FLOOD INSURANCE RATE MAP, UNION COUNTY, OHIO AND THE UNINCORPORATED AREAS). PANEL 390 OF 500. MAP NUMBER: 391023000. EFFECTIVE DATE: DECEMBER 16, 2008.
5. DEPICTED EXISTING CONDITIONS SURVEYED BY CENTRAL SURVEYING CO., LTD RECEIVED FROM AEP JANUARY 17, 2023 AND SEPTEMBER 15, 2023.
6. FILTER SOCK WILL BE PLACED AT THE ACTUAL CONSTRUCTION LIMITS AND IS SHOWN OFFSET ON THE PLANS FOR CLARITY ONLY.
7. IF REGULATORY AGENCIES REQUIRE SILT FENCE INSTEAD OF FILTER SOCK, INSTALL PER STANDARD DETAILS.

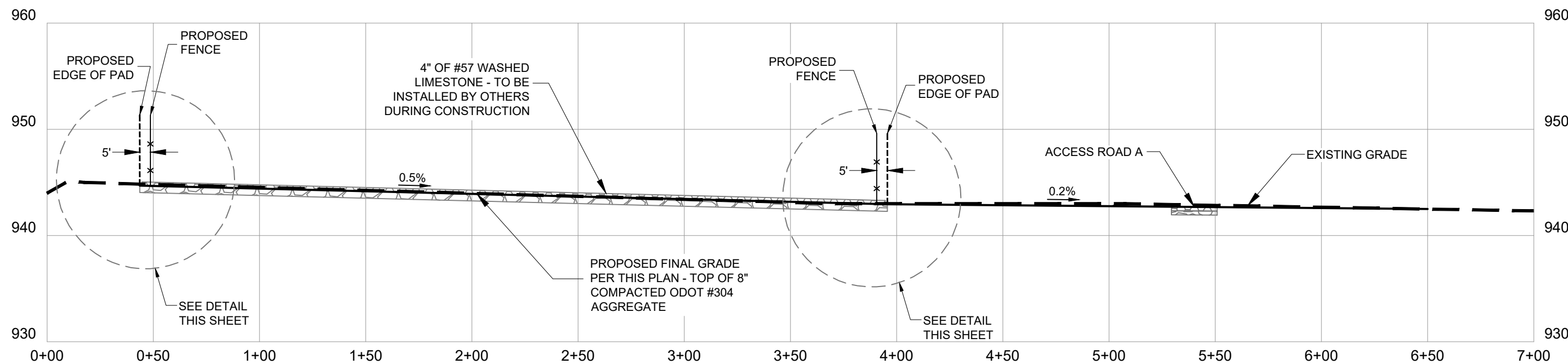
	BAIR, GOODIE AND ASSOCIATES, INC. 153 NORTH BROADWAY STREET NEW PHILADELPHIA, OH 44663 TEL: 330.343.3499 FAX: 330.343.9505 WWW.BAIRGOODIE.COM	UNDERGROUND UTILITIES TWO WORKING DAYS <b>CALL BEFORE YOU DIG</b> CALL 800-245-4848 (TOLL FREE) OHIO 811

OLD DRAWING #:		STD DRAWING #:	
<p><small>THIS DRAWING IS THE PROPERTY OF AMERICAN ELECTRIC POWER AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE COPIED OR REPRODUCED IN ANY MANNER, OR USED FOR FURNISHING TO ANY PERSON, WITHOUT THE WRITTEN CONSENT OF AMERICAN ELECTRIC POWER, OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST.</small></p>			
<p align="center"><b>OHIO POWER COMPANY JEROME STATION</b></p>			
PLAIN CITY		OHIO	
<p align="center"><b>GRADING / EROSION &amp; SEDIMENT CONTROL PLAN</b></p>			
SCALE: 1" = 50'			
	DR: D186A	ENG: JPB/GA	CH: JPB/GA
	WOR: T14011816	APPD: JPB/GA	DATE: 10/31/2023
1 RIVERSIDE PLAZA COLUMBUS, OH 43215		DWG. NO. <b>E-1113</b>	REV 0

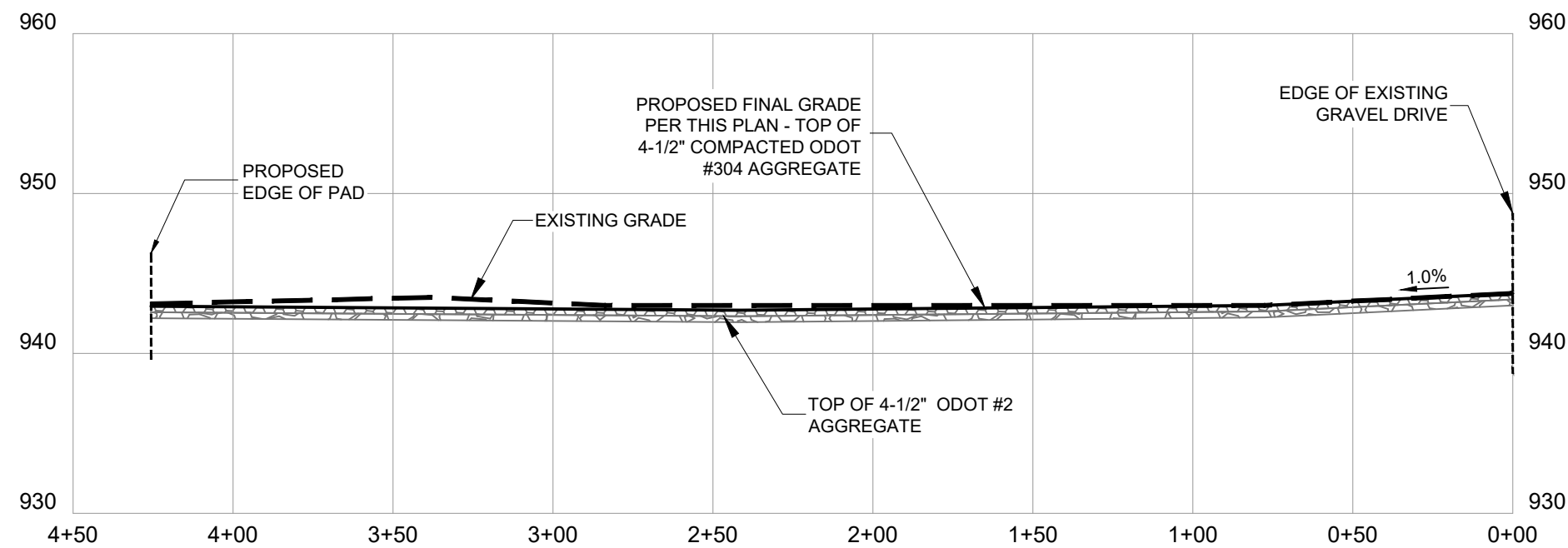




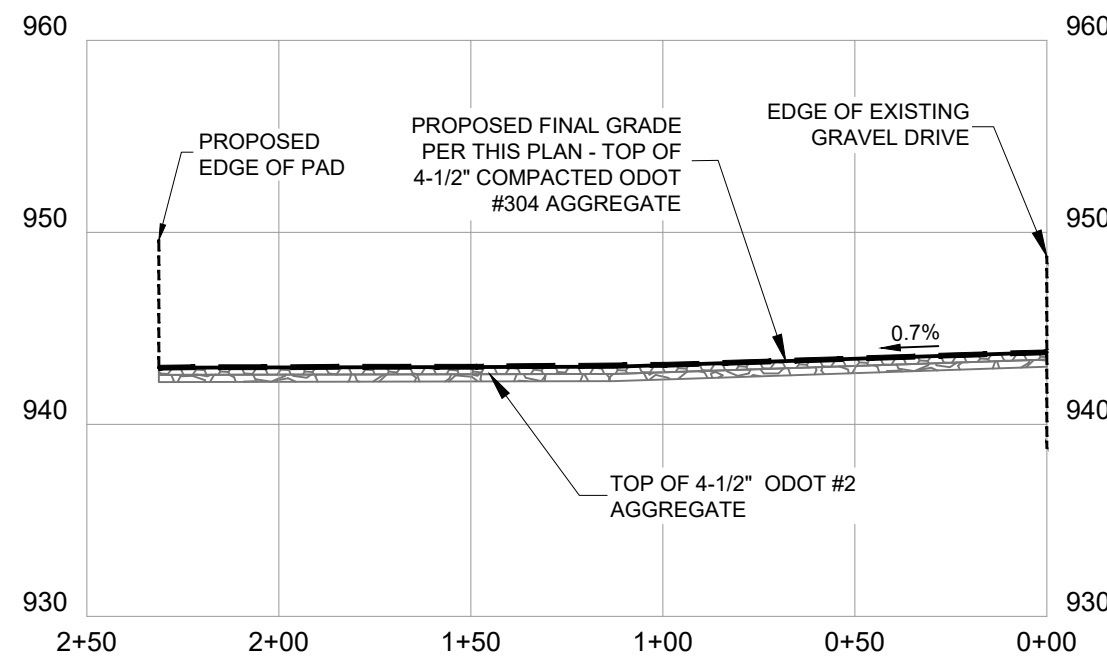
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VERTICAL SCALE: 1" = 10'



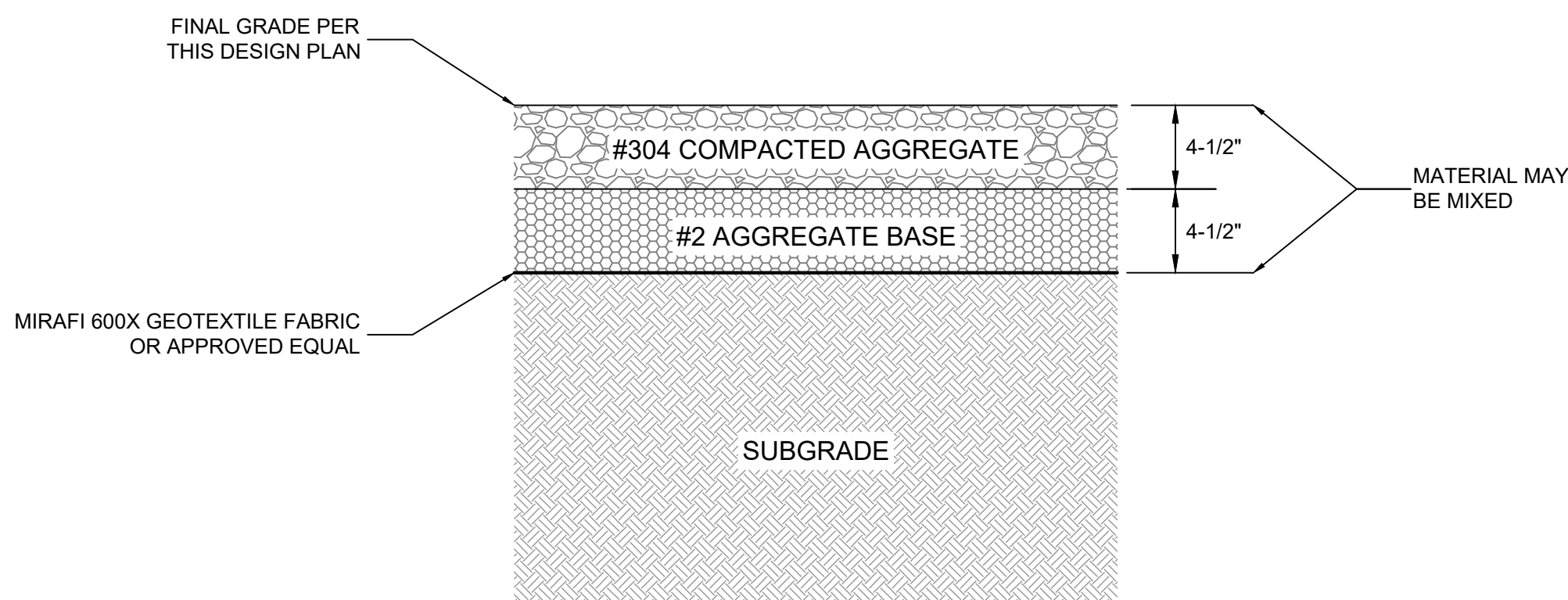
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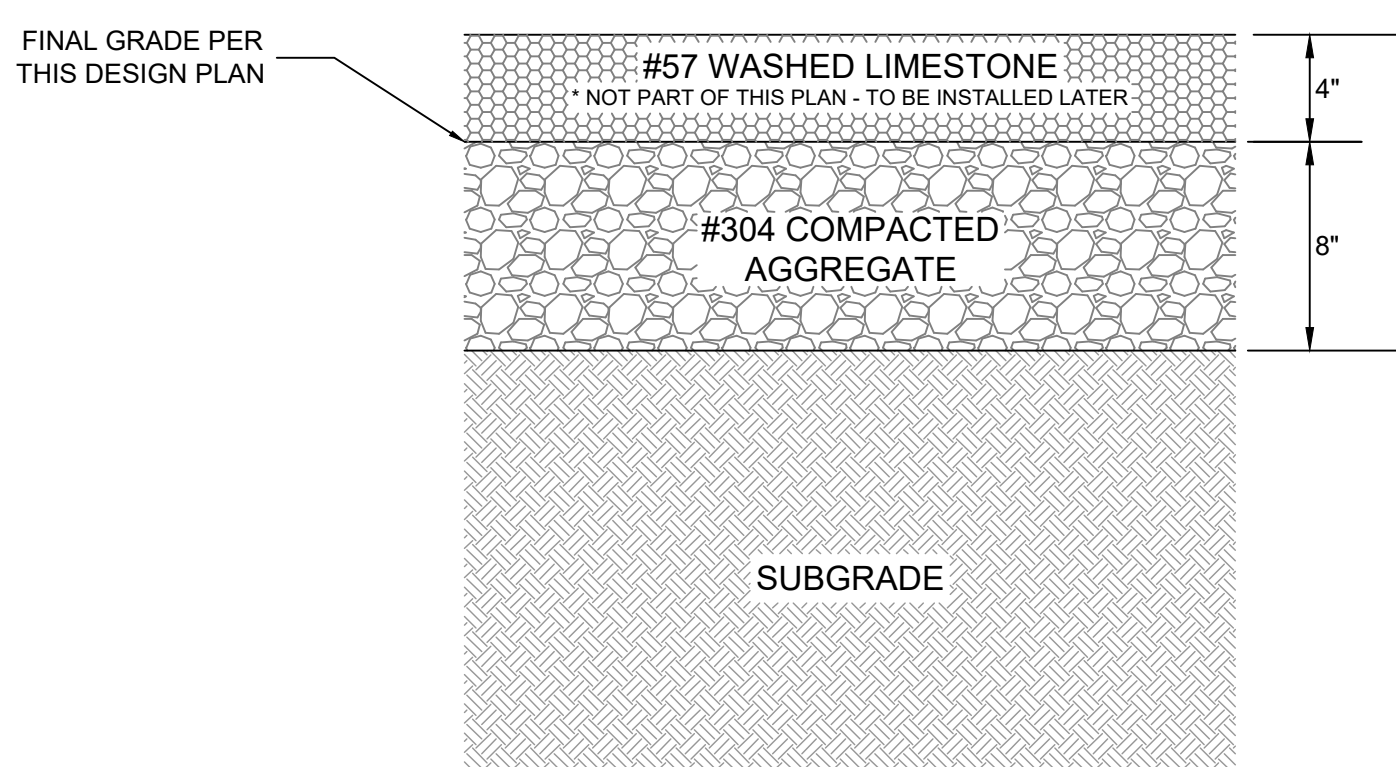
**ACCESS ROAD A PROFILE**  
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VERTICAL SCALE: 1" = 10'



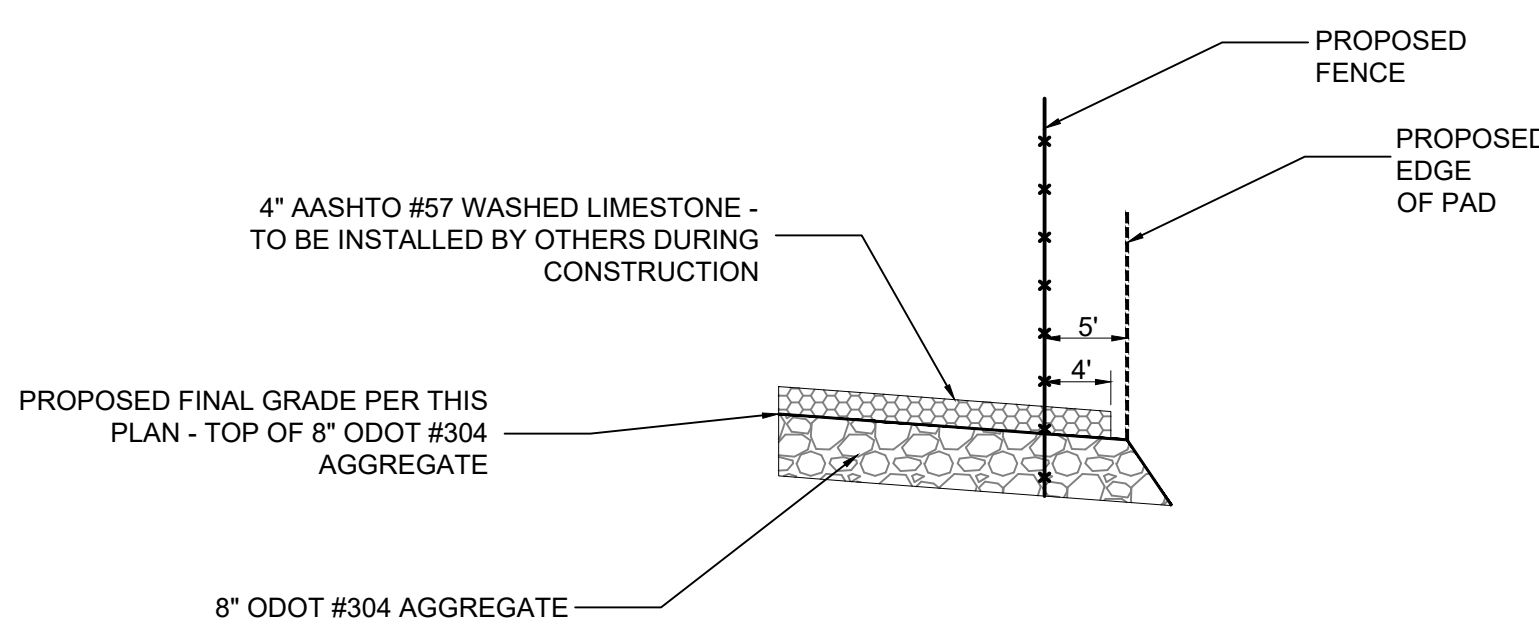
**ACCESS ROAD A-1 PROFILE**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 10'



**TYPICAL ACCESS ROAD DETAIL**  
NOT TO SCALE



**TYPICAL STATION PAD DETAIL**  
NOT TO SCALE


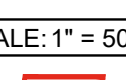


**TYPICAL EDGE OF STATION PAD DETAIL**  
NOT TO SCALE



**ISSUED FOR CONSTRUCTION**  
10/31/2023

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	OHIO POWER COMPANY <b>JEROME STATION</b>		
PLAN CITY		OHIO	
<b>PROFILES, CROSS SECTIONS &amp; DETAILS</b>			
SCALE: 1" = 50'	DR: DB/BGA	ENG: JP/BGA	CH: JP/BGA
	WO#: T10411816	APPD: JP/BGA	DATE: 10/31/2023
	1 RIVERSIDE PLAZA COLUMBUS, OH 43215	DWG. NO. E-1114	REV 0





## ADDITIONAL BMP'S

### OPEN BURNING

NO MATERIALS MAY BE BURNED WHICH CONTAIN RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS SUCH AS TIRES, CARS, AUTO PARTS, PLASTICS OR PLASTIC COATED WIRE (SEE OAC 3745-9). OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS. RESTRICTED AREAS ARE DEFINED AS:

1. WITHIN CORPORATION LIMITS.
2. WITHIN 1,000 FEET OF A MUNICIPAL CORPORATION.
3. WITHIN A ONE 1/2 MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE.

OUTSIDE THE RESTRICTED AREA, NO OPEN BURNING CAN TAKE PLACE WITHIN 1,000 FEET OF AN INHABITED BUILDING LOCATED OFF THE PROPERTY WHERE THE FIRE IS SET. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR THE FOLLOWING ACTIVITIES: HEATING TAR, WELDING AND ACETYLENE TORCHES, SMUDGE POTS AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING OR WARMTH FOR OUTDOOR BARBECUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE WASTES, PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM OHIO EPA, AND AGRICULTURAL WASTES MATERIAL GENERATED BY CROP, HORTICULTURAL, OR LIVESTOCK PRODUCTION PRACTICES.

### DUST CONTROL / SUPPRESSANTS

DUST CONTROL IS REQUIRED TO PREVENT NUISANCE CONDITIONS. DUST CONTROLS MUST BE USED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION AND NOT BE APPLIED IN A MANNER WHICH WOULD RESULT IN A DISCHARGE TO WATERS OF THE STATE. ISOLATION DISTANCES FROM BRIDGES, CATCH BASINS, AND OTHER DRAINAGEWAYS MUST BE OBSERVED (EXCLUDING WATER) AND NOT OCCUR WHEN PREVENTION IS IMMINENT. AS NOTED IN THE SHORT TERM FORECAST, USED OIL MAY NOT BE APPLIED FOR DUST CONTROL. CHEMICAL STABILIZERS MAY ONLY BE USED WITH AEP PERMISSION.

### AIR PERMITTING REQUIREMENTS

ALL CONTRACTORS AND SUB CONTRACTORS MUST BE MADE AWARE THAT CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS. ACTIVITIES INCLUDING BUT NOT LIMITED TO MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC., WILL REQUIRE SPECIFIC OHIO EPA AIR PERMITS FOR INSTALLATION AND OPERATION. NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO OHIO EPA FOR ALL COMMERCIAL SITES TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.

### WASTE DISPOSAL

THE CONTRACTOR SHALL PROVIDE LITTER CONTROL AND COLLECTION OF MATERIALS WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION. ALL FERTILIZER, HYDROCARBON, OR OTHER CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE EPA'S STANDARD PRACTICES. NO SOLID MATERIAL INCLUDING BUILDING AND CONSTRUCTION MATERIAL SHALL BE DISPOSED OF, DISCHARGED OR BURIED ON SITE.

### OFFSITE VEHICLE TRACKING

LOADED HAIL TRUCKS SHALL BE COVERED WITH A TARPULIN. EXCESS DIRT MATERIAL ON THE ROADS SHALL BE REMOVED IMMEDIATELY. HAULING ON UNPAVED SURFACES SHALL BE MONITORED TO MINIMIZE DUST AND CONTROL. EROSION HAIL ROADS SHALL BE WATERED OR OTHER CONTROLS PROVIDED AS NECESSARY TO REDUCE DUST AND CONTROL SEDIMENTS.

### SANITARY WASTE

THE CONTRACTOR SHALL PROVIDE PORTABLE SANITARY WASTE FACILITIES. THESE FACILITIES SHALL BE COLLECTED OR EMPTIED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

### FERTILIZERS AND PESTICIDES

FERTILIZER SHALL BE APPLIED AT A RATE SPECIFIED BY THE SPECIFICATIONS OR THE MANUFACTURER. THE APPLICATION OF FERTILIZERS SHALL BE ACCOMPLISHED IN A MANNER AS DESCRIBED BY THE SPECIFICATION OR MANUFACTURER TO ENSURE THE PROPER INSTALLATION AND TO AVOID OVER FERTILIZING. PESTICIDES ARE NOT ANTICIPATED FOR THIS PROJECT.

### ESTABLISH PROPER EQUIPMENT/VEHICLE FUELING AND MAINTENANCE PRACTICES

EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM THE WATERBODIES, DITCHES, OR STORM DRAINS. IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL, OIL, STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HOURS OF A 1/2 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER.

### SPILL PREVENTION CONTROL PLAN

SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND STORAGE TANK OF 1,320 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. SOILS THAT HAVE BEEN CONTAMINATED MUST BE DISPOSED OF IN ACCORDANCE WITH SECTION "CONTAMINATED SOILS" FOUND BELOW.

SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, CAT LITTER OR OTHER ABSORBENT MATERIAL AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO THE OHIO EPA (1-800-368-6878). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO THE OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH RESULT IN CONTACT WITH WATERS OF THE STATE MUST BE REPORTED TO OHIO EPA'S HOTLINE.

### CONTAMINATED SOILS

IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC., ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT A LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). PLEASE BE AWARE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BEING AUTHORIZED UNDER OHIO EPA'S GENERAL STORMWATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES. IN THE EVENT THERE ARE LARGE EXTENSIVE AREAS OF CONTAMINATED SOILS, ADDITIONAL MEASURES ABOVE AND BEYOND THE CONDITIONS OF OHIO EPA'S GENERAL CONSTRUCTION STORMWATER PERMIT WILL BE REQUIRED. DEPENDING ON THE EXTENT OF CONTAMINATION, ADDITIONAL TREATMENT AND/OR CLOSURE DISPOSAL MAY BE REQUIRED. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONTAMINATED SOILS MUST BE AUTHORIZED UNDER AN ALTERNATIVE NPDES PERMIT.

## FILTER SOCK (FS)

### DESCRIPTION

FILTER SOCKS ARE SEDIMENT-TRAPPING DEVICES USING COMPOST INSERTED INTO A FLEXIBLE, PERMEABLE TUBE WITH A PNEUMATIC BLOWER DEVICE OR EQUIVALENT. FILTER SOCKS TRAP SEDIMENT BY FILTERING WATER PASSING THROUGH THE BERM AND ALLOWING WATER TO POND, CREATING A SETTLING OF SOLIDS.

### SPECIFICATIONS FOR FILTER SOCK

1. MATERIALS - COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF A PARTICLE RANGING FROM 3/8" TO 2".
2. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HOPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

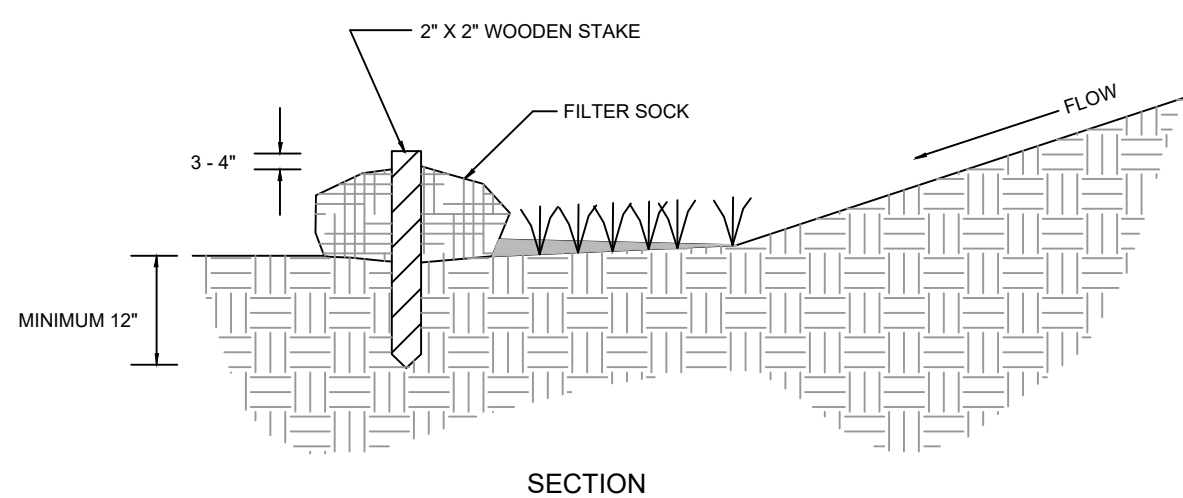
### INSTALLATION

3. FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA, ON SLOPES APPROACHING 2:1. ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
4. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
5. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.

### MAINTENANCE

6. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
7. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
8. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
9. REMOVAL - FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

NOTE: IF REGULATORY AGENCIES REQUIRE SALT FENCE INSTEAD OF FILTER SOCK, INSTALL PER STANDARD DETAILS.



SECTION

## TEMPORARY ROLLED EROSION CONTROL PRODUCTS (EROSION CONTROL MATTING) (EM)

### DESCRIPTION

A TEMPORARY ROLLED EROSION CONTROL PRODUCT (RECP) IS A DEGRADABLE, MANUFACTURED MATERIAL USED TO STABILIZE EASILY ERODED AREAS WHILE VEGETATION BECOMES ESTABLISHED. TEMPORARY ROLLED EROSION CONTROL PRODUCTS ARE DEGRADABLE PRODUCTS COMPOSED OF BIOLOGICALLY PHOTO-CHEMICALLY OR OTHERWISE DEGRADABLE MATERIALS. TEMPORARY RECP'S CONSIST OF EROSION CONTROL NETTING, OPEN WEAVE TEXTILES, AND EROSION CONTROL, BLANKETS AND MATTINGS. THESE PRODUCTS REDUCE SOIL EROSION AND ASSIST VEGETATIVE GROWTH BY PROVIDING TEMPORARY COVER FROM THE ERODIVE ACTION OF RAINFALL AND RUNOFF WHILE PERMANENT SOIL-SEED CONTACT.

### SPECIFICATIONS FOR TEMPORARY ROLLED EROSION CONTROL PRODUCT

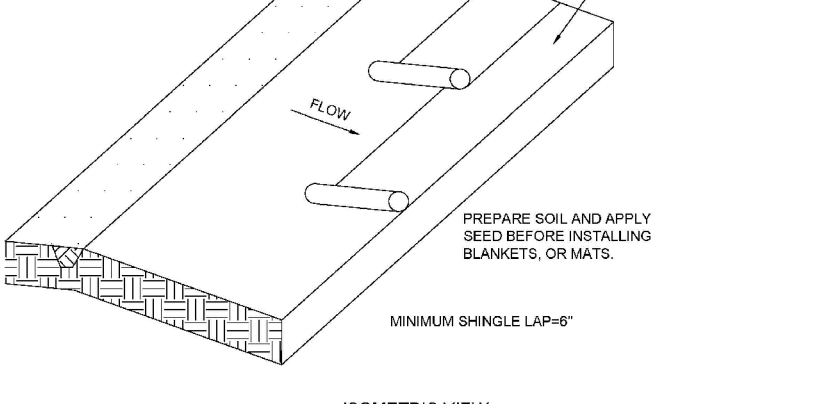
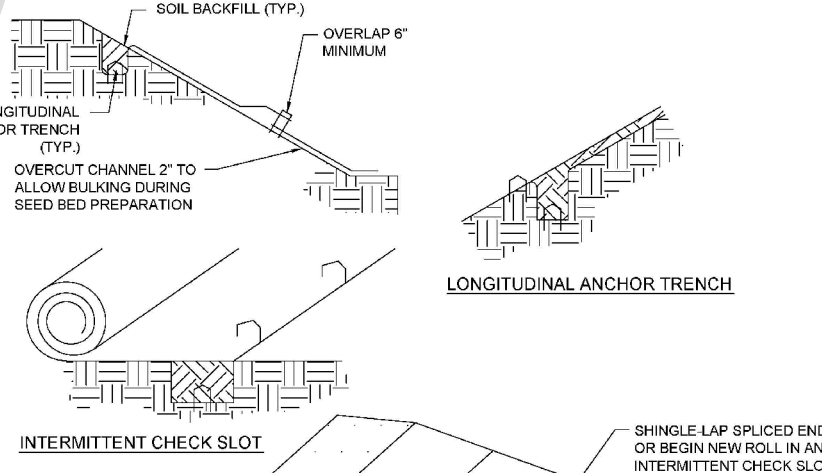
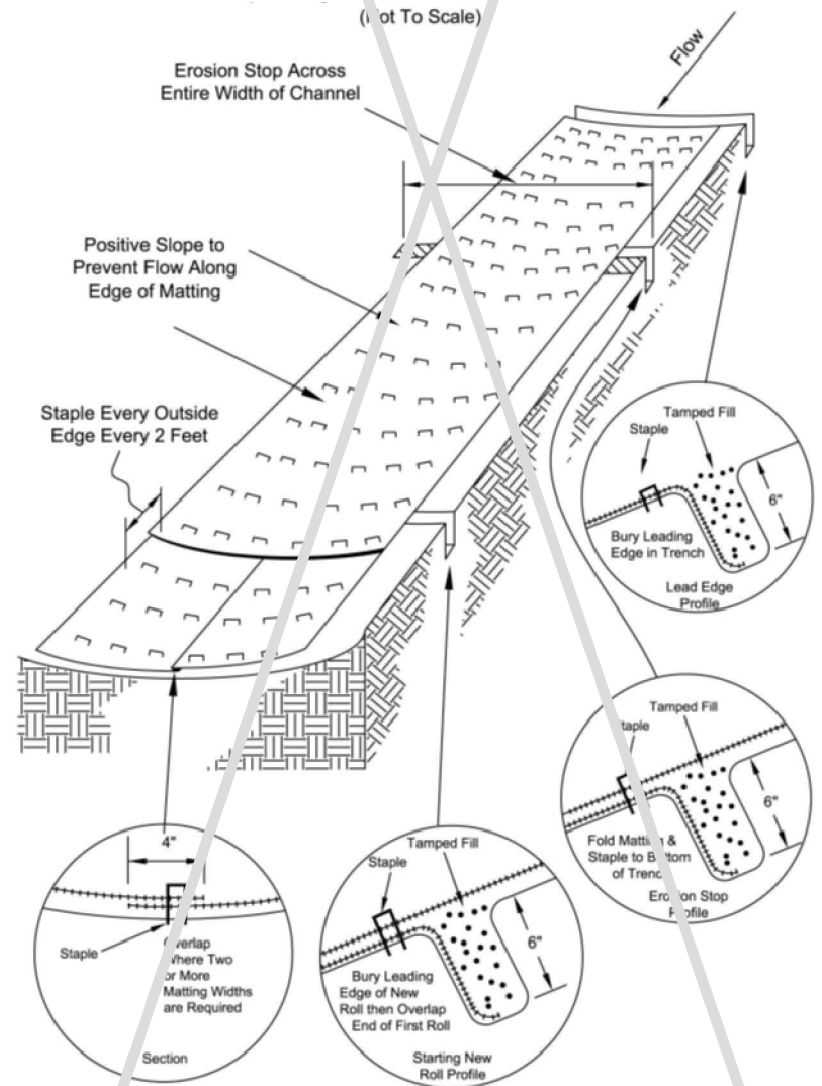
1. CHANNEL/SLOPE SOIL PREPARATION: GRADE AND COMPACT AREA OF INSTALLATION, PREPARING SEEDBED BY GROUNDING TO 2" OF TOPSOIL ABOVE FINAL GRADE. INCORPORATE AMENDMENTS SUCH AS LIMING AND FERTILIZER INTO SOIL, REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER DEBRIS SO THAT INSTALLED RECP WILL HAVE DIRECT CONTACT WITH THE SOIL SURFACE.
2. CHANNEL/SLOPE SEEDING: APPLY SEED TO SOIL SURFACE PRIOR TO INSTALLATION, ALL CHECK SLOTS, ANCHOR TRENCHES, AND OTHER DISTURBED AREAS MUST BE RESEED. REFER TO THE PERMANENT SEEDING SPECIFICATION FOR SEEDING RECOMMENDATIONS.

### SLOPE INSTALLATION

3. EXCAVATE TOP AND BOTTOM TRENCHES (12"X6"). INTERMITTENT EROSION CHECK SLOTS (8"X6") MAY BE REQUIRED BASED ON SLOPE LENGTH. EXCAVATE TOP ANCHOR TRENCH 2'X3' OVER CREST OF THE SLOPE.
4. IF INTERMITTENT EROSION CHECK SLOTS ARE REQUIRED, INSTALL RECP IN 6"X6" SLOT AT A MAXIMUM OF 30' CENTERS OR THE MID POINT OF THE SLOPE. RECP SHOULD BE STAPLED INTO TRENCH ON 12' CENTERS.
5. INSTALL RECP IN TOP ANCHOR TRENCH, ANCHOR ON 12' SPACINGS, BACKFILL AND COMPACT SOIL.
6. UNROLL RECP DOWN SLOPE WITH ADJACENT ROLLS OVERLAPPED A MINIMUM OF 3". ANCHOR THE SEAM EVERY 18". LAY THE RECP LOOSE TO MAINTAIN DIRECT SOIL CONTACT, DO NOT PULL TAUGHT.
7. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UP-SLOPE RECP ON TOP FOR A SINGLE EFFECT. BEGIN ALL NEW ROLLS IN AN EROSION CHECK SLOT IF REQUIRED. DOUBLE ANCHOR ACROSS ROLL VERY 12".
8. INSTALL RECP IN BOTTOM ANCHOR TRENCH (12"X6") ANCHOR EVERY 12". PLACE ALL OTHER STAPLES THROUGHOUT SLOPE AT 1 TO 2.5 PER SQUARE YARD DEPENDENT ON SLOPE, REFER TO MANUFACTURERS ANCHOR GUIDE.

### CHANNEL INSTALLATION

9. EXCAVATE INITIAL ANCHOR TRENCH (12"X6") ACROSS THE LOWER END OF THE PROJECT AREA.
10. EXCAVATE INTERMITTENT CHECK SLOTS (8"X6") ACROSS THE CHANNEL, AT 30' INTERVALS ALONG THE CHANNEL.
11. EXCAVATE LONGITUDINAL CHANNEL ANCHOR SLOTS (4"X4") ALONG BOTH SIDES OF THE CHANNEL TO BURY THE EDGES. WHENEVER POSSIBLE EXTEND THE RECP 2'-3' ABOVE THE CREST OF CHANNEL SIDE SLOPES.
12. INSTALL RECP IN INITIAL ANCHOR TRENCH (DOWNSTREAM) ANCHOR EVERY 12", BACKFILL AND COMPACT SOIL.
13. ROLL OUT RECP BEGINNING IN THE CENTER OF THE CHANNEL TOWARD THE INTERMITTENT CHECK SLOT. DO NOT PULL TAUGHT. UNROLL ADJACENT ROLLS UPSTREAM WITH A 3" MINIMUM OVERLAP (ANCHOR EVERY 18") AND UP EACH CHANNEL SIDE SLOPE.
14. AT TOP OF CHANNEL SIDE SLOPES INSTALL RECP IN THE LONGITUDINAL ANCHOR SLOTS, ANCHOR EVERY 18".
15. INSTALL RECP IN INTERMITTENT CHECK SLOTS, LAY INTO TRENCH AND SECURE WITH ANCHORS EVERY 12", BACKFILL WITH SOIL AND COMPACT.
16. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSTREAM RECP ON TOP FOR SHINGLING EFFECT. BEGIN ALL NEW ROLLS IN AN INTERMITTENT CHECK SLOT, DOUBLE ANCHORED EVERY 12".
17. INSTALL UPSTREAM END IN A TERMINAL ANCHOR TRENCH (12"X6") ANCHOR EVERY 12", BACKFILL AND COMPACT.
18. COMPLETE ANCHORING THROUGHOUT CHANNEL AT 2.5 PER SQUARE YARD USING SUITABLE GROUND ANCHORING DEVICES (U SHAPED WIRE STAPLES, METAL GEOTEXTILE PINS, PLASTIC STAPLES, AND TRIANGULAR WOODEN STAKES). ANCHORS SHOULD BE OF SUFFICIENT LENGTH TO RESIST PULL OUT. LONGER ANCHORS MAY BE REQUIRED IN LOOSE SANDY OR GRAVELLY SOILS.



ISOMETRIC VIEW

"SEE MANUFACTURERS LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, AND SEEDING AND SOIL PREPARATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES, AND MULCHING INFORMATION LINING TO BE TENSAR VMA5 SC250 OR APPROVED EQUAL.

### NOTE

1. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

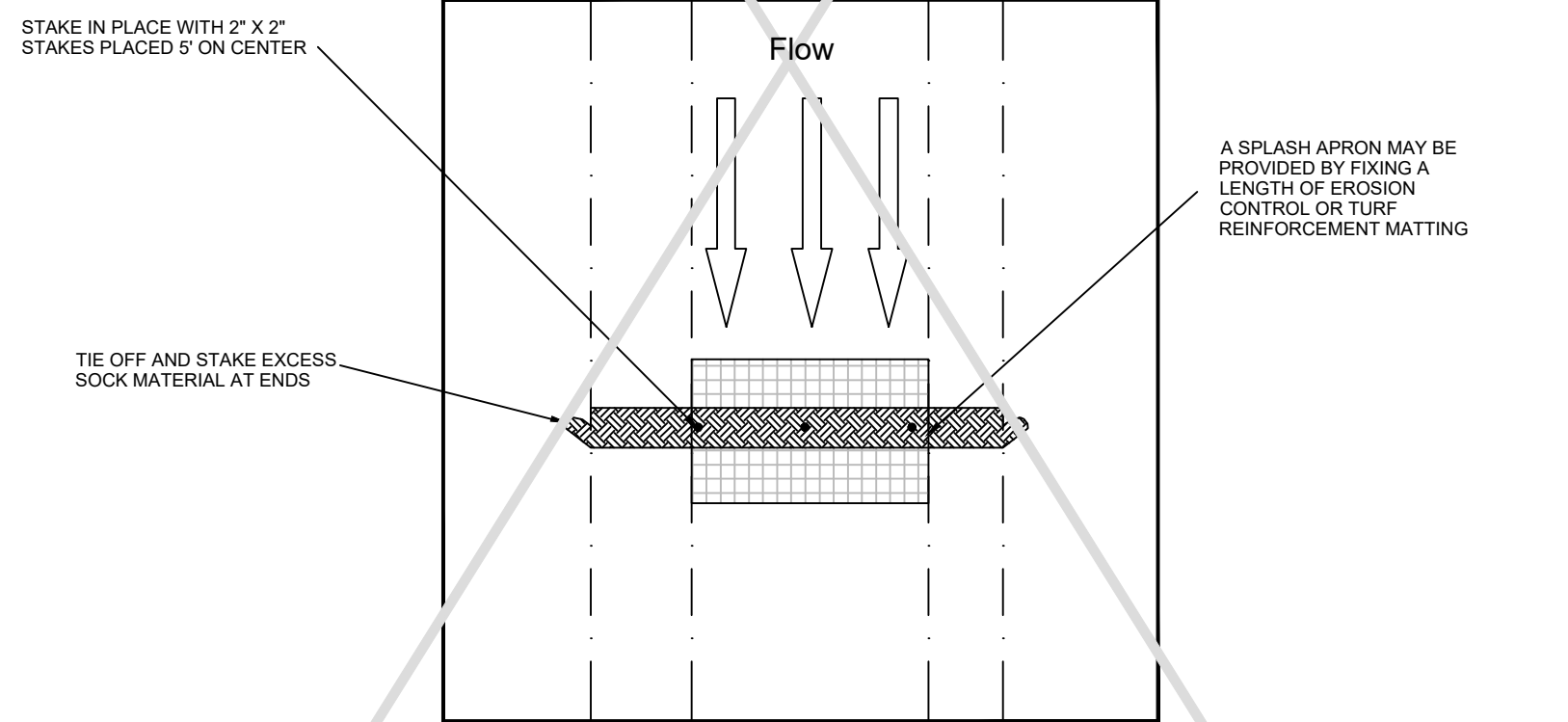
SLOPE PROTECTION

NOT TO SCALE

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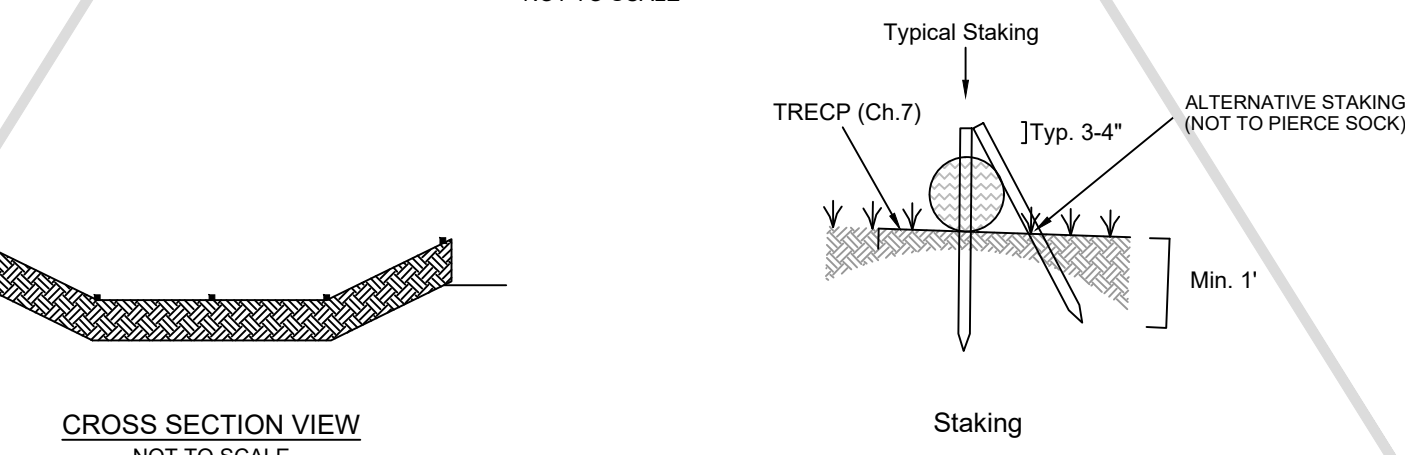
## TYPICAL COMPOST SOCK CHECK DAM (CS)

1. COMPOST SOCK NETTING SHALL USE A KNITTED MESH FABRIC WITH 1/8" - 3/8" INCH OPENINGS, AND COMPOST MEDIA WITH PARTICLE SIZES 98% < 3 INCHES, AND 60% - 3/8 INCHES (CONFORMING TO MEDIA DESCRIBED IN CHAPTER 6 OF THE ODMR RAINWATER AND LAND DEVELOPMENT MANUAL).
2. COMPOST SOCK CHECK DAMS SHALL BE USED IN AREAS THAT DRAIN 5 ACRES OR LESS.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SOCK WHEN IT REACHES 1/2 THE HEIGHT OF THE CHECK DAM.
4. COMPOST SOCK CHECK DAMS SHALL BE CONSTRUCTED WITH 12, 18, OR 24 INCH DIAMETER COMPOST SOCKS, AND SHALL COMPLETELY COVER THE WIDTH OF THE CHANNEL. THE MIDPOINT OF THE COMPOST SOCK CHECK DAM SHALL BE A MINIMUM OF 6 INCHES LOWER THAN THE SIDES IN ORDER TO DIRECT FLOW ACROSS THE CENTER AND AWAY FROM THE CHANNEL SIDES. FILTER SOCK CHECK DAMS SHALL BE FILLED TO A DENSITY SUCH THAT THEY SHALL REACH THEIR INTENDED HEIGHT (DIAMETER) AFTER INSTALLATION AND USE. THEY SHALL BE CONSIDERED UNSUITABLE AND IN NEED OF REPLACEMENT AFTER FALLING BELOW 80% OF THEIR MINIMUM REQUIRED HEIGHT (DIAMETER).
5. ALTHOUGH NO TRENCHING IS NECESSARY, COMPOST SOCK CHECK DAMS SHALL BE PLACED ON A GRADED SURFACE WHERE CONSISTENT CONTACT WITH THE SOIL SURFACE IS MADE WITHOUT BRIDGING OVER GAPS, RILLS, GULLIES, STONES OR OTHER IRREGULARITIES.
6. PLACE COMPOST SOCK CHECK DAMS SO THAT THE ENDS EXTEND TO THE TOP OF BANK, STAKING FOR COMPOST SOCK CHECK DAMS SHALL USE 2 INCH X 2 INCH WOODEN STAKES, PLACED 5 FOOT ON CENTER. STAKE LENGTH SHALL ALLOW THEM TO BE DRIVEN 12 INCHES INTO EXISTING SOIL AND ALLOW AT LEAST 2 INCHES ABOVE THE SOCK.
7. SPACE COMPOST SOCK CHECK DAMS SO THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION OR LOWER ELEVATION AS THE TOP OF THE DOWNSTREAM COMPOST SOCK CHECK DAM (AT THE CENTER OF THE CHANNEL). THIS WILL BE INFLUENCED BY THE HEIGHT OF THE SOCK AND GRADIENT OF THE WATERWAY.
8. A SPLASH APRON MAY BE NEEDED WHERE FLOWS OVER THE SOCK MAY ERODE THE CHANNEL AND UNDERCUT THE COMPOST SOCK CHECK DAM. CREATE THE APRON BY FIXING A LENGTH OF TEMPORARY ROLLED EROSION CONTROL PRODUCT (TRECIP - EROSION CONTROL MATTING) OR TURF REINFORCEMENT MATTING STARTING UPSTREAM OF THE SOCK A DISTANCE EQUAL TO THE SOCK HEIGHT AND EXTENDING A LENGTH TWO TIMES THE HEIGHT OF THE COMPOST SOCK CHECK DAM. SEE CHAPTER 7 OF THE ODMR RAINWATER AND LAND DEVELOPMENT MANUAL FOR INFORMATION REGARDING THESE MATERIALS. MATERIALS USED SHOULD BE ABLE TO BE LEFT IN PLACE (E.G. BIODEGRADABLE/PHOTODEGRADABLE TRECIP) WITHOUT CREATING PROBLEMS FOR FUTURE MOWING OR MAINTENANCE OF THE CHANNEL.



PLAN VIEW

NOT TO SCALE



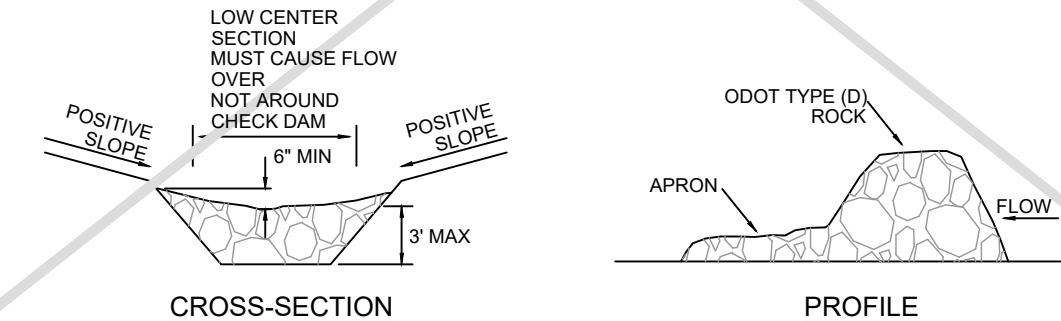
CROSS SECTION VIEW

NOT TO SCALE

NOT PART OF THIS PROJECT

## TYPICAL ROCK CHECK DAM (CD)

1. THE CHECK DAM SHALL BE CONSTRUCTED OF 4-8 INCH DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL. ODOT TYPE (D) STONE IS ACCEPTABLE, BUT SHOULD BE UNDERLAIN WITH A GRAVEL FILTER CONSISTING OF ODOT NO. 3, 5, OR 4 OR SUITABLE FILTER FABRIC.
2. MAXIMUM HEIGHT OF CHECK DAM SHALL NOT EXCEED 3.0 FEET.
3. THE MIDPOINT OF THE ROCK CHECK DAM SHALL BE A MINIMUM OF 6 INCHES LOWER THAN THE SIDES IN ORDER TO DIRECT FLOW ACROSS THE CENTER AND AWAY FROM THE CHANNEL SIDES.
4. THE BASE OF THE CHECK DAM SHALL BE ENTRENCHED APPROXIMATELY 6 INCHES.
5. SPACING OF CHECK DAMS SHALL BE IN A MANNER SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
6. A SPLASH APRON SHALL BE CONSTRUCTED WHERE CHECK DAMS ARE EXPECTED TO BE IN USE FOR AN EXTENDED PERIOD OF TIME. A STONE APRON SHALL BE CONSTRUCTED IMMEDIATELY DOWNSTREAM OF THE CHECK DAM TO PREVENT FLOWS FROM UNDERCUTTING THE STRUCTURE. THE APRON SHOULD BE 6 INCHES THICK AND ITS LENGTH TWO TIMES THE HEIGHT OF THE DAM.
7. STONE PLACEMENT SHALL BE PERFORMED EITHER BY HAND OR MECHANICALLY AS LONG AS THE CENTER OF CHECK DAM IS LOWER THAN THE SIDES AND EXTENDS ACROSS ENTIRE CHANNEL.
8. SIDE SLOPES SHALL BE A MINIMUM OF 2:1.



TYPICAL ROCK CHECK DAM

NOT TO SCALE

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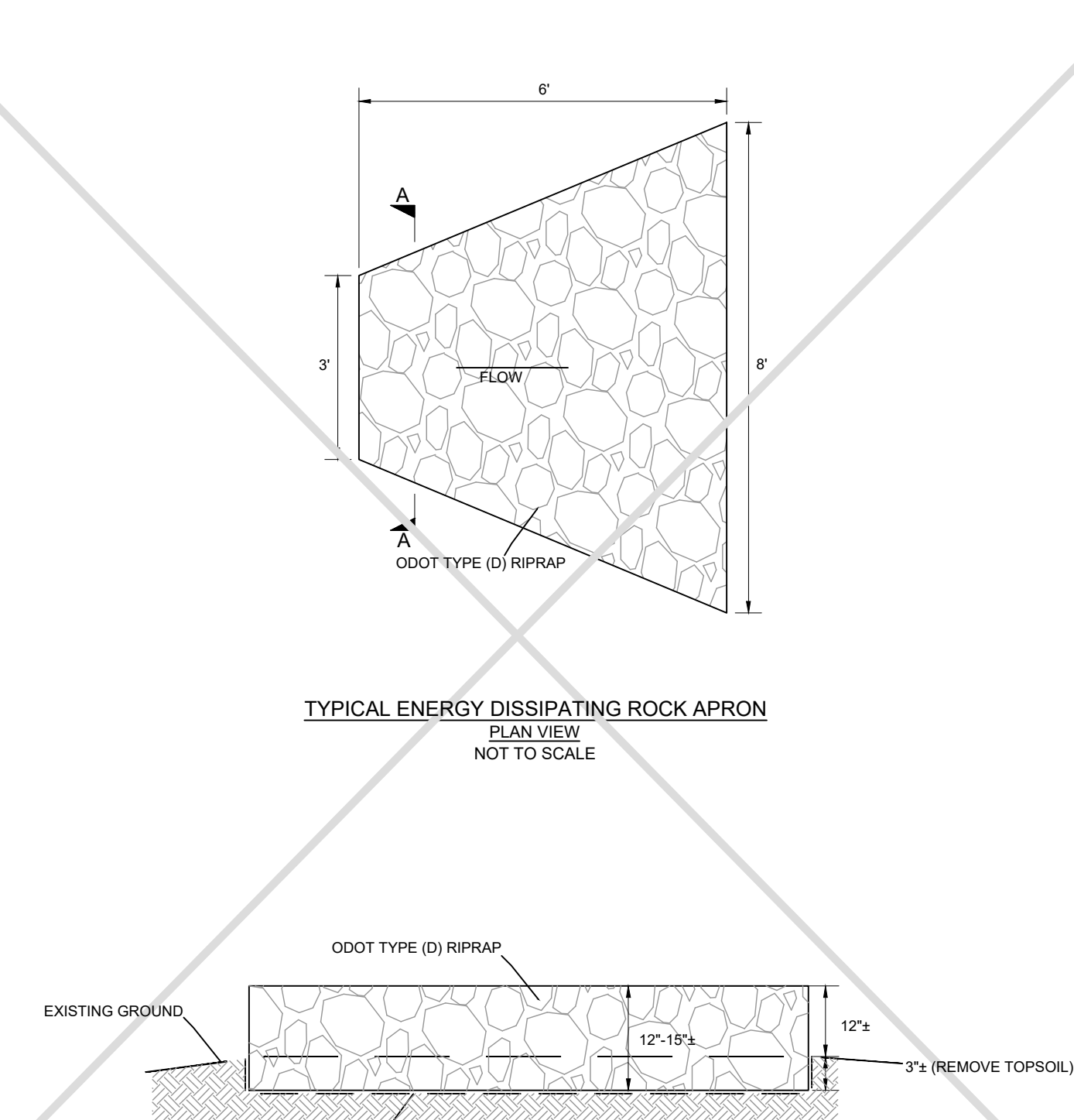
## INLET PROTECTION (IP)

STORM DRAIN INLET PROTECTION DEVICES REMOVE SEDIMENT FROM STORM WATER BEFORE IT ENTERS STORM SEWERS AND OTHER UNDERGROUND PIPING SYSTEMS PRIOR TO THE SITE BEING STABILIZED. DUE TO THEIR POORER EFFECTIVENESS, INLET PROTECTION IS CONSIDERED A SECONDARY SEDIMENT CONTROL TO BE USED IN CONJUNCTION WITH OTHER MORE EFFECTIVE CONTROLS.

INLET PROTECTION IS INSTALLED TO CAPTURE SOME SEDIMENT AND REDUCE THE MAINTENANCE OF STORM SEWERS AND OTHER UNDERGROUND PIPING SYSTEMS PRIOR TO THE SITE BEING STABILIZED. DUE TO THEIR POORER EFFECTIVENESS, INLET PROTECTION IS CONSIDERED A SECONDARY SEDIMENT CONTROL TO BE USED IN CONJUNCTION WITH OTHER MORE EFFECTIVE CONTROLS.

NOT PART OF THIS PROJECT

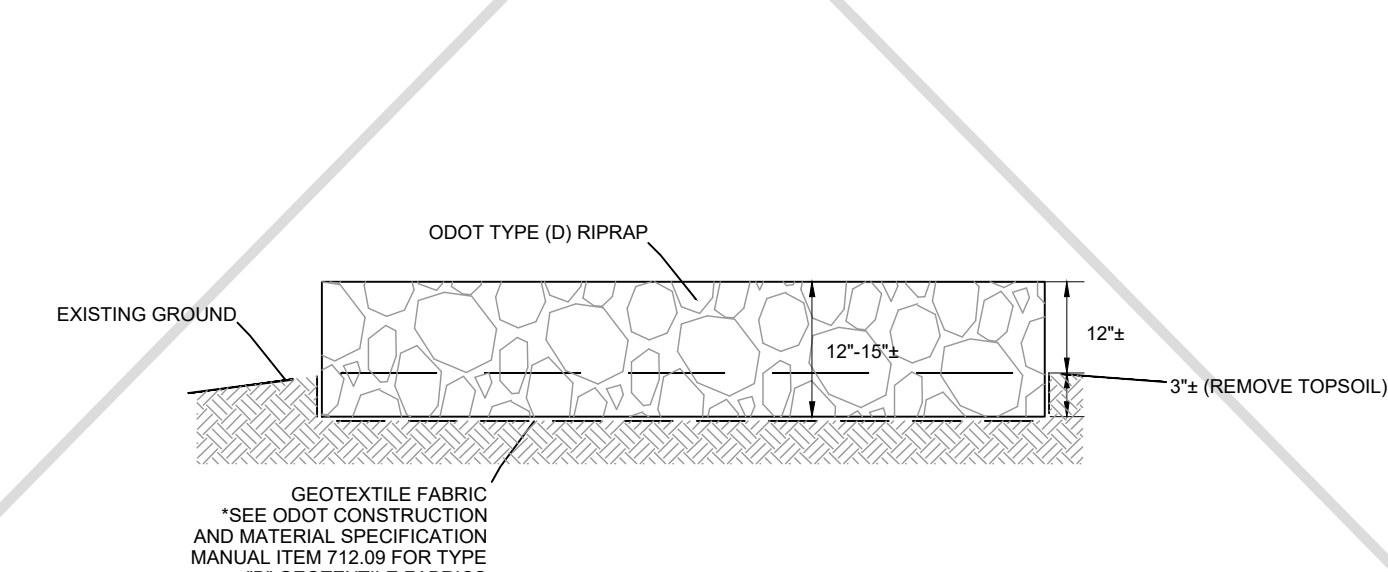
## TYPICAL ENERGY DISSIPATING ROCK APRON (RA)



TYPICAL ENERGY DISSIPATING ROCK APRON

PLAN VIEW

NOT TO SCALE



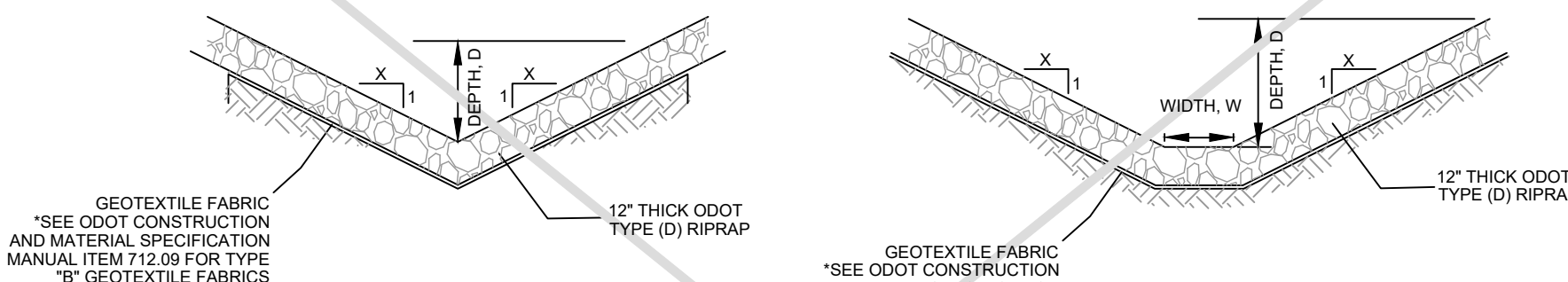
TYPICAL ENERGY DISSIPATING ROCK APRON

SECTION A

NOT TO SCALE

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## TYPICAL ROCK-LINED DITCH



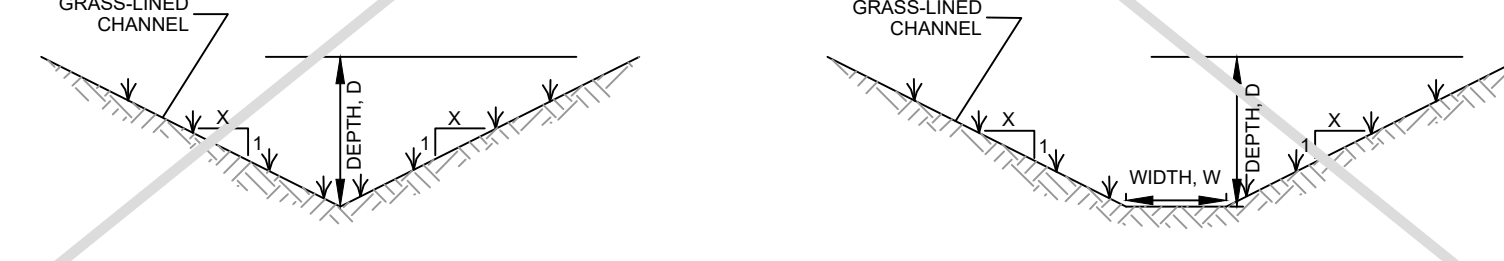
V-BOTTOM DITCH

NOT TO SCALE

FLAT BOTTOM DITCH

NOT TO SCALE

## TYPICAL VEGETATED DITCH



V-BOTTOM DITCH

NOT TO SCALE

TYPICAL VEGETATED FLAT BOTTOM DITCH

NOT TO SCALE

NOT PART OF THIS PROJECT

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OHIO POWER COMPANY  
JEROME STATION

PLAN CITY

EROSION & SEDIMENT CONTROL DETAILS - SHEET 1

SCALE: 1" = 50'

DR: DB/BGA

ENG: JP/BGA

CH: JP/BGA

WOW: T10411816

APPD: JP/BGA

DATE: 10/31/2023

1 RIVERSIDE PLAZA

COLUMBUS, OH 43215

DWG. NO. E-1115

R 0

ISSUED FOR  
CONSTRUCTION

10/31/2023



## TEMPORARY SEEDING



### DESCRIPTION

TEMPORARY SEEDING ESTABLISHES TEMPORARY COVER ON DISTURBED AREAS BY PLANTING APPROPRIATE RAPIDLY GROWING ANNUAL GRASSES OR SMALL GRASSES. TEMPORARY SEEDING PROVIDES EROSION CONTROL ON AREAS IN BETWEEN CONSTRUCTION OPERATIONS. GRASSES WHICH ARE QUICK GROWING ARE SEEDING AND USUALLY MULCHED TO PROVIDE PROMPT, TEMPORARY SOIL STABILIZATION. IT EFFECTIVELY MINIMIZES THE AREA OF A CONSTRUCTION SITE PRONE TO EROSION AND SHOULD BE USED EVERYWHERE THE SEQUENCE OF CONSTRUCTION OPERATIONS ALLOWS VEGETATION TO BE ESTABLISHED.

SPECIFICATIONS FOR TEMPORARY SEEDING		
LBS./AC	BOTANICAL NAME	COMMON NAME
50	AVENA SATIVA	SEED OATS
10	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS

- STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.
- TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 14 DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDING WITHIN 7 DAYS AFTER GRADING.
- THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.
- SOIL AMENDMENTS-TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. BASE RATES FOR LIME AND FERTILIZER SHALL BE USED.
- SEEDING METHOD-SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

### MULCHING TEMPORARY SEEDING

- APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDING MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.
- MATERIALS
  - STRAW-IF STRAW IS USED, IT SHALL BE UNHOTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 LBS./1,000-SQ. FT. (24 BALES)
  - HYDROSEEDERS-IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LBS./AC OR 496 LB./1,000-SQ.-FT.
  - OTHER-OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 1 TON/AC.
- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS
  - MECHANICAL-A DISK, CRUMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES.
  - MULCH NETTING-NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.
  - SYNTHETIC BINDERS-SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
  - WOOD-CELLULOSE FIBER-WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WT. 750 LB./AC. THE WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB./100 GAL.

## DUST CONTROL



### DESCRIPTION

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL, OR PLANT LIFE.

### SPECIFICATIONS FOR DUST CONTROL

- VEGETATIVE COVER AND MULCH-APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 14 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING PRACTICES, AND TREE AND NATURAL AREA PROTECTION PRACTICES.
- WATERING-SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON PAVED ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- SPRAY-ON ADHESIVES-APPLY ADHESIVE ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- STONE-GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
- BARRIERS-EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL.
- OPERATION AND MAINTENANCE-WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.
- STREET CLEANSING-PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED UTILIZING A STREET SWEEPER OR BUCKET-TYPE END LOADER OR SCRAPER.

## PERMANENT SEEDING



### DESCRIPTION

PERMANENT SEEDING IS ESTABLISHED ON AREAS THAT WILL NOT BE RE-DISTURBED FOR PERIODS LONGER THAN 12 MONTHS. PERMANENT SEEDING INCLUDES SITE PREPARATION, SEEDBED PREPARATION, PLANTING SEED, MULCHING, IRRIGATION AND MAINTENANCE. PERMANENT VEGETATION IS USED TO STABILIZE SOIL, REDUCE EROSION, PREVENT SEDIMENT POLLUTION, REDUCE RUNOFF BY PROMOTING INFILTRATION, AND PROVIDE STORMWATER QUALITY BENEFITS OFFERED BY DENSE GRASS COVER.

### SPECIFICATIONS FOR PERMANENT SEEDING

#### SITE PREPARATION

- SUBSOILING, PLOW OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION, MAXIMIZING INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY. SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLOPES PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
- THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
- TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

#### SEEDBED PREPARATION

- LIME-AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOILS AS RECOMMENDED BY A SOIL TEST. IN LIEU OF SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000-SQ. FT. OR 2 TONS PER ACRE.
- FERTILIZER-FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN PLACE OF SOIL TEST, FERTILIZER SHALL BE APPLIED AT A RATE OF 25 POUNDS PER 1,000-SQ. FT. OR 1000 POUNDS PER ACRE OF A 10-10-10 OR 15-15-15 ANALYSIS.
- THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES ON SLOPING LAND. THE SOIL SHALL BE WORKED ON THE CONTOUR.

#### SEEDING DATES AND SOIL CONDITIONS

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE-SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.

#### DORMANT SEEDING

- SEEDING SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD, THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.
- THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING":
  - FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE, INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE SEEDING.
  - FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
  - APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER ON A FIRM, MOIST SEEDBED).
  - WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG, ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHERE FEASIBLE.

#### MULCHING

- MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED MATERIAL.
- MATERIALS
  - STRAW-IF STRAW IS USED IT SHALL BE UNHOTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 POUNDS (TWO TO THREE BALES) PER 1,000-SQ. FT. THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED TO THE SOIL. SURFACE IS COVERED, FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000-SQ. FT. SECTIONS AND SPREAD TWO 45-LB. BALES OF STRAW IN EACH SECTION.
  - HYDROSEEDERS-IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2,000 LB./AC. OR 46 LB./1,000-SQ. FT.
  - OTHER-OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BIANETS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE.
- STRAW AND MULCH ANCHORING METHODS
  - STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.
  - MECHANICAL-A DISK, CRUMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT, GENERALLY, BE LEFT LONGER THAN 6 INCHES.
  - MULCH NETTING-NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.
  - ASPHALT EMULSION-ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURER AT OR THE RATE OF 160 GALLONS PER ACRE.
  - SYNTHETIC BINDERS-SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE MANUFACTURER.
  - WOOD CELLULOSE FIBER-WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 POUNDS CELLULOSE PER 100 GALLONS OF WATER.

#### IRRIGATION

PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH. IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDING AREAS FROM EXCESSIVE RUNOFF.

#### PERMANENT SEED MIXES

##### SLOPE STABILITY AND NATURAL CORRIDORS SEED MIX

TEMPORARY MATRIX		
OZ./AC	GRASSES	SEED OATS
512	AVENA SATIVA	
160	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS

PERMANENT MATRIX		
OZ./AC	GRASSES	
16	ANDROPOGON GERARDII	BIG BLUESTEM
16	BOUTELOUA CURTIPENDULA	SIDE-OATS GRAMA
48	ELYNUS CANADENSIS	CANADA WILD RYE
48	ELYNUS VIRGINICUS	VIRGINIA WILD RYE
32	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
16	SORGHASTRUM NUTANS	INDIAN GRASS

OZ./AC		
OZ./AC	GRASSES	
1	MONARDA FISTULOSA	BERGAMOT
2	CORYDORIS LANCEOLATA	LANCELOT COREOPSIS
4	RUBROCOCA HIRTA	BLACK-EYED SUSAN
2	SOLIDAGO NEMORALIS	GREY GOLDENROD
2	SOLIDAGO SPECIOSA	SHOWY GOLDENROD

LAWN MIX - SUN TO PARTIAL SHADE		
LBS./AC	GRASSES	
20	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS
100	POA PROTENSIS	KENTUCKY BLUEGRASS
100	LOLIUM PERENNE	PERENNIAL RYEGRASS

LAWN MIX - SHADE		
LBS./AC	GRASSES	
20	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS
100	POA PROTENSIS	KENTUCKY BLUEGRASS
100	FESTUCA RUBRA	CREeping RED FESCUE

SWALE AND RETENTION AREA SEED MIX		
OZ./AC	GRASSES	
512	AVENA SATIVA	SEED OATS
160	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS

PERMANENT MATRIX		
OZ./AC	GRASSES	
8	CAREX PHAEOLIS	FRANK'S SEDGE
2	ELEOCHARIS OBtusA	BLUNT SPIKE RUSH
8	CAREX VULPINODEA	FOX SEDGE
32	PANICUM VIRGATUM	SWITCHGRASS
2	SCIRPUS ACUTUS	HARD STEM RUSH

OZ./AC		
OZ./AC	FORBS	
2	ASCLEPIAS INCARNATA	SWAMP MILKWEED
2	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER
2	ELAPATORIUM PERfolIATUM	BONESET
1	HELENIUM AUTUMNALE	AUTUMN SNEEZEWEED
2	MONARDA FISTULOSA	BERGAMOT
2	RATISIA PINATA	YELLOW CORNFLOWER
2	RUBROCOCA SUBTomentosa	SWEET BLACK-EYED SUSAN

FARM LANE AREA SEED MIX		
OZ./AC	GRASSES	
512	AVENA SATIVA	SEED OATS
160	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS

PERMANENT MATRIX		
OZ./AC	GRASSES	
64	TRIFOLIUM PRATENSE	RED CLOVER
32	TRIFOLIUM REPENS	WHITE CLOVER

## CONCRETE WASHOUT



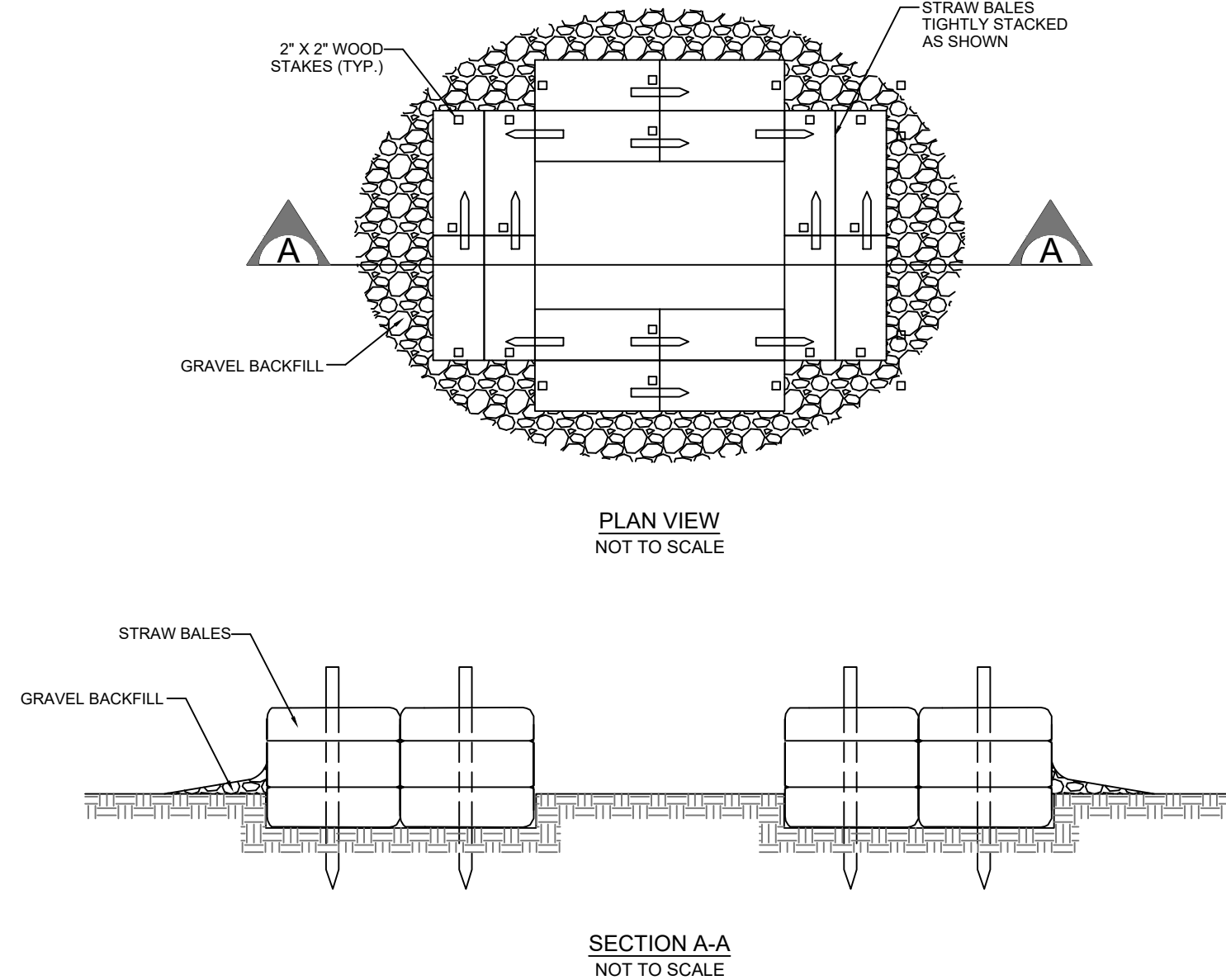
- THE RESIDUE OR CONTENTS OF ALL CONCRETE MIXERS, DUMP TRUCKS, OTHER CONVEYANCE EQUIPMENT AND FINISHING TOOLS SHALL BE WASHED INTO CONCRETE CLEAN-OUT STRUCTURES CONSISTING OF A STRAW BALE BARRIER WITH GRAVEL BACKFILL. THE LENGTH AND WIDTH OF THESE STRUCTURES SHALL BE AS DETERMINED BY THE CONTRACTOR TO FACILITATE THE PARTICULAR EQUIPMENT USED. THESE STRUCTURES SHALL BE CONSTRUCTED ON LEVEL GROUND AT LEAST 100' FROM THE NEAREST WATERCOURSE, DRAINAGE SWALE OR INLET. AT NO TIME SHALL THE STRUCTURE BE ALLOWED TO BE MORE THAN 50% FULL. THE CONTRACTOR SHALL MAINTAIN THESE PONDS UNTIL ALL CONCRETE PLACEMENT IS COMPLETE FOR THE PROJECT.

- EMBED THE STRAW BALES 4" INTO THE SOIL. PROVIDE TWO ROWS OF BALES, AS SHOWN ON THE DETAIL, WITH ENDS AND CORNERS TIGHTLY BUTTING. ORIENT THE STRAW BALES LENGTHWISE WITH BUNDINGS AROUND THE SIDES OF THE BALES SO THE WIRES DO NOT CONTACT THE SOIL. DRIVE 2" X 2" WOOD STAKES THROUGH EACH BALE TO SECURELY ANCHOR THE BALE AND CONNECT ADJACENT BALES. GRAVEL BACKFILL SHALL BE PROVIDED AND TAMPED AROUND THE OUTSIDE PERIMETER OF THE BALES TO PREVENT EROSION AND FLOW AROUND THE BALES.

- THE INTENT OF THESE STRUCTURES IS TO COLLECT ALL CONCRETE WASH OUT WATER AND ALLOW IT TO DRY TO A SOLID MATERIAL. AFTER DRYING, THE SOLID MATERIAL CAN BE REMOVED WITH A LOADER OR EXCAVATOR FOR PROPER DISPOSAL. WASH OUT WILL NOT BE PERMITTED IN ANY OTHER AREAS.

- USE THE MINIMUM AMOUNT OF WATER TO WASH THE VEHICLES AND EQUIPMENT. NEVER DISPOSE OF WASH OUT INTO THE STREET, STORM INLET, DRAINAGE SWALE OR WATERCOURSE. DISPOSE OF SMALL AMOUNTS OF EXCESS DRY CONCRETE, GROUT AND MORTAR IN THE TRASH. ANY SOAPS THAT ARE UTILIZED SHALL BE PHOSPHATE-FREE AND BIODEGRADABLE.

- ADDITIONAL CONCRETE CLEAN-OUT STRUCTURES SHALL BE CONSTRUCTED WITHIN THE SPECIFIED AREA AS NEEDED BASED UPON THE VOLUME OF WASH OUT GENERATED DAILY.



## CONSTRUCTION ENTRANCE



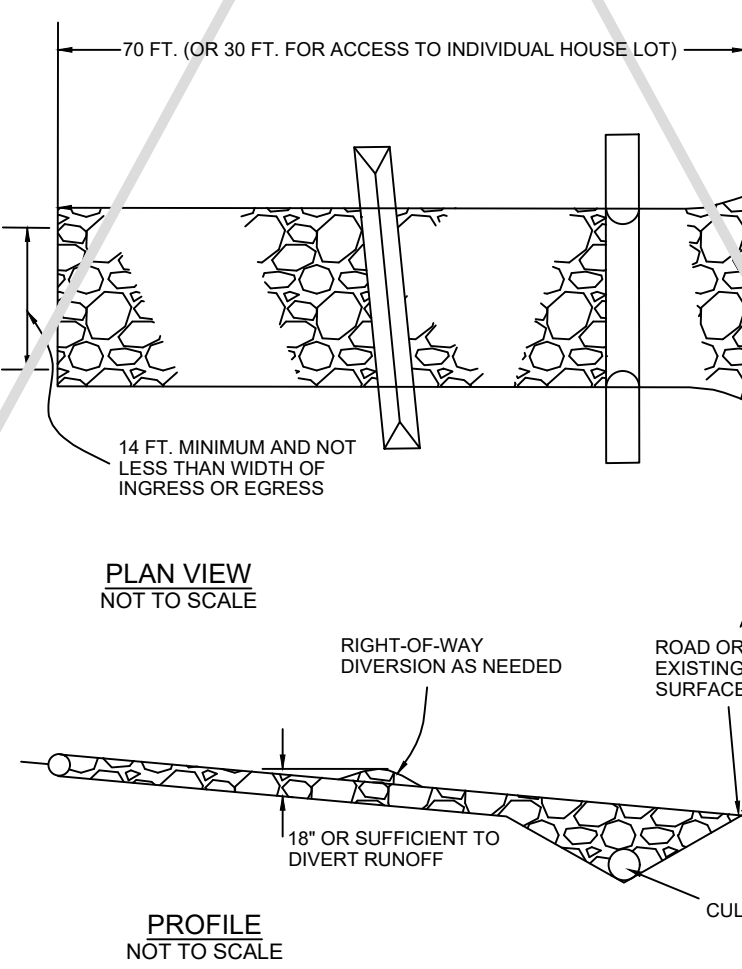
### DESCRIPTION

A CONSTRUCTION ENTRANCE IS A STABILIZED PAD OF STONE UNDERLAIN WITH A GEOTEXTILE AND IS USED TO REDUCE THE AMOUNT OF MUD TRACKED OFF-SITE WITH CONSTRUCTION TRAFFIC. LOCATED AT POINTS OF INGRESS/EGRESS, THE PRACTICE IS USED TO REDUCE THE AMOUNT OF MUD TRACKED OFF-SITE WITH CONSTRUCTION TRAFFIC.

#### SPECIFICATIONS FOR CONSTRUCTION ENTRANCE

- STONE SIZE-ODOT (21) 1.5-2.5 (INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH-THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS (BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS)).
- THICKNESS-THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 18 INCHES FOR HEAVY DUTY USE.
- WIDTH-THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- GEOTEXTILE-A GEOTEXTILE SHALL BE Laid OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS.
 

GEOTEXTILE SPECIFICATIONS FOR CONSTRUCTION ENTRANCE	
MINIMUM TENSILE STRENGTH	200 LBS.
MINIMUM PUNCTURE STRENGTH	80 PSI
MINIMUM TEAR STRENGTH	90 LBS.
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	ESD<=5 MM
PERMITTIVITY	1X10-3 CM/SEC
- TIMING-THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
- CULVERT-A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BENS DIRECTED OUT ONTO PAVED SURFACES.
- WATER BARR-A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- MAINTENANCE-TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PAVED ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
- REMOVAL-THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.



## TEMPORARY SILT FENCE



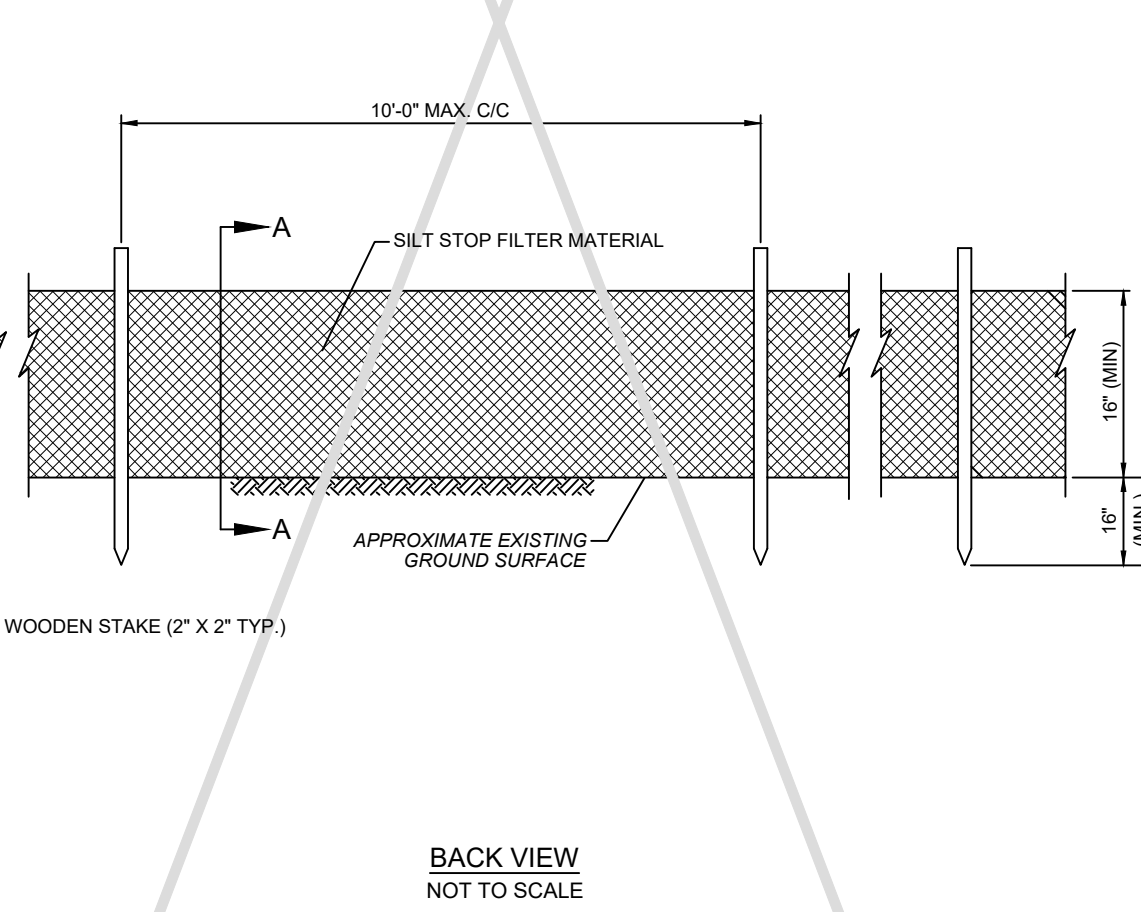
- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
- ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISAPPEARED ALONG ITS LENGTH.
- ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
- SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
- WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
- THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
- THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
- SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP PRIOR TO DRIVING INTO THE GROUND.
- MAINTENANCE-SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE SILT FENCE.

SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE CONDITION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

#### CRITERIA FOR SILT FENCE MATERIALS

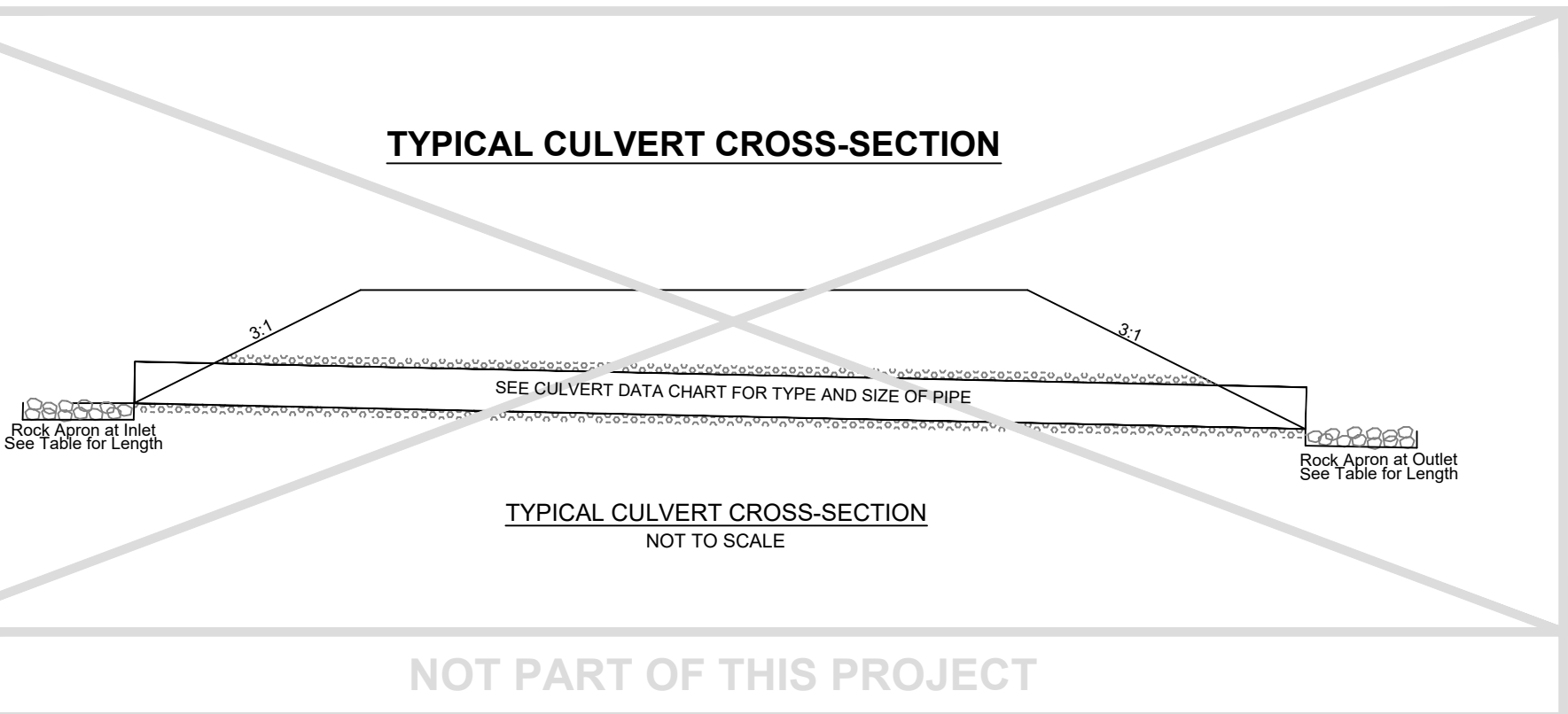
FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS. (220N)	ASTM D 4832
MAXIMUM ELONGATION AT 90 LBS.	50%	ASTM D 4832
MINIMUM PUNCTURE STRENGTH	50 LBS. (220N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS. (180N)	ASTM D 4833
APPROXIMATE OPENING SIZE	<= 5MM	ASTM D 4751
MINIMUM PERMITTIVITY	1X10-2 SEC-1	ASTM D 4461
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4355



SECTION A-A  
NOT TO SCALE

NOT PART OF THIS PROJECT

## TYPICAL CULVERT CROSS-SECTION



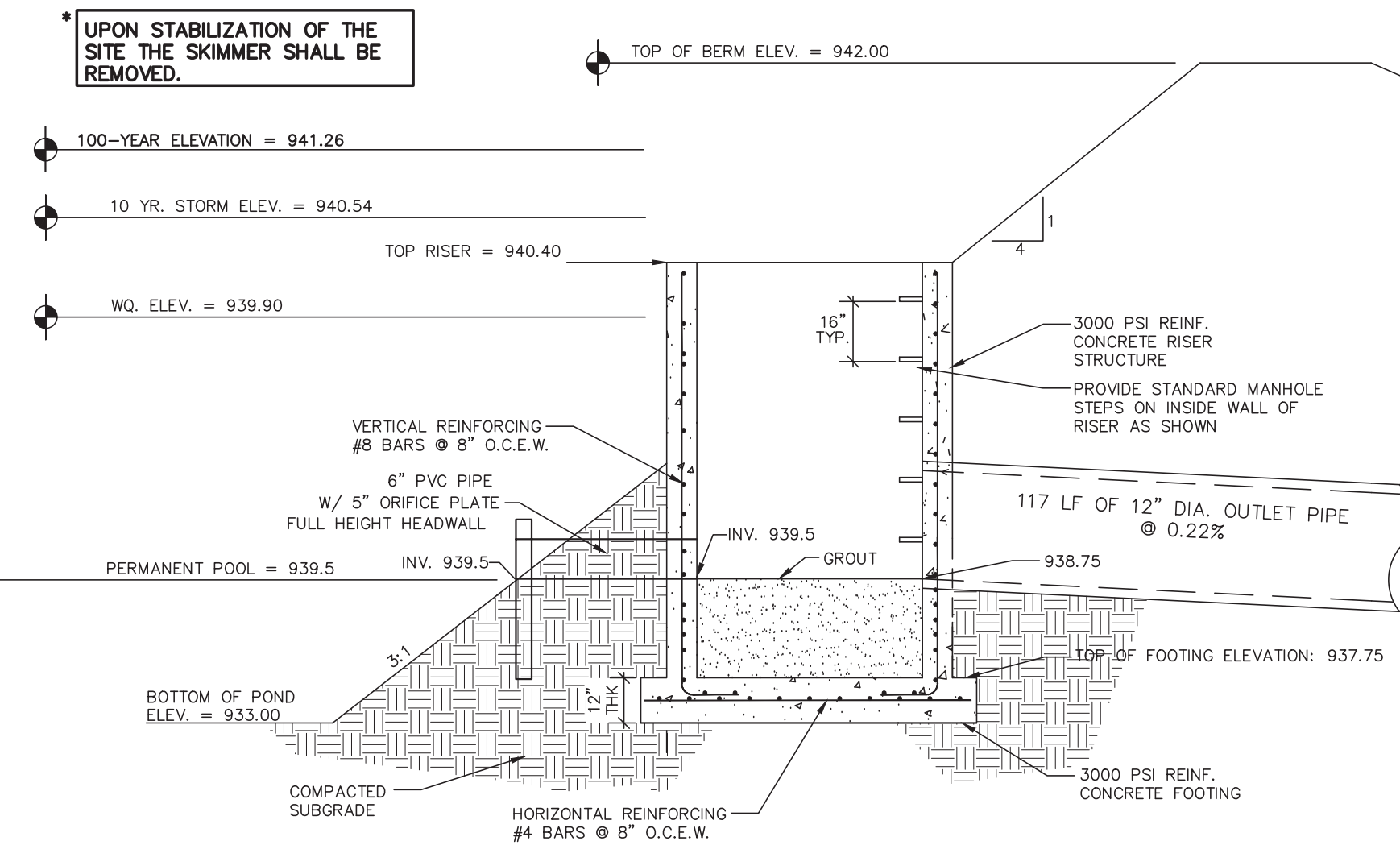
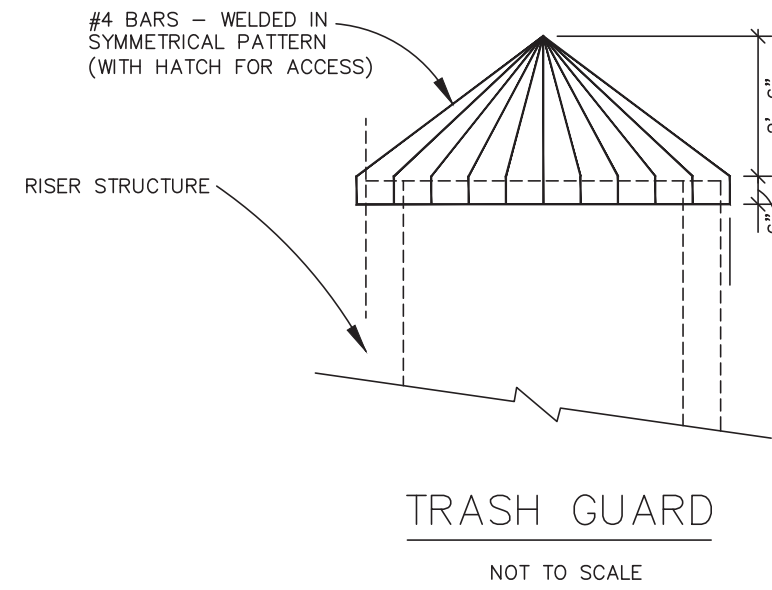
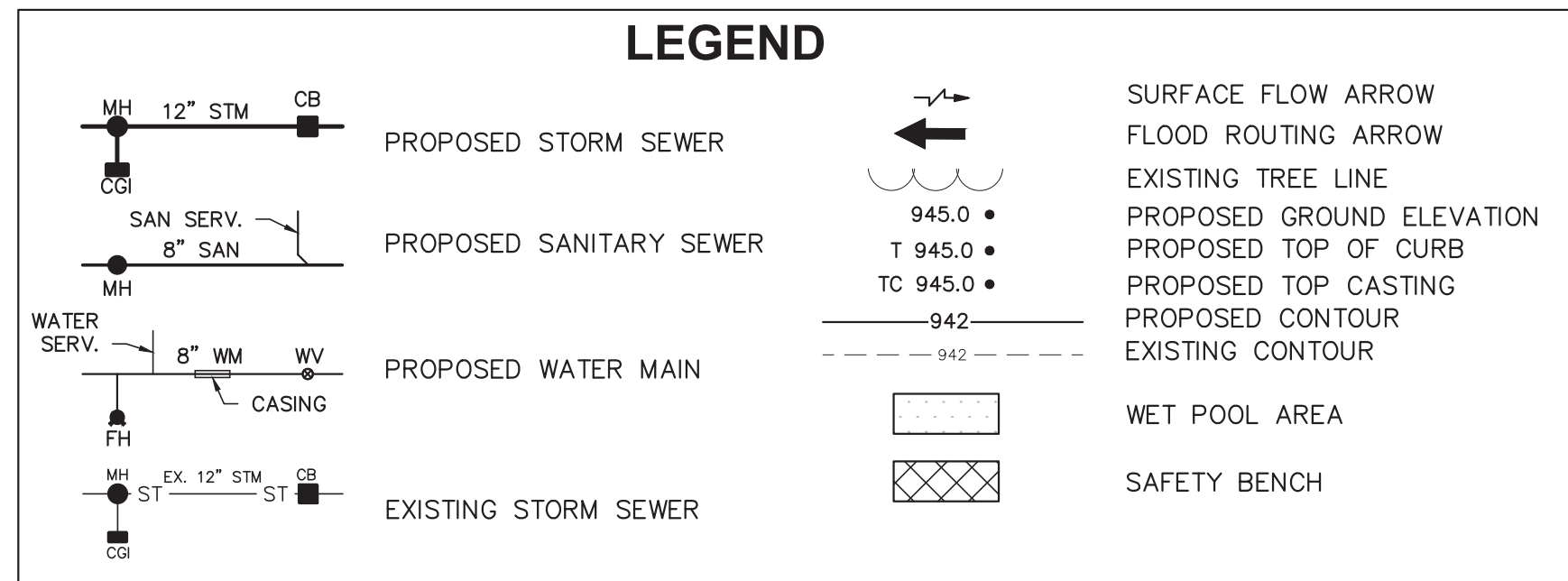
NOT PART OF THIS PROJECT

#### DRAWING INDEX

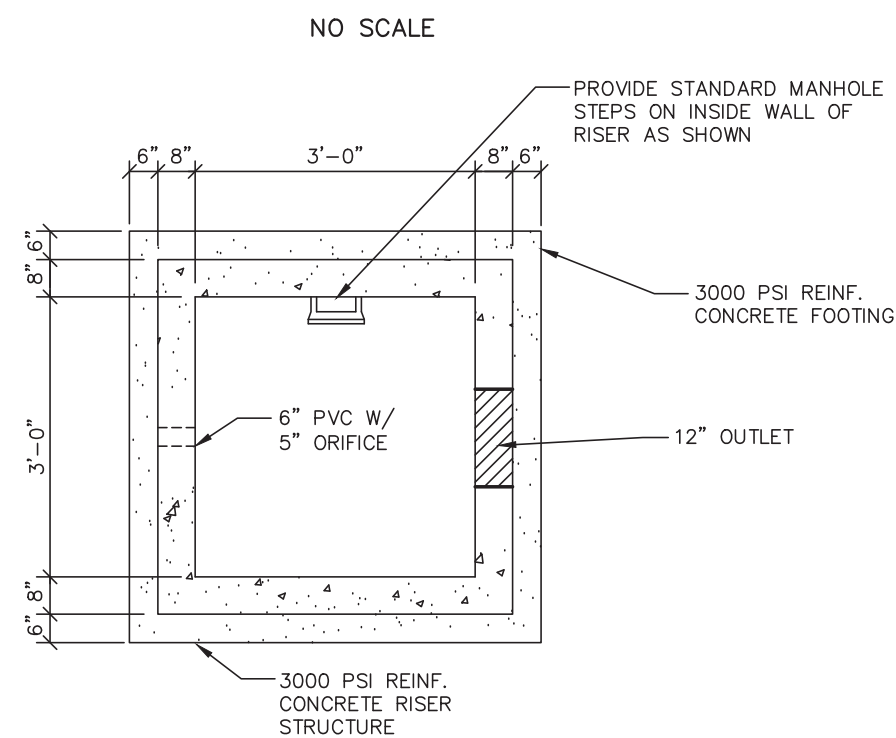
COVER SHEET	E-1110
EXISTING CONDITIONS	E-1111
SITE DIMENSION PLAN	E-1112
GRADING, EROSION & SEDIMENT CONTROL PLAN	E-1113
PROFILES, CROSS SECTIONS & DETAILS	E-1114
EROSION & SEDIMENT CONTROL DETAILS - SHEET 1	E-1115
EROSION & SEDIMENT CONTROL DETAILS - SHEET 2	E-1116

<b>BAIR GOODIE</b> BAIR, GOODIE AND ASSOCIATES, INC. 153 NORTH BROADWAY STREET NEW PHILADELPHIA, OH 44893 TEL: 330.343.3499 FAX: 330.343.3555 WWW.BAIRGOODIE.COM		UNDERGROUND UTILITIES TWO WORKING DAYS <b>CALL BEFORE YOU DIG</b> CALL: 800-245-4688 (TOLL FREE) OHIO 811	
OLD DWG #:		STD DWG #:	
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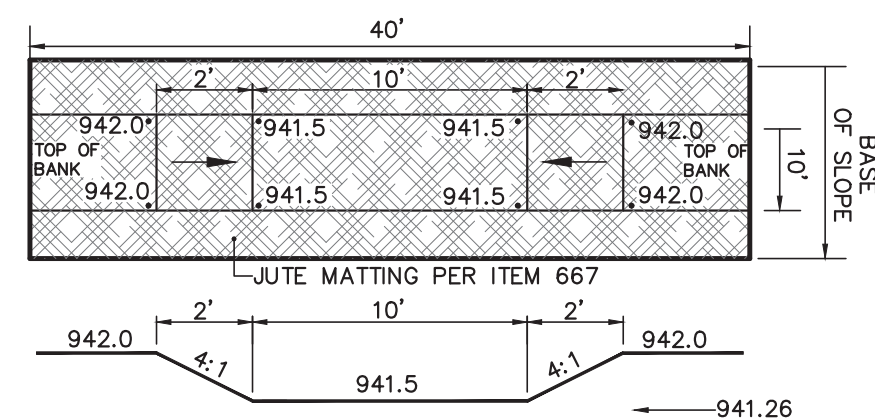
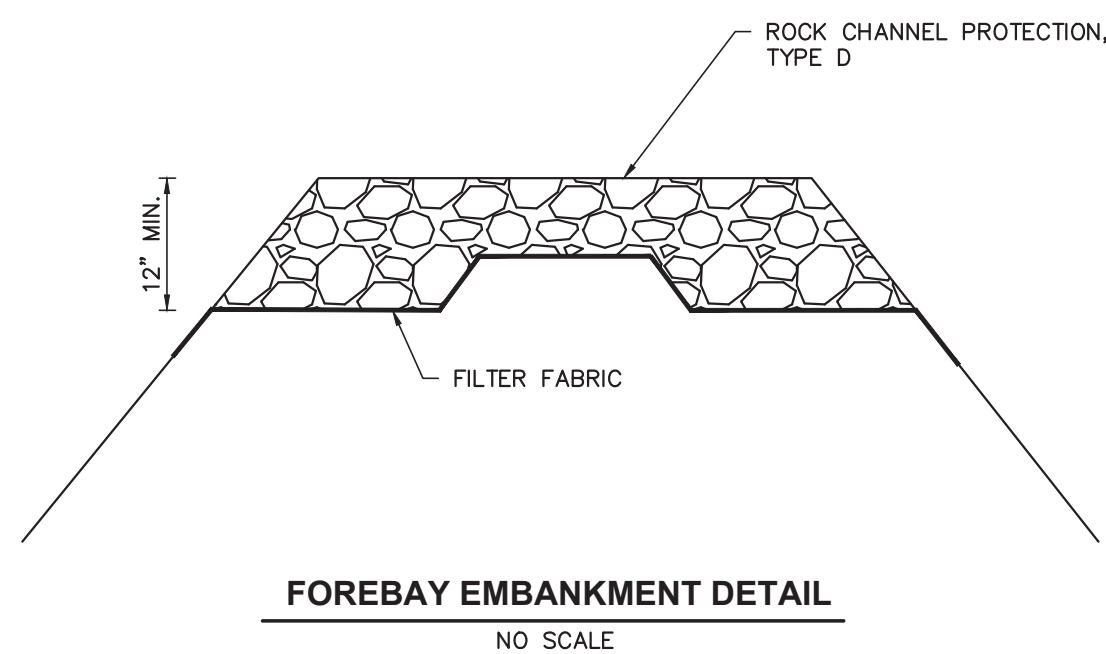
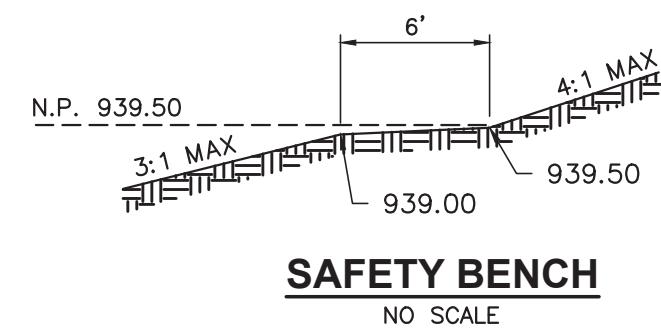


### BASIN 1 & 2 OUTLET STRUCTURE WET BASIN OUTLET



### PLAN VIEW OF RISER STRUCTURE

NOT TO SCALE



### BASIN EMERGENCY OVERFLOW WEIR

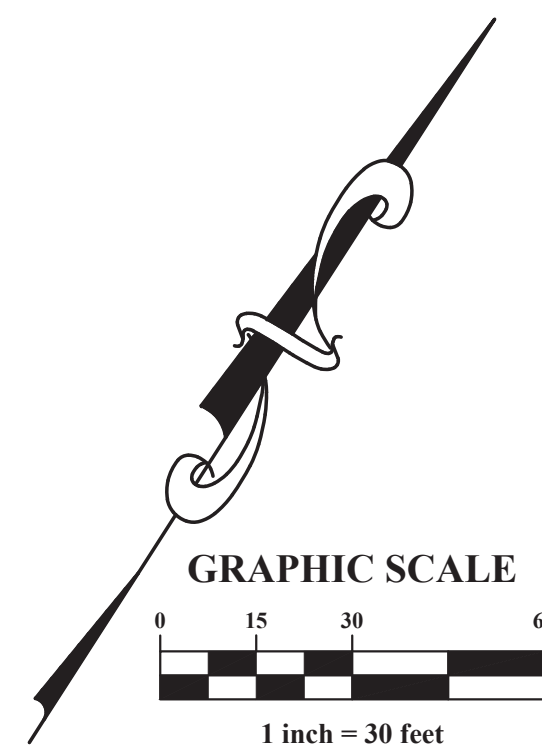
NO SCALE

BASIN #3 DETENTION VOLUME TABLE					
STORM EVENT	TOTAL ALLOWABLE RELEASE RATE (CFS)	TOTAL POST-DEVELOPED RELEASE RATE (CFS)	PEAK ELEVATION	REQUIRED STORAGE (CF)	TOTAL PROVIDE STORAGE AT OVERFLOW (CF ELEV. 941.5
1 YEAR	4.20	0.39	940.05	27,357	121,144
10 YEAR	4.20	2.72	940.54	56,531	121,144
100 YEAR	23.32	4.03	941.26	96,289	121,144

## NOTES

ALL PROPOSED SPOT ELEVATIONS ARE AT FINISHED/PAVEMENT GRADE.

TC ELEVATIONS FOR CURB AND GUTTER INLETS ARE TOP OF CASTING AT TOP OF CURB ELEVATIONS.



**PLAN PREPARED BY:**



Ford & Associates  
A R C H I T E C T S

JEROME TOWNSHIP UNION COUNTY OHIO

## INDUSTRIAL PARKWAY

C

# FOR DATA CENTER CAMPUS

## POND 3 DETAIL

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Issue Dates:

A. 29MAR2022: ISSUE FOR 30% REVIEW

B. 26APR2022: ISSUE FOR 60% REVIEW

C. 24MAY2022: ISSUE FOR 90% REVIEW

D. 133EF2022: ISSUE FOR 90% REVIEW

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E. 18OCT2022: BID SET

**Date:** 29NOV2022

Drawn By:	Engineer
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JLB	JD
-----	----

ACD Project Num

22-0035-1

Drawing Number

**C-043**

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## **APPENDIX 6**

### Storm Water Calculations Report

**Industrial Parkway Data Campus**  
**NPDES Water Quality Requirements**

New Development  $WQ_v = (C * P * A) / 12$

Redevelopment Development  $WQ_v = ((C * P * A) / 12) * .2$

1. Is this project New Development or Redevelopment?	
Answer:	<b>New Development</b>
WQ <sub>v</sub> =	Water Quality Volume (ac.ft.)
C =	Runoff Coefficient
P =	.9-in precipitation depth (inch)
A =	Drainage area (acres)

2. Determine Percent Impervious		
Land Use	Acre	% Total
Impervious	6.00	40%
Pervious	8.90	60%
Total Area	14.90	

Water Quality Volume	WQ <sub>v</sub>	=	((R <sub>v</sub> x P x A) / 12)
	Volume		in. Ac.
ac.ft.	0.4609	=	0.41 x 0.9 x 14.9 / 12
cu. ft.	20,076		

Water Quality Volume Required	
TWQ <sub>v</sub> =	20,076 CF

3. Determine Volumetric Runoff Coefficient
$R_v = 0.05 + 0.9 * i$

**Industrial Parkway Data Campus**

Prepared by Advanced Civil Design

HydroCAD® 10.00-17 s/n 05356 © 2016 HydroCAD Software Solutions LLC

Type II 24-hr Delaware 001 yr Rainfall=2.17"

Printed 7/13/2023

**Hydrograph for Pond 3: Pond 3 AEP**

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	939.50	0.00	0.00	<b>0.00</b>
6.00	0.00	0	939.50	0.00	0.00	0.00
7.00	0.00	0	939.50	0.00	0.00	0.00
8.00	0.00	0	939.50	0.00	0.00	0.00
9.00	0.00	0	939.50	0.00	0.00	0.00
10.00	0.00	0	939.50	0.00	0.00	0.00
11.00	0.21	282	939.50	0.00	0.00	0.00
12.00	<b>16.43</b>	8,898	939.65	0.08	0.08	0.00
13.00	<b>1.48</b>	26,323	939.95	0.40	0.40	0.00
14.00	0.88	28,755	939.99	0.50	0.50	0.00
15.00	0.69	<b>29,643</b>	<b>940.01</b>	<b>0.54</b>	<b>0.54</b>	0.00
16.00	0.55	<b>29,905</b>	<b>940.01</b>	<b>0.55</b>	<b>0.55</b>	0.00
17.00	0.48	29,749	940.01	0.54	0.54	0.00
18.00	0.43	29,439	940.00	0.53	0.53	0.00
19.00	0.37	28,999	940.00	0.51	0.51	0.00
20.00	0.32	28,442	939.99	0.49	0.49	0.00
21.00	0.30	27,833	939.98	0.46	0.46	0.00
22.00	0.29	27,274	939.97	0.44	0.44	0.00
23.00	0.28	26,758	939.96	0.41	0.41	0.00
24.00	0.27	26,277	939.95	0.39	0.39	0.00
25.00	0.00	25,107	939.93	0.35	0.35	0.00
26.00	0.00	23,919	939.91	0.31	0.31	0.00
27.00	0.00	22,863	939.89	0.28	0.28	0.00
28.00	0.00	21,910	939.88	0.25	0.25	0.00
29.00	0.00	21,036	939.86	0.23	0.23	0.00
30.00	0.00	20,218	939.85	0.22	0.22	0.00
31.00	0.00	19,430	939.83	0.22	0.22	0.00
32.00	0.00	18,665	939.82	0.21	0.21	0.00
33.00	0.00	17,926	939.81	0.20	0.20	0.00
34.00	0.00	17,211	939.80	0.20	0.20	0.00
35.00	0.00	16,521	939.78	0.19	0.19	0.00
36.00	0.00	15,856	939.77	0.18	0.18	0.00
37.00	0.00	15,215	939.76	0.17	0.17	0.00
38.00	0.00	14,599	939.75	0.17	0.17	0.00
39.00	0.00	14,005	939.74	0.16	0.16	0.00
40.00	0.00	13,434	939.73	0.16	0.16	0.00
41.00	0.00	12,890	939.72	0.15	0.15	0.00
42.00	0.00	12,372	939.71	0.14	0.14	0.00
43.00	0.00	11,883	939.70	0.13	0.13	0.00
44.00	0.00	11,420	939.70	0.12	0.12	0.00
45.00	0.00	10,983	939.69	0.12	0.12	0.00
46.00	0.00	10,571	939.68	0.11	0.11	0.00
47.00	0.00	10,182	939.68	0.10	0.10	0.00
48.00	0.00	9,816	939.67	0.10	0.10	0.00
49.00	0.00	9,470	939.66	0.09	0.09	0.00
50.00	0.00	9,144	939.66	0.09	0.09	0.00
51.00	0.00	8,836	939.65	0.08	0.08	0.00
52.00	0.00	8,545	939.65	0.08	0.08	0.00
53.00	0.00	8,271	939.64	0.07	0.07	0.00
54.00	0.00	8,010	939.64	0.07	0.07	0.00
55.00	0.00	7,764	939.63	0.07	0.07	0.00
56.00	0.00	7,531	939.63	0.06	0.06	0.00

Begin WQ drawdown

At 1/3 drawdown over  
1/2 WQ volume  
remainsVolume remains at 24  
hours

## **APPENDIX 7**

### Long-term Maintenance Plan

## LONG-TERM MAINTENANCE PLAN

### AEP OHIO TRANSMISSION COMPANY JEROME STATION

The Storm Water Pollution Prevention Plan (SWPPP) prepared for construction of the Jerome Station includes Best Management Practices (BMPs) for storm water management. As a condition of the General Permit (OHC000006), a maintenance plan is required for all post-construction BMPs to ensure that permanent storm water management systems continue to function as designed and constructed. For this Project, BMPs that will remain in place following the Notice of Termination (NOT) to Ohio EPA include a stormwater pond, constructed by others under permit 4GC08755\*BG (see Grading Plan and Details).

#### INSPECTION AND MAINTENANCE RESPONSIBILITIES

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

INSPECTION AND MAINTENANCE ACTIVITIES FOR BMPs	
ACTIVITY	SCHEDULE
Stormwater Pond: <ul style="list-style-type: none"><li>Mow embankment and clean trash and debris from outlet structure</li></ul>	Annually / As Needed
<ul style="list-style-type: none"><li>Inspect embankment and outlet structure for damage and proper flow</li><li>Remove woody vegetation and fix any eroding areas</li><li>Monitor sediment accumulations in main pool</li></ul>	Annually
<ul style="list-style-type: none"><li>Monitor sediment accumulations in the main pool and clean as pond becomes eutrophic or pool volume is reduced significantly</li></ul>	15-20 Years



**This foregoing document was electronically filed with the Public Utilities  
Commission of Ohio Docketing Information System on**

**12/21/2023 12:54:00 PM**

**in**

**Case No(s). 23-0531-EL-BLN**

Summary: Correspondence Proof of Compliance electronically filed by Hector Garcia-Santana on behalf of Ohio Power Company.