Table of Contents

NPDES Notice of Intent - Construction General Permit (CGP)

version 1.13

(Submission #: HPH-RYB2-X1ZG4, version 1)

Details

Originally Started By	Callan J Pierson
Submitted	8/3/2022 (0 days ago) by Adam Wenzel
Submission ID	HPH-RYB2-X1ZG4
Site Name	TVA Allen Fossil Plant D4 Plant Retirement/ Decommissioning and Plant Site Restoration
Manager	Joellyn Brazile
Status	Submitted
Active Steps	Admin Review ,Submission Assignment

Fees

Fee	$3,000.00
Payments/Adjustments	($3,000.00)
Balance Due	$0.00 (Paid)

Form Input

Site Information

Site or Project Name
TVA Allen Fossil Plant D4 Plant Retirement/ Decommissioning and Plant Site Restoration

Site Location
2574 PLANT RD
MEMPHIS, TN 38109

Site Description
Building demolition and restoration of site to brownfield

County
Shelby

Approximate Center of the Site
35.0726076,-90.1468254

Estimated Start Date
8/1/2022

Estimated End Date
8/30/2024

Acres Disturbed
38.8

Total Acres
44.6

A project within the jurisdiction of an MS4 recognized as a Qualified Local Program (QLP) may obtain CGP coverage through the local MS4 without submittal to the division. More information about Tennessee's QLP program and a list of MS4 QLP participants can be found on our website.
Tennessee Qualifying Local Program

MS4 Jurisdiction (if applicable)
NONE PROVIDED

Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the construction site
NONE PROVIDED

If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the permit number?
NRS21.020

SWPPP Uploads
If you are uploading shapefile extensions (.shp, .shx, .dbf, etc.), they will need to be compressed and uploaded as a .zip file.

Stormwater Pollution Prevention Plan (SWPPP)
ALF D4 Site Restoration SWPPP_signatures.pdf - 07/28/2022 03:27 PM
Comment
NONE PROVIDED

Click here for a sample site location map.

Site Location Map
Site Map.pdf - 07/19/2022 08:52 AM
Comment
NONE PROVIDED

Owner/Developer Information

Site Owner/Developer Name (Site-Wide Permittee)
Tennessee Valley Authority (TVA)

Ownership Type
Federal Facility (U.S. Government)

Please Lookup SOS Control Number
If you do not know your SOS Control Number, please access the Tennessee Secretary of State Business Information search engine below.
Tennessee Secretary of State Business Search

For corporate entities only, provide the Tennessee Secretary of State (SOS) Control Number
NONE PROVIDED

Provide Owner or Developer Contact(s)
For General Partnerships only, use the Additional Contacts section to list each additional partner.

Site Owner or Developer Individual Name

Prefix
NONE PROVIDED

First Name	Last Name
M. Scott	*Turnbow*

Title
Vice President, Civil Projects, ESS & CCP

Company Name
TVA

Phone Type	Number	Extension
Business	423-751-3031	

Email
msturnbow@tva.gov

Address
1101 Market St
LP 5E-C
Chattanooga, TN 37402

Is this also the billing contact who will be responsible for the annual maintenance fee?
No

Billing Contact

Prefix
NONE PROVIDED

First Name	Last Name
Sharon	*Figgures*

Title
Business Support Representative

Company Name
TVA

Phone Type	Number	Extension
Business	423-751-7235	

Email
sdmclin@tva.gov

Address
1101 Market St
BR 2C-C
Chattanooga, TN 37402

Have any contractors been identified?
Yes

Contractors (1 of 1)

Brandenburg Industrial Service Company

Contractor Company Name
Brandenburg Industrial Service Company

Contractor Start Date
8/1/2022

Please Lookup SOS Control Number
If you do not know your SOS Control Number, please access the Tennessee Secretary of State Business Information search engine below.
Tennessee Secretary of State Business Search

For corporate entities only, provide the Tennessee Secretary of State (SOS) Control Number
459441

Additional Contacts (1 of 4)

Optional Contact

Contact Affiliation Type
Optional Contact

Additional Contacts

Prefix
NONE PROVIDED

First Name	Last Name
Stacey	*McCluskey*

Title
Program Manager, Environmental Support

Company Name
TVA

Phone Type	Number	Extension
Business	256-314-7872	

Email
ssmuccluskey@tva.gov

Address
1010 Reservation Road
Muscle Shoals, AL 35662

Additional Contacts (2 of 4)

Optional Contact

Contact Affiliation Type
Optional Contact

Additional Contacts

Prefix
NONE PROVIDED

First Name	Last Name
Callan	*Pierson*

Title
Water Specialist

Company Name
TVA

Phone Type	Number	Extension
Mobile	865-850-5933	

Email
cpierson@tva.gov

Address
1101 MARKET ST
BR 2C-C
CHATTANOOGA, TN 37402

Additional Contacts (3 of 4)

Facility Contact

Contact Affiliation Type
Facility Contact

Additional Contacts

Prefix
NONE PROVIDED

First Name	Last Name
DeAnne	*Hardy*

Title
Environment Regional Operations Manager

Company Name
TVA

Phone Type	Number	Extension
Business	9017898862	

Email
dahardy@tva.gov

Address
2574 Plant Rd
ASP 1A-MET
Memphis, TN 38109

Additional Contacts (4 of 4)

Optional Contact

Contact Affiliation Type
Optional Contact

Additional Contacts

Prefix
NONE PROVIDED

First Name	Last Name
Stuart	*Harris*

Title
Senior Project Manager

Company Name
TVA

Phone Type	Number	Extension
Business	423-751-7602	

Email
srharris@tva.gov

Address
400 W. Summit Hill Dr.
LP 1F-C
Knoxville, TN 37902

Outfall(s) (1 of 6)

SW1

Unique Outfall Identifier (e.g. SW1)
SW1

Outfall Location
35.075253,-90.149889

Receiving Water Name (Type name or enter ID)
McKellar Lake (not a real lake) from Mississippi River to confluence with Nonconnah Creek (TN08010100001_1200)

Total drainage area for this outfall (Acres)
7.5

Outfall(s) (2 of 6)

SW2

Unique Outfall Identifier (e.g. SW1)
SW2

Outfall Location
35.075006,-90.1466

Receiving Water Name (Type name or enter ID)
McKellar Lake (not a real lake) from Mississippi River to confluence with Nonconnah Creek (TN08010100001_1200)

Total drainage area for this outfall (Acres)
9.9

Outfall(s) (3 of 6)

SW3

Unique Outfall Identifier (e.g. SW1)
SW3

Outfall Location
35.074878,-90.145303

Receiving Water Name (Type name or enter ID)
McKellar Lake (not a real lake) from Mississippi River to confluence with Nonconnah Creek (TN08010100001_1200)

Total drainage area for this outfall (Acres)
2.9

Outfall(s) (4 of 6)

SW4

Unique Outfall Identifier (e.g. SW1)
SW4

Outfall Location
35.074767,-90.141792

Receiving Water Name (Type name or enter ID)
McKellar Lake (not a real lake) from Mississippi River to confluence with Nonconnah Creek (TN08010100001_1200)

Total drainage area for this outfall (Acres)
4.3

Outfall(s) (5 of 6)

SW5

Unique Outfall Identifier (e.g. SW1)
SW5

Outfall Location
35.071750,-90.146991

Receiving Water Name (Type name or enter ID)
Horn Lake Cutoff from Horn Lake Creek to headwaters (TN08010211001_0100)

Total drainage area for this outfall (Acres)
4.3

Outfall(s) (6 of 6)

SW6

Unique Outfall Identifier (e.g. SW1)
SW6

Outfall Location
35.074238,-90.150943

Receiving Water Name (Type name or enter ID)
McKellar Lake (not a real lake) from Mississippi River to confluence with Nonconnah Creek (TN08010100001_1200)

Total drainage area for this outfall (Acres)
4.3

Attachments

Date	Attachment Name	Context	User
7/28/2022 3:27 PM	ALF D4 Site Restoration SWPPP_signatures.pdf	Attachment	Callan Pierson
7/19/2022 8:52 AM	Site Map.pdf	Attachment	Callan Pierson

Internal Data

Label	Value
Permit Number	
Site ID	
Document Type	NOI
Form Name	CGP NOI
Form Number	CN-0940
Permit Type	CGP
RDA Number	2366
Class ID	CGP

Status History

	User	Processing Status
5/18/2022 12:20:57 PM	Callan J Pierson	Draft
7/28/2022 3:38:45 PM	Callan J Pierson	Signing
8/1/2022 1:31:13 PM	Adam Wenzel	Payment Due
8/3/2022 7:45:23 AM	Adam Wenzel	Submitting
8/3/2022 7:45:44 AM	Adam Wenzel	Submitted

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Adam Wenzel	8/3/2022 7:45:44 AM
Admin Review	Stephanie Richey	
Submission Assignment	Joellyn Brazile	
Technical Review		
Submission Deemed Complete		

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- ☑ I am the owner of the account used to perform the electronic submission and signature.
- ☑ I have the authority to submit the data on behalf of the facility I am representing.
- ☑ I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- ☑ I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

For Owner/Developer(s)*: I certify under penalty of lawthat this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.*

For Contractor(s)*: I certify under penalty of lawthat I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.*

Signed By Michael Turnbow on 07/30/2022 at 10:26 AM

Adam Wenzel on 08/01/2022 at 1:31 PM

Storm Water Pollution Prevention Plan
Revision 0

NPDES Permit Application
for Discharges of Storm Water Associated with
Construction Activities

D4 Plant Retirement / Decommissioning & Plant
Site Restoration
(TVA Project No. 609669)

Allen Fossil Plant
Shelby County, Tennessee

July 15, 2022

Prepared for:

Tennessee Valley Authority
Chattanooga, Tennessee

Prepared by:

Stantec Consulting Services Inc.
Nashville, Tennessee

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

July 15, 2022

0.0 SITE / OWNER INFORMATION

Project Name:	**Tennessee Valley Authority** **Allen Fossil Plant** **D4 Plant Retirement / Decommissioning & Plant Site Restoration**
TVA Project No.:	609669
Site Location (County):	Shelby County, Tennessee
Owner/Primary Permittee:	Tennessee Valley Authority
Owner/Primary Permittee Address & Phone:	Scott Turnbow 1101 Market Street, LP 5E-c Chattanooga, TN 37402 Phone: (423) 751-3031
General Contractor (Operator):	TBD
General Contractor Address & Phone:	TBD
Description of Proposed Project:	This project will involve demolition of the plant buildings and facilities, as well as site restoration and associated grading activities at the Allen Fossil Plant in Shelby County, Tennessee.
Standard that EPSC Measures Meet:	5–year / 24–hour Storm Event

Discharges to waters having unavailable parameters for siltation and/or habitat alteration:	**Yes**	Is project located within a watershed which maintains an approved TMDL for siltation and habitat alteration? If so, include the 8-digit Hydrologic Unit Code (HUC).	**No**
Discharges to Exceptional Tennessee Waters:	**Yes** **McKellar Lake**	Is project located within a sub-watershed which has a Waste Load Allocation (WLA)? If so, include the 12-digit HUC (or 4-digit sub-watershed code).	**N/A**
Discharges to MS4:	**Yes**	Does project have a direct discharge to a 303(d) listed stream for siltation or habitat alteration? If so, list stream name to the right.	**Yes** **McKellar Lake**

1.0 INTRODUCTION

This Storm Water Pollution Prevention Plan (SWPPP) has been developed and prepared in accordance with current engineering practices. This SWPPP identifies potential sources of pollution that one would reasonably expect to affect the quality of storm water discharges from the construction site. This SWPPP describes the implementation practices that will be used to effectively reduce pollutants in storm water associated with construction activities at the Tennessee Valley Authority (TVA) Allen Fossil Plant (ALF) D4 Plant Retirement / Decommissioning & Plant Site Restoration (D4) project site. The SWPPP has been designed to comply with the terms and conditions of the Tennessee General Permit No. TNR100000 (Discharges of Storm Water Associated with Construction Activities).

In accordance with Section 3.5. of the Tennessee Department of Environment and Conservation's (TDEC) National Pollutant Discharge Elimination System (NPDES) General Permit TNR100000 (Permit), the components of the SWPPP for the site have been included herein.

1.1 PERMITTING AUTHORITY

This SWPPP has been prepared to cover storm water runoff from a construction site owned by the Tennessee Valley Authority (TVA). Therefore, under Section 1.4.5 of the Permit, permitting of storm water runoff from this federal agency site will remain solely under the authority of TDEC and is exempt from the jurisdiction of the local NPDES-permitted municipal separate storm sewer system (MS4) of the city of Memphis.

1.2 DISCHARGES INTO EXCEPTIONAL TENNESSEE WATERS

A portion of the D4 project site outfalls to McKellar Lake, which is a listed Water with Unavailable Parameters for Siltation. Therefore, under the requirements of Section 6.4 of the Permit, the Erosion Prevention and Sediment Control (EPSC) measures used at the site are designed to control storm water runoff generated by a 5-year, 24-hour storm event and this SWPPP has been prepared by a licensed professional Engineer.

2.0 SITE DESCRIPTION

2.1 DESCRIPTION OF CONSTRUCTION ACTIVITIES

A description of all the construction activities at the site, not just grading and street construction.

The proposed ALF D4 Plant Retirement / Decommissioning & Plant Site Restoration (D4) project includes demolition of the plant buildings and facilities, followed by site restoration work. The demolition work will include removal of concrete, asphalt, and plant underground features (such as pilings under a foundation) to at least 3 feet below final grade. The subsequent site restoration work will include grading activities to ensure positive drainage to appropriate outfalls and final stabilization to prevent erosion at the decommissioned site.

See **Figure 1** for a USGS topographic map and site vicinity map of the project.

2.2 SEQUENCE OF CONSTRUCTION ACTIVITY

The intended sequence of activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities, and infrastructure installation).

1. Installation of initial EPSC devices, including stabilized construction exits, temporary construction fencing, silt fence / sediment tube perimeter protection, rock check dams, and vehicle wash stations;
2. Clearing/grubbing and site demolition activities (no major site grading should take place during this phase, and any excavation will be solely for demolition and removal of existing buildings or concrete/asphalt paving);
3. Crushing of demolished concrete materials to use as on-site backfill (e.g. for below-grade / basement areas);
4. Installation of temporary sediment basins per the EPSC plans, including temporary culverts and ditches as required to direct site flows;
5. Finish grading to provide surface positive drainage across the site (only after demolition work is complete);
6. Final stabilization of disturbed site areas (rip rap, gravel, paving, seeding/mulching, and/or sodding, as required);
7. Removal of temporary sediment basins and finish grading & final stabilization of these areas;
8. Removal of all other EPSC devices once final stabilization has been established.

The general sequence of major activities described above may be replaced by a “Plan of Operation” provided by the Contractor prior to the start of Work. This “Plan of Operation” will indicate the Contractor’s intended sequence of construction activities at the site. However, the “Plan of Operation” shall require that the EPSC measures for each Stage must be in place and functional prior to earth disturbing operations. If provided by the Contractor, the “Plan of Operation” shall be attached to and included as part of the SWPPP.

2.3 PROJECT AREA

Estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, filling or other construction activities.

- Total Project Area: ±46.91 acres
- Total Disturbed Area: ±41.11 acres

Areas to be left undisturbed are discussed further in Section 2.14.

2.4 SITE TOPOGRAPHY

A description of the topography of the site, including an estimation of percent slope and the variation in percent slope found on site. The estimate should be on a basis of a drainage area serving each outfall, rather than an entire project.

The site consists of a gently sloping flood plain with constructed earthen embankments and ALF plant site pad along the banks of McKellar Lake, situated just east of the Mississippi River. The crest of the existing constructed embankments and plant site pad ranges from approximately elevation 238 to 240 feet mean sea level (MSL). Final grades on the filled site vary from 0-2%, with side slopes at berms/embankments and drainage ditches of 3H:1V. McKellar Lake's elevation fluctuates, as it is hydraulically connected to the Mississippi River; however, the normal water surface elevation is approximately 210 feet MSL. Estimated slopes within each drainage basin are given in **Table 1** in the following section.

2.5 DRAINAGE AREA

An estimate of drainage area (acres) serving each outfall.

This project has 6 outfall points, which depicted on **Figure 1** and the EPSC plans in **Appendix A**. **Table 1** lists the locations of impacted drainage features that could transport pollutants off-site, their associated outfall numbers, drainage basin slopes and estimated drainage areas.

Table 1. Outfall Information

Outfall No.	Latitude / Longitude	Drainage Location Description	Impacted Drainage Feature	Drainage Area (ac.)	Estimated % Slope Within Drainage Basin
1	35° 4'30.91"N 90° 8'59.60"W	Permitted multisector storm water Outfall F9 (Existing)	McKellar Lake	±7.5	0-2%
2	35° 4'30.02"N 90° 8'47.76"W	New Outfall (Proposed) (above OHWM)	McKellar Lake	±9.9	0-2%
3	35° 4'29.56"N 90° 8'43.09"W	Permitted multisector storm water Outfall F4 (Existing)	McKellar Lake	±2.9	0-5%, with 3:1 to 2:1 embankment slopes

Outfall No.	Latitude / Longitude	Drainage Location Description	Impacted Drainage Feature	Drainage Area (ac.)	Estimated % Slope Within Drainage Basin
4	35° 4'29.16"N 90° 8'30.45"W	Permitted multisector storm water Outfall F5 (Existing)	McKellar Lake	±4.3	0-5%, with 3:1 embankment slopes
5	35.071750, -90.146991	Permitted multisector storm water Outfall F6 (Existing)	Horn Lake Cutoff	±4.3	0-5%, with 3:1 embankment slopes
6	35.074238, -90.150943	Permitted multisector storm water Outfall F7 (Existing)	McKellar Lake	±4.3	0-5%, with 3:1 embankment slopes

The drainage basin size and proximity to Waters with Unavailable Parameters for Siltation (McKellar Lake) will require that a Site Assessment be performed as specified by the requirements of the NPDES Permit issued for this construction. At a minimum, Site Assessments will be performed per Section 5.5.3.8 of the Construction General Permit, TNR100000.

2.6 SOILS DESCRIPTION

Data describing the soil, how the soil type will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site. The data may be referenced or summarized.

INFORMATION TAKEN FROM THE LOCAL SOIL SURVEY: The project is located in Shelby County, Tennessee. According to maps provided by the Natural Resources Conservation Service (NRCS) on the Web Soil Survey internet site and the County Soil Conservation District, the project site consists mainly of sandy fill material and silt loam soils. See **Appendix B** for additional soils information.

Silt loam soils will require check dams to slow water in channels so that the heavy particles can settle out. Detention or ponding of water will be the preferred method to remove suspended sediment prior to discharging through the project outfalls.

The quality of discharge from properly implemented and maintained EPSC measures is expected to be sufficient to comply with the terms and conditions of this permit.

2.7 RUNOFF COEFFICIENTS

An estimate of the runoff coefficient of the site after construction activities are completed and a description of how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream. An estimate of the percentage of impervious area before and after construction must also be provided.

The pre-construction (existing) runoff curve number (RCN) was calculated using the entire project area. The pre-construction project area and weighted curve number is depicted in **Table 2** below.

Table 2. Runoff Curve Number – Pre-Construction (Existing) Conditions

Area Type	Area (acres)	Runoff Curve Number (RCN)
Impervious (concrete, asphalt, gravel drives, buildings, open water, etc.)	40.41	92
Pervious (grass, brush, etc.)	6.5	61
Preconstruction weighted curve number	**46.91**	**88**

The proposed project work includes demolition and removal of site concrete, asphalt, and plant underground features (such as pilings under a foundation) to at least 3 feet below final grade, followed by finish grading for positive surface drainage and final stabilization of the site with gravel and seeding, as required. Therefore, the proposed work will reduce the amount of impervious area, and the RCN will decrease from existing conditions. The post-construction runoff curve number was calculated using the entire project area. The post-construction disturbed area is depicted in **Table 3**.

Table 3. Runoff Curve Number – Post-Construction Conditions

Area Type	Area (acres)	Runoff Curve Number (RCN)
Impervious (gravel)	40.51	88
Pervious (grass, brush, etc.)	6.4	61
Post-construction weighted curve number	**46.91**	**84**

Calculations for the runoff curve numbers depicted in the pre- and post-construction tables are found in **Appendix C**.

2.8 EROSION PREVENTION & SEDIMENT CONTROL PLAN

An erosion prevention and sediment control plan with the proposed construction area clearly outlined. The plan should indicate the boundaries of the permitted area, drainage patterns, approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the SWPPP, the location of areas where stabilization practices are expected to occur, surface waters including wetlands and sinkholes, and identification on the erosion control plan of outfall points intended for coverage. The erosion control plan must meet requirements stated in Section 5.5.3 of the Permit (see Appendix I).

1. Please see the attached USGS map (**Figure 1**), aerial (**Figure 2**), and EPSC Plans (**Appendix A**) for the construction boundaries, EPSC plans, and drainage patterns.
2. The areas that will have soil disturbance are designated on the EPSC plans by the limits of construction. Sediment tubes or silt fence will be located along these lines/boundaries to protect receiving waters.
3. Areas to be left undisturbed include selected areas north and downslope of the D4 plant site along McKellar Lake, as well as the parking lot area in the southwest portion of the site. These areas are included in the construction limits since access is required for demolition / grading in adjacent areas; however, no disturbance will be required

by the proposed work. Areas to be left undisturbed will be visibly delineated using perimeter EPSC controls, high-visibility temporary construction fencing, and/or other suitable measures,

4. Locations of structural erosion controls are shown on the EPSC plans in **Appendix A**. For calculations and details not provided on the EPSC plans, refer to the TDEC Erosion & Sediment Control Handbook for best management practices (BMPs).
5. Stabilization with erosion control measures will occur in selected areas. Seeding with mulch or erosion control blankets will be used to stabilize disturbed work areas. Temporary rock check dams will be used in ditches and swales throughout the project site to reduce the storm water velocities so that sediment will be removed prior to traveling off-site.
6. During the initial site clearing/grubbing and demolition activities within the D4 plant area, site runoff will follow existing drainage patterns, with mainly sheet flow and infiltration across the relatively flat site.
7. Once the demolition phase of the project is complete, two (2) temporary sedimentation basins will be installed for the drainage areas to Outfalls No. 1 and No. 2. These temporary sedimentation basins must be installed prior to beginning any site gradings activities. The temporary sediment basins must be maintained until the limits of disturbance / active grading upstream of each basin has been reduced to less than 3.5 acres, meaning final stabilization has been achieved for all remaining upstream areas. The temporary sediment basins are discussed further in Section 3.2.3 of this report. Hydrologic and basin sizing calculations can be found in **Appendix D**, and dimensions, layout, and construction details can be found in the EPSC plans (**Appendix A**).
8. No wetland or other environmental features (i.e. sinkholes) are expected to be disturbed by the construction activities.
9. This project **does** discharge into waters with unavailable parameters for siltation and/or habitat alteration and into to an existing MS4; and **does not** discharge into waters with an approved TMDL for siltation and/or habitat alteration nor to Tennessee Exceptional Waters.
10. This project has 6 outfall points depicted on **Figures 1 & 2** and in the EPSC Plans in **Appendix A**. **Table 1** lists the locations of impacted drainage features and their associated outfall point numbers.

2.9 NON-STORMWATER DISCHARGES

A description of any discharge associated with industrial activity other than construction stormwater that originates on site and the location of that activity and its permit number.

No outside sources of water will enter the project area, and storm water that is collected from within the project area will drain to three (3) existing permitted multisector storm water outfalls and one (1) new stormwater outfall.

No non-stormwater discharges are planned as part of this project. NPDES Permit No. TN0005355 regulates non-stormwater discharges from the Allen Fossil Plant, and all discharge water sampling (if required) should be completed in accordance with this permit.

2.10 PERMITTED ALTERATIONS

Identification of any stream or wetland on or adjacent to the project, a description of any anticipated alteration of these waters and the permit number or tracking number of the Aquatic Resources Alteration Permit (ARAP) or Section 401 Certification issued for the alteration.

No alterations of streams nor wetlands are proposed with this project work. As described in Section 2.5 above, Outfall #2 does not directly impact the lake since the discharge is above the OHWM of elevation 210 ft MSL. The project shall be constructed in accordance with the permit conditions. Any disagreement between the project plans, the SWPPP, the project as constructed, and the permit or permits issued shall be brought to the attention of the Owner prior to finalization of the project. In general, permit conditions will prevail.

ALF currently has coverage under ARAP - NRS21.020 authorizing:

"Removal of mooring cells from McKellar Lake associated with activities related to the closure of the Allen Fossil Plant. Turbidity curtains will be employed during construction to minimize mobilization of sediments."

2.11 RECEIVING WATERS

The name of the receiving waters and identification if those receiving waters have unavailable parameters for siltation and habitat alterations due to in-channel erosion or are Exceptional Tennessee Waters.

The receiving water(s) are as follows:

- McKellar Lake
  - Mississippi River watershed (HUC #08010100)
  - 303(d) listed water TN0801010001_1200 (unavailable parameters for siltation)
  - Exceptional Tennessee Water
  - Siltation Impaired Waterbody
- Horn Lake Cutoff
  - Not Supporting
  - Siltation Impaired Stream

- This project will **not** affect any wetland areas.

2.12 BUFFER ZONES

Identify and outline the buffer zones established to protect waters of the state located within the boundaries of the project.

McKellar Lake, located in the project site vicinity, is listed as a water with unavailable parameters for siltation or habitat alteration. For the majority of the project area, there will be no direct discharge into this water body, and runoff from the site will discharge to McKellar Lake indirectly through the Allen Fossil Plant permitted storm water outfalls and new outfall, described elsewhere in the report.

However, some of the proposed demolition and grading activities take place north of the plant area and/or USACE levee in areas which sheet flow into McKellar Lake. The work in these portions of the site is generally upstream of the 60-foot buffer zone for McKellar Lake (based on a normal water surface elevation of 210'). Therefore, wired-backed silt fence will be utilized along the entire downhill perimeter of these work areas to control sediment for stormwater runoff that may pass through these portions of the site.

For demolition activities for the overhead coal conveyors, walkway, intake structure and other infrastructure that will take place within the 60-foot-buffer zone, wire-backed silt fence, along with high-visibility temporary fencing, will be utilized along the entire downstream perimeter of these work areas.

For demolition work within the limits of McKellar Lake, floating turbidity curtains and/or other in-water sediment control measures will be utilized to contain sediment and allow for settlement of fine particles to minimize impacts to the surrounding water body during demolition activities.

2.13 CONSTRUCTION PHASING

A description of the construction phasing for projects of more than 50 acres.

This project does not require more than 50 acres of disturbed area. Therefore, phasing is not required.

2.14 UNDISTURBED AREAS

A description of the protections (e.g. caution fencing or stream side buffer zones) employed to limit the disturbance if only a portion of the total acreage of the construction site is to be disturbed. The areas to be undisturbed shall be clearly marked in the field before construction activities begin.

Areas to be left undisturbed include selected areas north and downslope of the D4 plant site along McKellar Lake, as well as the parking lot area in the southwest portion of the site. These areas are included in the construction limits where access is required for demolition / grading in adjacent areas; however, no disturbance will be required by the proposed work. Areas to be left undisturbed will be visibly delineated using perimeter EPSC controls, high-visibility temporary construction fencing, and/or other suitable measures, as shown on the EPSC plans, which can be found in **Appendix A**.

2.15 DISCHARGES TO PERMITTED MS4

The name and number of the previously permitted Municipal Separate Storm Sewer to which the project discharges.

This project will discharge into the Memphis municipal separate storm sewer system (MS4), permit number TNS068276.

3.0 EROSION PREVENTION AND SEDIMENT CONTROLS

The goal of this SWPPP is to maintain and protect the natural, physical, and biological characteristics and functions (e.g., no significant changes in the hydrological regime or pollutant input) of the receiving water by minimizing the dislodging and suspension of soil in runoff and by retaining mobilized sediment on-site. Construction activities will conform to the following general practices with regards to EPSC. Specific BMPs for this project are also described in **Appendix A** and in the Tennessee Erosion and Sediment Control Handbook.

3.1 PRECONSTRUCTION AND DURING CONSTRUCTION

Preconstruction planning should be used to sequence major grading activities to minimize the exposure time of graded or denuded areas. The EPSC measures and/or plans shall be modified as necessary so that they are effective at all times throughout the course of the project. The site Operator (Contractor) will be responsible for the implementation and execution of all storm water runoff controls. Preconstruction ground cover will not be destroyed, removed, or disturbed more than 14 days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed. Temporary erosion control measures may be removed at the beginning of the workday but will be replaced at the end of the day. Structural controls to be used on this project and their placement are identified on the EPSC plans in **Appendix A**.

3.2 STABILIZATION, STRUCTURAL, AND NON-STRUCTURAL CONTROLS

Storm water runoff controls for the proposed project will consist of the structural control measures themselves and the maintenance and inspection practices discussed later in this SWPPP. They have been designed to retain sediment on the project site. The following paragraphs describe the sequence of major construction activities that are planned for the site and the general stabilization and structural practices that will be associated with each activity. They also identify the party responsible for implementing the SWPPP.

3.2.1 Temporary Construction Exit

General Requirements: Off-site tracking of sediment must be controlled wherever equipment and construction vehicles exit the site. EPSC structures must be in place and functional before demolition, clearing, grubbing, excavation, grading, cutting or filling occurs, except as such work may be necessary to install EPSC measures. Project plans, proposal contract, and standard details referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization: Stabilization practices include placing geotextile fabric beneath the stone pad and grading the area around the construction exit to direct storm water runoff back onto the project site. The temporary construction exit will be removed after construction is completed. Seed with straw mulch or erosion control blankets will be placed to revegetate disturbed areas, as needed, no later than 14 days after the structure is removed. Permanent or Temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Avoid planting cover vegetation during winter months (December – March), if possible. Seeding requirements are provided in Section 3.3.

Structural Practices: Temporary construction exits will be constructed in accordance with the Tennessee Erosion and Sediment Control Handbook. The types of crushed stone selected to construct the structure will be based on TDEC's standard details. No temporary drainage pipes will be required.

Responsible Party: The site Operator (Contractor) will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices for the duration of construction. Inspections will be performed by personnel meeting the requirements provided in Section 4.4.5.

3.2.2 Clearing and Grubbing

General Requirements: Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. EPSC structures must be in place and functional before demolition, clearing, grubbing, excavation, grading, cutting or filling occurs, except as such work may be necessary to install EPSC measures. Project plans, proposal contract, and standard details referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization: Interim and permanent stabilization practices at site-specific locations are detailed on the EPSC plans in **Appendix A**. Only the areas where grading and earth-moving activities are planned within 14 days will be cleared unless they are to be subsequently seeded and/or mulched or other temporary cover is installed. Stabilization practices rely primarily on seeding with mulch of cleared and grubbed areas prior to other construction activities. Temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Avoid planting cover vegetation during winter months (December – March), if possible. Seeding requirements are provided in Section 3.3.

Structural Practices: Structural practices include installation of silt fence, sediment tube checks, inlet and culvert protection, and construction of rock check dams in drainage ditches. These items will be installed prior to and during clearing operations. Silt fences, sediment tube checks, and rock check dams will generally be installed parallel to slopes, but the ends of the fences and checks may turn slightly perpendicular and run up the slope to prevent bypass flows and ensure protection at those locations.

During the Clearing and Grubbing phase, including the proposed demolition work, no major grading work is proposed, and site drainage will follow existing drainage patterns. Therefore, no outfall will have a drainage area of greater than 5 acres during this phase of work. However, prior to beginning grading activities, temporary sediment basins must be installed as outlined in the following section.

Responsible Party: The site Operator (Contractor) will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity. Inspections will be performed by personnel meeting the requirements provided in Section 4.4.5.

3.2.3 Grading and Excavation

General Requirements: Project plans, proposal contract, and standard details referenced in the project plans provide additional information regarding requirements for EPSC and protection of waters of the State and the United States.

Stabilization Practices: Stabilization practices for this sequence includes backfilling excavated locations to final grade with approved backfill to final grade and stabilizing during construction with stone surfacing, seeding and mulching (if needed), and/or installation of erosion control blankets as operations allow. Stabilization measures shall be initiated as soon as practicable on portions of the site where construction activities have temporarily or permanently ceased,

but in no case more than 14 days after the construction activity on that portion of the site has temporarily or permanently ceased, except in the following two situations:

1. Where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy conditions, stabilization measures shall be initiated as soon as practicable;
2. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 working days, temporary stabilization measures do not have to be initiated on that portion of the site.

Temporary or permanent stabilization will be completed within 14 days of final grading or earth-moving activities; areas with steep slopes (≥ 35%) are to be stabilized within 7 days, if applicable. Permanent or Temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Avoid planting cover vegetation during winter months (December – March), if possible.

Structural Practices: Structural practices for grading and excavation will include two (2) sedimentation basins (see below), installation of silt fence and sediment tube checks, inlet and culvert protection, and construction of rock check dams in drainage ditches. Silt fences, sediment tube checks and rock check dams will generally be installed parallel to slopes, but the ends of the fences and checks may turn slightly perpendicular and run up the slope to prevent bypass flows and ensure protection at those locations.

Temporary Sediment Basins: For an outfall discharging to waters with unavailable parameters (McKellar Lake) with a total drainage area of 5 acres or more, a temporary sediment basin is required (or equivalent control measure) which provides storage for the calculated runoff volume from a 5-year, 24-hour storm for each acre drained shall be provided until final stabilization of the site. The drainage area includes both disturbed and undisturbed portions of the site, all draining through a common outfall (Outfall Nos. 1 and 2).

During the initial site clearing/grubbing and demolition activities within the D4 plant area, site runoff will follow existing drainage patterns, with mainly sheet flow and infiltration across the relatively flat site. However, once grading operations begin, the site will be graded to direct runoff toward Outfalls Nos. 1 and 2 via 2.0% slopes and drainage swales/ditches. Therefore, during the interim grading and final (proposed) grading conditions, drainage areas of greater than 5 acres will drain to each of these outfalls and temporary sediment basins will be required. Approximate drainage areas to Outfalls F6 and F7 will remain unchanged during demolition.

Once the demolition phase of the project is complete, two (2) temporary sedimentation basins will be installed for the drainage areas discharging to Outfalls No. 1 and No. 2. The sedimentation basins must be installed prior to beginning any site gradings activities. The temporary sediment basins will be removed only after all grading work has been completed and final stabilization has been achieved for the entire upslope drainage area to each of these outfalls.

A sediment basin consists of an embankment (dam), a sediment storage area, a sediment forebay, a dewatering mechanism, a principal (or primary) spillway and emergency spillway system, a permanent pool, and scour protection at the outlet of the principal spillway pipe. Additional information can be found in Chapter 7 of the TDEC Erosion and Sediment Control Handbook.

Hydrologic and basin sizing calculations can be found in **Appendix D**, and dimensions, layout, and construction details for the temporary sediment basins can be found in the EPSC plans (**Appendix A**).

Responsible Party: The site Operator (Contractor) will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity. Inspections will be performed by personnel meeting the requirements provided in Section 4.4.5.

3.3 FINAL STABILIZATION

General Requirements: Project plans, proposal contract, and standard details referenced in the project plans provide additional information regarding requirements for erosion and siltation control and protection of waters of the State and the United States.

Stabilization Practices: Final stabilization of disturbed site areas will be accomplished using rip rap, gravel, paving, seeding/mulching, and/or sodding, as directed by the plans and specifications and required by field conditions encountered.

Permanent or temporary seeding will be accomplished by using seed groups adapted for germination and growth during the subject season. Avoid planting cover vegetation during winter months (December – March), if possible. Stabilization will be completed within 14 days after final grading or earth moving activities have ceased.

Table 4. Acceptable Seeding Mixtures

Seed Mixtures	Hydroseed Rate (pounds/acre PLS*)
Application Period: February 1 to November 15	
German Millet (Annual)	15
Bermuda Grass	15
Alfalfa	20
White Sweet Clover	5
Red Clover	5
Perennial Rye	30
Fescue (Endophyte free)	25
Weeping Lovegrass	3
Application Period: November 15 to February 1	
Winter Wheat	60
Temporary Seed Mix	
Annual Rye	60

* PLS Pure Live Seed is determined by multiplying the percent germination of the seed times the percent purity.

Structural Practices: All permanent structural practices have been completed at this point of the project. After final stabilization has been achieved all silt fence, linear sediment tubes, rock check dams and/or sediment tube checks, and other applicable EPSC measures will be removed to prevent them from becoming pollutants.

Responsible Party: The site Operator (Contractor) will be responsible for the implementation, maintenance, and inspection of the SWPPP structural practices during this construction activity. Inspections will be performed by personnel meeting the requirements provided in Section 4.4.5.

3.4 POST-CONSTRUCTION

The Owner does not anticipate any project-derived pollutants will occur after construction operations have been completed. The stabilized site and grassed waterways should not present a significant increase in runoff or pollutants into the receiving waterway. Although the permit does not require maintenance and operation of the storm water management measures after discharges associated with construction activities have been eliminated from the site, the Owner will provide for routine maintenance of facilities.

3.4.1 Pollutant Controls

Procedures will include debris removal from drainage structures and trash removal and disposal from the installed facilities. Maintenance of drainage swales and conveyance pipes and structures will be the responsibility of the Owner.

3.4.2 Velocity Controls

The project includes the installation of rip rap slope protection and rip rap aprons at the site drainage outlets to reduce velocities of the flows exiting the site. Post-construction runoff will be lower than the existing runoff due to decreased CN of the gravel surface compared to the paved existing surfaces and structures.

4.0 STORM WATER MANAGEMENT

4.1 REQUIRED RECORDS

The site Operator (Contractor) will maintain at the site the following records of construction activities:

1. The dates when major grading activities occur;
3. The dates when construction activities temporarily or permanently cease on a portion of the site;
4. The dates when stabilization measures are initiated;
5. Records of inspections and corrective measures, including photographs of representative items requiring correction and the corrective action taken for it; and
6. Detailed records of rainfall events including dates, amounts of rainfall, and the approximate duration or starting and ending times (see **Appendix E** for sample form). Use of a reference site for a record of daily precipitation will be acceptable.

The site Operator (Contractor) shall maintain a copy of the SWPPP, including any modifications, at all times.

4.2 RAINFALL MONITORING PLAN

EPSC measures and devices are utilized to minimize the dislodging and suspension of soil in runoff and to retain mobilized sediment on-site. Storm water runoff is directly proportional to the intensity and duration of a given rainfall event. Rainfall monitoring is necessary to estimate the effectiveness of EPSC measures and devices at the construction site. The intent of the plan is to provide a means to record the volume of rainfall and the time in which it fell to estimate the intensity of the rainfall event. Permittees shall maintain a rain gauge and daily rainfall records at the site or use a reference site for a record of daily amount of precipitation.

4.2.1 Equipment

If an on-site rain gauge is used, the following requirements shall be met. At a minimum, a fence post type rain gauge will be used to measure rainfall. The standard fence post rain gauge shall be a wedge-shaped gauge that measures up to six (6) inches (150mm) of rainfall (e.g. Tru-Chek® Direct-Reading Rain Gauge). Both English and metric scales should be provided on the face, with graduations permanently molded in the body of the gauge. The minimum graduations shall be 0.05 inch (1 mm). An aluminum bracket with screws may be used for mounting the gauge on a wooden support.

4.2.2 Location

The rain gauge will be located at or along the project site, in an open area such that the measurement will not be influenced by outside factors (i.e. overhangs, gutters, trees, etc.). For linear projects, at least one rain gauge will be located within each linear mile (as measured along the centerline of the primary alignment) of the project where clearing, grubbing, excavation, grading, cutting or filling is being actively performed, or exposed soil has not yet been permanently stabilized.

4.2.3 Methods

The rain gauge or reference site data shall be checked after every rainfall event occurring on the project site. Detailed records of the rainfall event(s) including dates, amounts of rainfall, and the approximate duration or starting and ending times shall be maintained.

4.3 MAINTENANCE

Maintenance activities will be undertaken to ensure that vegetation, erosion and sediment control measures, and other protective measures identified in the site EPSC Plans are kept in good and effective operating condition. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event, but in no case more than 7 days after the need is identified. The need for maintenance will be determined through the inspection procedures listed below and will include, but not be limited to, the following practices:

1. Observation of control measures to determine compliance with the manufacturer's specifications and good engineering practices for installation and use of the control;
2. Removal of off-site sediment accumulations from the project site that have not reached a sinkhole and/or stream such that off-site impacts are minimized (Note: Sediment accumulations from the project site that have reached sinkholes and/or streams must not be removed until after consultation with TDEC);
3. Removal of sediment from silt fence, and other sediment controls when the storage capacity has been reduced by 50 percent; and
4. Pickup or otherwise prevention of litter, construction debris, and construction chemicals from becoming a pollutant source prior to anticipated storm events.

In addition to the practices listed above, the project will be inspected as required by this SWPPP to ensure the maintenance and effectiveness of the EPSC measures. A Sequence of Control Measure Implementation, Maintenance, and Removal log is provided in **Appendix E**.

4.4 INSPECTION

The inspection schedule and documentation procedures have been designed to ensure that vegetation, erosion and sediment control measures, and other protective measures identified in the SWPPP are kept in good and effective operating condition. If the site description and pollution prevention measures in the SWPPP need to be revised based on the results of the inspection, those revisions will be completed as appropriate, but no later than 7 calendar days following the inspection identifying the need.

4.4.1 Schedule

Our review of the TDEC's current 303(d) List indicates that the project **will** discharge to bodies of water listed for siltation or habitat alteration and into an MS4 and **will not** discharge to waters with an approved TMDL **nor** into Exceptional Tennessee Water. The schedule for EPSC inspections will be as follows:

1. Since the drainage basins for Outfalls No. 1 and No. 2 are each larger than 5 acres and within proximity to waters with unavailable parameters for siltation (McKellar Lake), a Site Assessment must be performed as

specified by the requirements of the General NPDES Permit issued for this construction. At a minimum, Site Assessments will be performed per Section 5.5.3.8 of the General Permit, TNR100000.

Each Site Assessment should verify installation, functionality, and performance of the SWPPP EPSC measures. Each Site Assessment should be performed with the inspector and include a review and update (if applicable) of the SWPPP. The Site Assessment findings should be documented and kept with the SWPPP at the site. The documentation should at least include the inspection form, printed name/signature of the individual performing the Site Assessment, and certification statement. Additional Site Assessments may be required if the inspection conditions have the potential of causing pollution to the waters of the State.

2. Inspections shall be performed at least twice per calendar week and at least 72 hours apart. Where sites or portions of construction sites have been temporarily stabilized, inspections only have to be conducted once per month until construction activity resumes. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the division's Nashville Central Office for projects of the Tennessee Valley Authority (TVA). Should the division discover that monthly inspections of the site are not appropriate due to insufficient stabilization measures or otherwise, twice weekly inspection shall resume. The division may inspect the site to confirm or deny the notification to conduct monthly inspections.

Inspections shall continue until the site is fully constructed and all disturbed areas not paved, concreted, or covered by stone are permanently stabilized with a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent.

4.4.2 Documentation Requirements

Inspections will be documented in writing and include the following:

1. Scope of the inspection;
2. Name(s) and title or qualifications of personnel making the inspection;
3. The date(s) of the inspection;
4. Major observations relating to the implementation of the SWPPP, including the location(s) of discharges of sediment or other pollutants from the site and of any control devices that failed to operate as designated or proved inadequate for a particular location; and
5. Actions taken to replace, modify, or repair any control measures identified as inadequate or in disrepair during inspections.

All inspections shall be documented on the Construction Storm Water Inspection Certification form provided in **Appendix F** of this SWPPP.

4.4.3 Areas to be Inspected

Qualified personnel will inspect disturbed areas of the project site that have not been finally stabilized for evidence of, or the potential for, pollutants to enter the drainage system. These areas include, but are not limited to, the following:

1. Disturbed areas and areas used for storage of materials that are exposed to precipitation;
2. EPSC measures identified in the SWPPP;

3. Outfall points (where discharges leave the site or enter waters of the State). Where outfall locations are inaccessible, the nearest possible downstream locations shall be inspected;
4. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking; and
5. Fueling station(s) on-site (if applicable – See Section 5.3).

These inspection requirements do not apply to definable areas of the site that have met the final stabilization requirement and have been noted in the SWPPP as described in Subpart 3.1 of the permit. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the division's Nashville Central Office for projects of the TVA.

4.4.4 Repairs, Modifications, and Revisions

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next storm event, but in no case more than 7 days after the need is identified.

4.4.5 Inspector Training and Certification

Inspectors performing the required twice weekly inspections must meet one of the following qualifying requirements:

1. A person with a valid certification from the "Fundamentals of EPSC Level I" course;
2. A licensed professional engineer or landscape architect;
3. A Certified Professional in Erosion and Sediment Control (CPESC); or,
4. A person who has successfully completed the "Level II Design Principles for EPSC for Construction Sites" course.

A copy of the certification, or training record for inspector certification, must be kept on site with the SWPPP.

Personnel performing required Site Assessments must meet the requirements of either Item 2, 3, or 4 listed above.

5.0 OTHER ITEMS REQUIRING CONTROL

5.1 CONSTRUCTION MATERIALS

Construction materials that are anticipated to be present at this construction site include:

- Earth
- Rock
- Concrete/Grout
- Asphalt
- Seed and Mulch
- Construction Vehicles / Heavy Equipment
- Demolition Materials / Construction Waste
- Recycled Concrete

Stockpiled erodible construction materials will be protected by control measures down gradient of the stockpiles. Other materials necessary for this project will be placed in a staging area away from storm water conveyances until they are installed. The Operator may keep several portable storage units on the project site to store construction equipment.

5.2 WASTE MATERIALS

Waste material (earth, rock, asphalt, concrete, etc.) not required for the construction of the project shall be disposed of by the Operator. The Operator will be required to obtain all necessary permits.

5.3 OTHER MATERIALS

Other materials not used for construction but needed for construction at the proposed site must also be controlled to prevent pollution of the receiving waters. These items include, but are not limited to, the storage and dispensing of the following:

- Fertilizers and Lime
- Diesel and Gas
- Machinery Lubricants (oil and grease)
- Cleaning Solvents

Soils at fueling stations should be checked daily for signs of spillage or staining of the soil. A drip bucket and spill kit will be present at all times when fueling operations are taking place. Any fixed fueling station/tank storage shall have a containment system to prevent runoff by potential spills or tank rupture. Machinery should be serviced or repaired to prevent leaks of fluids.

The Operator will be responsible for compliance with all applicable Environmental Protection Agency (EPA) and United States Department of Transportation (USDOT) guidelines regarding equipment-related fluids as well as all National Fire Protection Association regulations regarding flammable liquids. No construction materials or equipment are expected to produce pollutant runoff.

5.4 NON-STORM WATER DISCHARGES

The following non-storm water discharges have potential for occurring from the site during the construction period:

1. Groundwater may be intercepted during the construction of this project. While these locations are yet unknown, the SWPPP will be modified to incorporate these areas should they arise;
2. The use of wash waters to clean and remove construction generated soils from roadways (where there have been no spills or leaks of toxic or hazardous materials);
3. Dust suppression water used on haul routes and exposed soils;
4. Water used to wash vehicles (where detergents are not used, and detention and/or filtering are provided before the water leaves the site).

All non-storm water discharges will be directed to appropriate BMPs, if required, prior to leaving the site. Wash down or waste discharge of concrete trucks will not be permitted on-site unless a proper settlement area has been constructed in accordance with both state and federal regulations.

6.0 REQUIREMENTS FOR PLANS AND REPORTS

6.1 KEEPING SWPPP CURRENT

The Owner will amend the SWPPP when any of the following conditions apply:

1. Whenever there is a change in the scope of the project that would be expected to have a significant effect on the discharge of pollutants to the waters of the State and which has not otherwise been addressed in the SWPPP;
2. Whenever inspections or investigations by site Operators, local, state, or federal officials indicate the SWPPP is proving ineffective in eliminating or significantly minimizing pollutants from construction activity sources, or is otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity;
3. When any new Operator (Contractor) and/or sub-Operator (Subcontractor) is assigned or relieved of their responsibility to implement a portion of the SWPPP; and
4. When the SWPPP must be modified to prevent a negative impact to legally protected state or federally listed or proposed threatened or endangered aquatic fauna.

6.2 MAKING PLANS ACCESSIBLE

The Operator (Contractor) will retain a copy of this SWPPP (including a copy of the permit language and all reports) at the construction site (or other local location accessible to TDEC and the public) from the date construction commences to the date of final stabilization. The Operator (Contractor) who will have operations control over daily pollution prevention plan implementation will have a copy of the SWPPP available at the location where work is occurring on-site for the use of operators and those identified as having responsibilities under the SWPPP whenever they are on the construction site.

Prior to the initiation of land disturbing activities and until the site has met the final stabilization criteria, the Operator (Contractor) will post a notice near the main entrance of the construction site with the following information:

1. A copy of the Notice of Coverage (NOC) with the NPDES permit number for the project - see **Appendix G**;
2. The name, telephone number, and address of a local TVA contact person – see **Appendix H**;
3. A brief description of the project; and
4. The location of the SWPPP (especially important if the site is inactive or does not have an on-site location at which to store the SWPPP).

If posting this information near a main entrance is infeasible due to safety concerns, the notice shall be posted in a local building and maintained in a legible condition. The notice must be placed in a publicly accessible location where construction is actively underway and moved as necessary. The Owner understands that this permit does not provide the public with any right to trespass or require that the Owner allow members of the public to access a construction site for any reason, including inspection of a site.

6.3 NOTICE OF TERMINATION

When all storm water discharges from construction activities that are authorized by the permit are eliminated by final stabilization, the Owner will submit a Notice of Termination (NOT) that is signed in accordance with the permit. For the purposes of the certification required by the NOT, the elimination of storm water discharges associated with the construction activity is understood to mean the following:

1. That all disturbed soils at the portion of the construction site where the Operator (Contractor) had control have been finally stabilized;
2. Temporary erosion and sediment control measures are no longer necessary and have been removed; or
3. That all storm water discharges associated with construction activities from the identified site that are authorized by an NPDES general permit have otherwise been eliminated from the portion of the construction site where the Operator (Contractor) had control.

The NOT will be submitted on the TDEC's NOT form provided in **Appendix G** of this SWPPP.

6.4 RETENTION OF RECORDS

The Owner will retain copies of the SWPPP, all reports required by the permit, and records of all data used to complete the Notice of Intent for the project for a period of at least three (3) years from the date the NOT was filed. The Owner is aware the period may be extended by written request of the Director.

July 15, 2022

7.0 CERTIFICATIONS

OWNER OR DEVELOPER 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 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."

OWNER – Tennessee Valley Authority

Signed: Scott Turnbow 07/27/2022 Date

July 15, 2022

OPERATOR'S CERTIFICATION

"I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements."

General Contractor:

Signed: Adam Wenzel

Adam Wenzel - Vice President of Sales & Estimating 7/26/22

Date

General Contractor: _____

Signed: _____ _____

Date

General Contractor: _____

Signed: _____ _____

Date

General Contractor: _____

Signed: _____ _____

Date

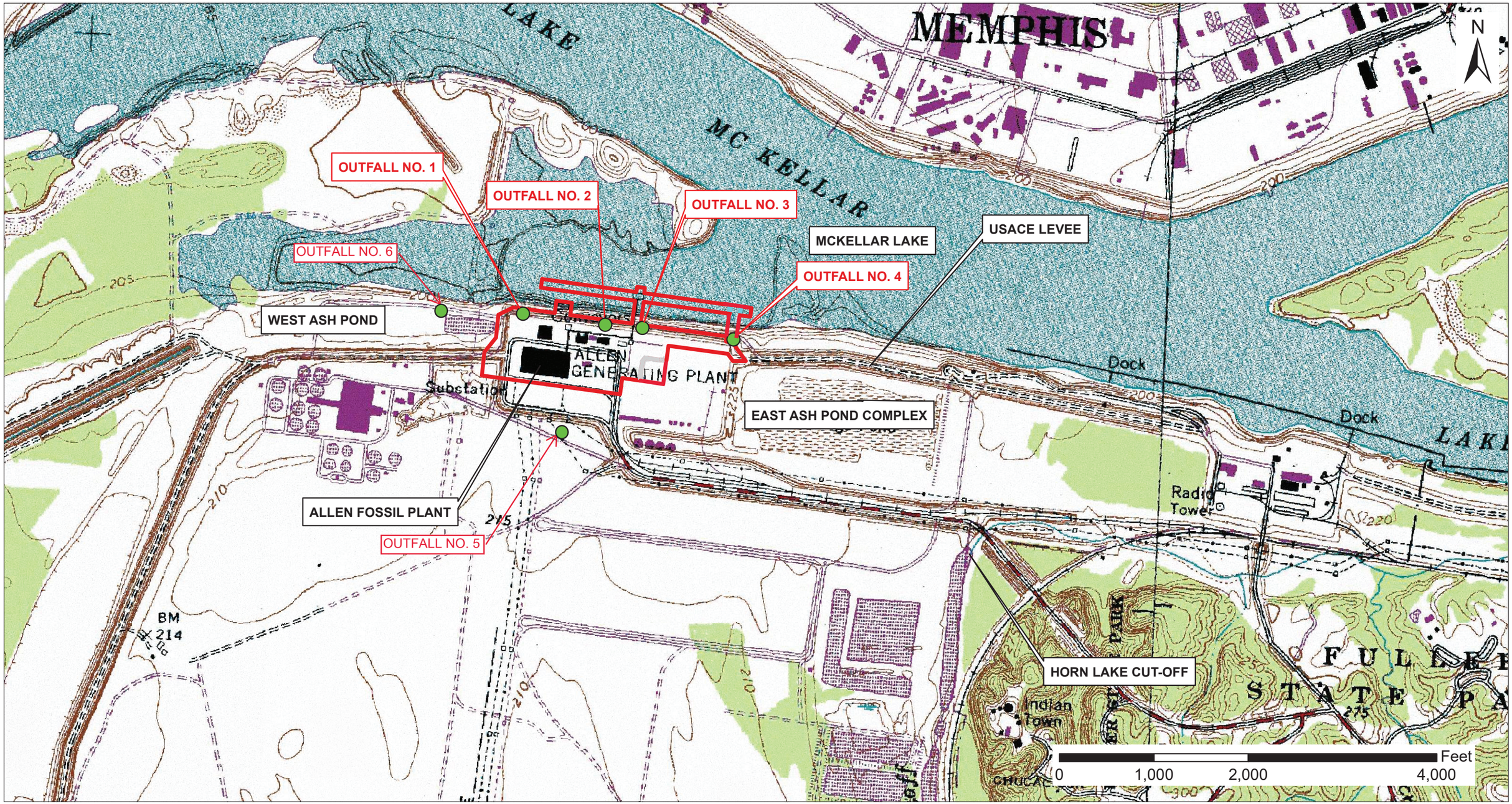
July 15, 2022

ENGINEER'S CERTIFICATION

I, Stephen Brady, certify that this SWPPP and accompanying drawings were prepared under my responsible charge.

Signature	TN License No.	Date
Stephen Brady	119367	7-15-2022

Figure 1
USGS TOPOGRAPHIC MAP



V:\1755\active\175578052\gis\mxds\TVA Allen Fossil Plant - D4.mxd
Revised: 2021-05-12 By: npresmyk

May 2021
Project No. 172676009

Stantec

Notes

1. Coordinate System: NAD 1983 NSRS2007 StatePlane Tennessee FIPS 4100 Ft US

2. Topographic data: USGS (24K)

Legend

- Outfall Points
- Limits of Construction

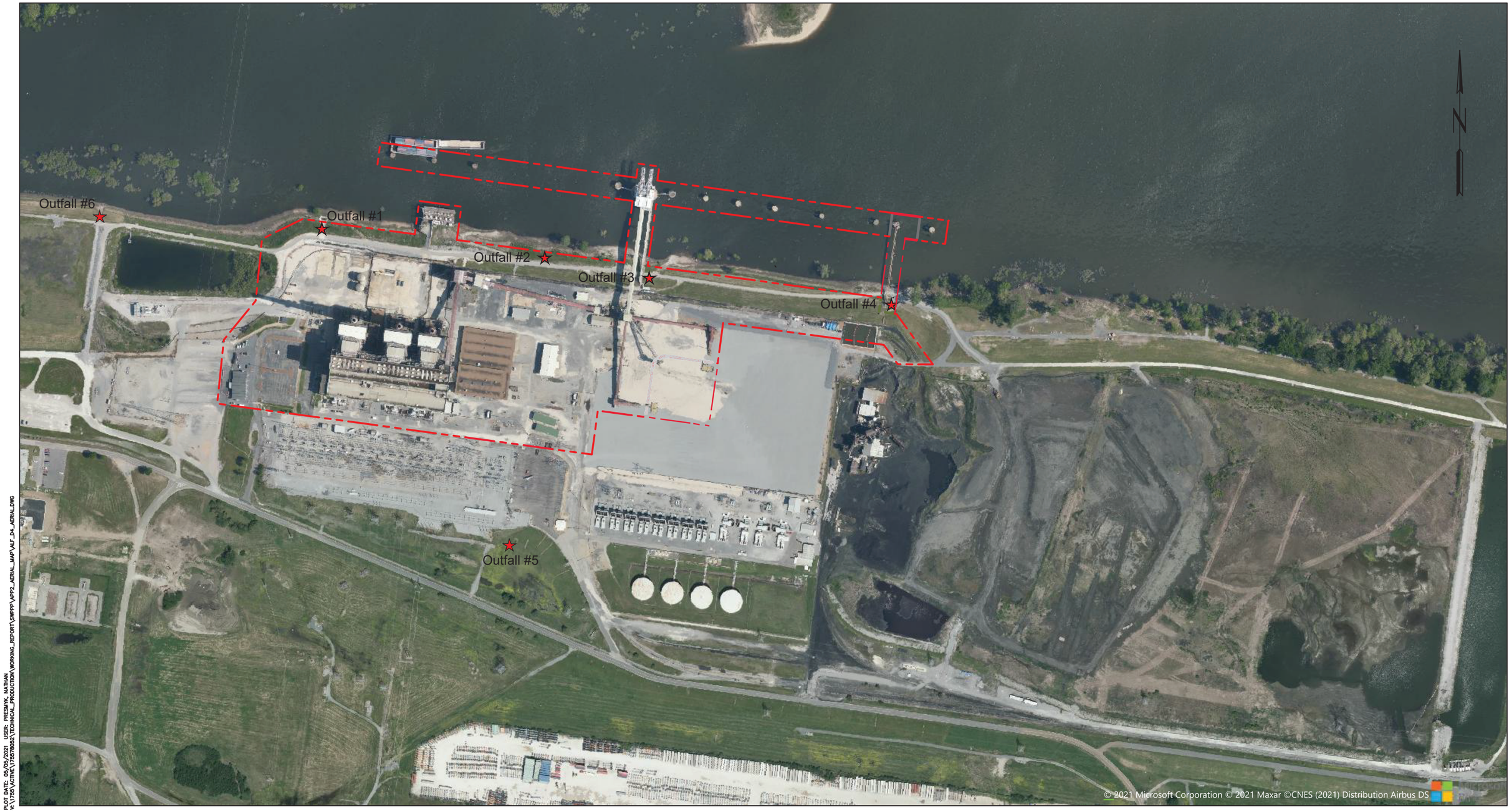
TVA

Client/Project
Tennessee Valley Authority
Allen Fossil Plant
Shelby County, Tennessee

Figure No.
01

Title
TVA Allen Fossil Plant
D4 Plant Decommissioning / Site Restoration SWPPP

Figure 2
AERIAL MAP



PLOT DATE: 05/05/2021 USER: PRESNYK, NATHAN
V:\1755\ACTIVE\175578002\TECHNICAL_PRODUCTION\WORKING_REPORT\SWPPP\APP2_AERIAL_MAP\ALF_D4_AERIAL.DWG

Stantec

Legend

- Construction Limits
- Outfall Points

200 0 400 800 FEET

GRAPHIC SCALE

SOURCE: Microsoft Bing Imagery

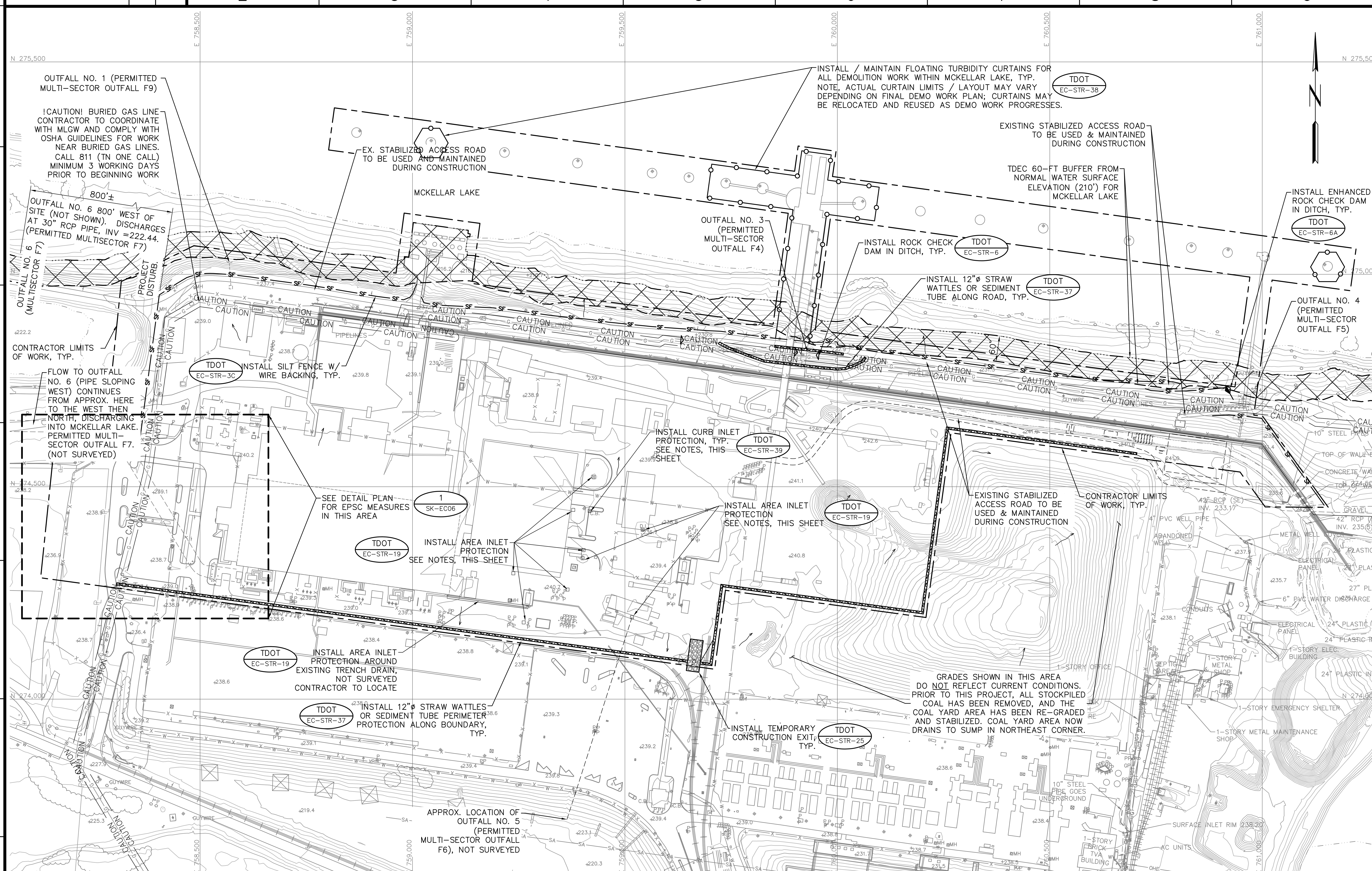
TVA

Client/Project
Tennessee Valley Authority
Allen Fossil Plant
Shelby County, Tennessee

Figure No.
02

Title
TVA Allen Fossil Plant -
D4 Plant Site Restoration

Appendix A
EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLANS



SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

METADATA:

HORIZONTAL PROJECTION: PLANT LOCAL GROUND
PLANT LOCAL GROUND COORDINATES ARE BASED ON THE TENNESSEE NAD 27 STATE PLANE COORDINATE SYSTEM, BUT REPRESENT LOCATIONS ON THE GROUND. THEY ARE NOT EQUIVALENT TO GRID POSITIONS.
HORIZONTAL DATUM: LOCAL
VERTICAL DATUM: NGVD 29
H&V ACCURACY: GPS RTK
UNITS: US SURVEY FEET (SFT)

MAPPING SOURCE NOTE:

TOPOGRAPHIC MAPPING WAS OBTAINED FROM TUCK MAPPING SOLUTIONS, INC.
FLIGHT DATE: 03/11/2014; COMPLETION DATE: 08/25/2014
ADDITIONAL TOPOGRAPHIC INFORMATION WAS OBTAINED/CONFIRMED BY ALLEN & HOSHALL, INC. DATED 06/29/2016 AND BY STANTEC CONSULTING SERVICES, INC. DATED 09/24/2019 (IRA PROJECT & PARTIAL COAL YARD AREA; SHOWN IN PROFILE/SECTION VIEWS ONLY).

ADDITIONAL (NON-SURVEYED) TOPOGRAPHIC AND PLANIMETRICS FOR THE EXISTING RIP-RAP SEDIMENT BASIN ARE TAKEN FROM DESIGN INFORMATION PER TVA DRAWING 10W230-03. APPROXIMATE LIMITS AND ELEVATIONS OF EXISTING PLANT BUILDING BASEMENT ARE TAKEN FROM TVA-PROVIDED BUILDING ARCHITECTURAL PLANS DATED 11/16/1958.

EPSC NOTES:

1. ALL INLET PROTECTION SHALL BE INSTALLED PRIOR TO PROPOSED DEMOLITION AND GRADING WORK AND SHALL REMAIN IN PLACE FOR DURATION OF THE PROJECT (I.E. EPSC STAGES I-III) UNTIL FINAL STABILIZATION IS COMPLETE.
2. INLET LOCATIONS HAVE NOT ALL BEEN SURVEYED AND ARE SHOWN APPROXIMATELY FROM AS-BUILT DRAWING.
3. CATCH BASINS / DRAINAGE STRUCTURES ON THE PROJECT WILL BE REMOVED OR ABANDONED IN PLACE DURING THE DEMOLITION WORK. SEE DEMOLITION PLANS AND SPECIFICATIONS FOR DETAILS.

LEGEND

GAS VALVE
GUYWIRE
LIGHT POLE
MANHOLE
POST
SANITARY MANHOLE
SIGN
SPOT ELEVATION
TREE/SHRUB
UTILITY POLE
WATER METER
WATER VALVE
EDGE OF PAVED ROAD
EDGE OF GRAVEL ROAD
EDGE OF WATER
FENCE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
RAILROAD TRACK
OVERHEAD ELECTRIC LINE
SANITARY LINE
TELEPHONE LINE
TREE LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND TELEPHONE LINE
WATER LINE
GAS LINE
LIMITS OF CONSTRUCTION
UTILITY/PROJECT BASELINE
PROP. INDEX CONTOUR
PROP. INTERMEDIATE CONTOUR
DITCHLINE/EDGE OF WATER
PROPOSED SEEDED AREA
EROSION CONTROL BLANKET
EROSION CONTROL BLANKET
RIP RAP APRON
GRAVEL ROAD / DRIVEWAY
HIGH-VISIBILITY SAFETY FENCING
SILT FENCE
SEDIMENT TUBE
ROCK CHECK DAM
ENHANCED CHECK DAM
INLET PROTECTION

GRAPHIC SCALE: 1" = 100'
CONTOUR INTERVAL = 2 FEET

ISSUED FOR CONSTRUCTION

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

SEE 10W231-01 FOR LIST OF DESIGN, COMPANION, REFERENCE DRAWINGS AND SUPPORTING DESIGN CALCULATIONS NUMBER.

Stantec
601 Grassmere Park Road, Suite 22
Nashville, Tennessee 37211
www.stantec.com

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R -	-	-	-	-	-	-	-	-	-	-	-
R 0	07/30/21	NAP	NAP	TSM	HCE	N/A	N/A	TVA	609669	-	D

ISSUED FOR CONSTRUCTION AS PER PROJECT ID 609669

DISCIPLINE INTERFACE 1 2 3 4

SCALE: 1"=100' EXCEPT AS NOTED

YARD
D4 PLANT SITE

PLANT SITE RESTORATION
EPSC PLAN
STAGE I

DESIGNED BY: | DRAWN BY: | CHECKED BY: | SUPERVISED BY: | REVIEWED BY: | APPROVED BY: | ISSUED BY:

ALLEN FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R | DATE | 38 | C | SK-EC01 | R 0

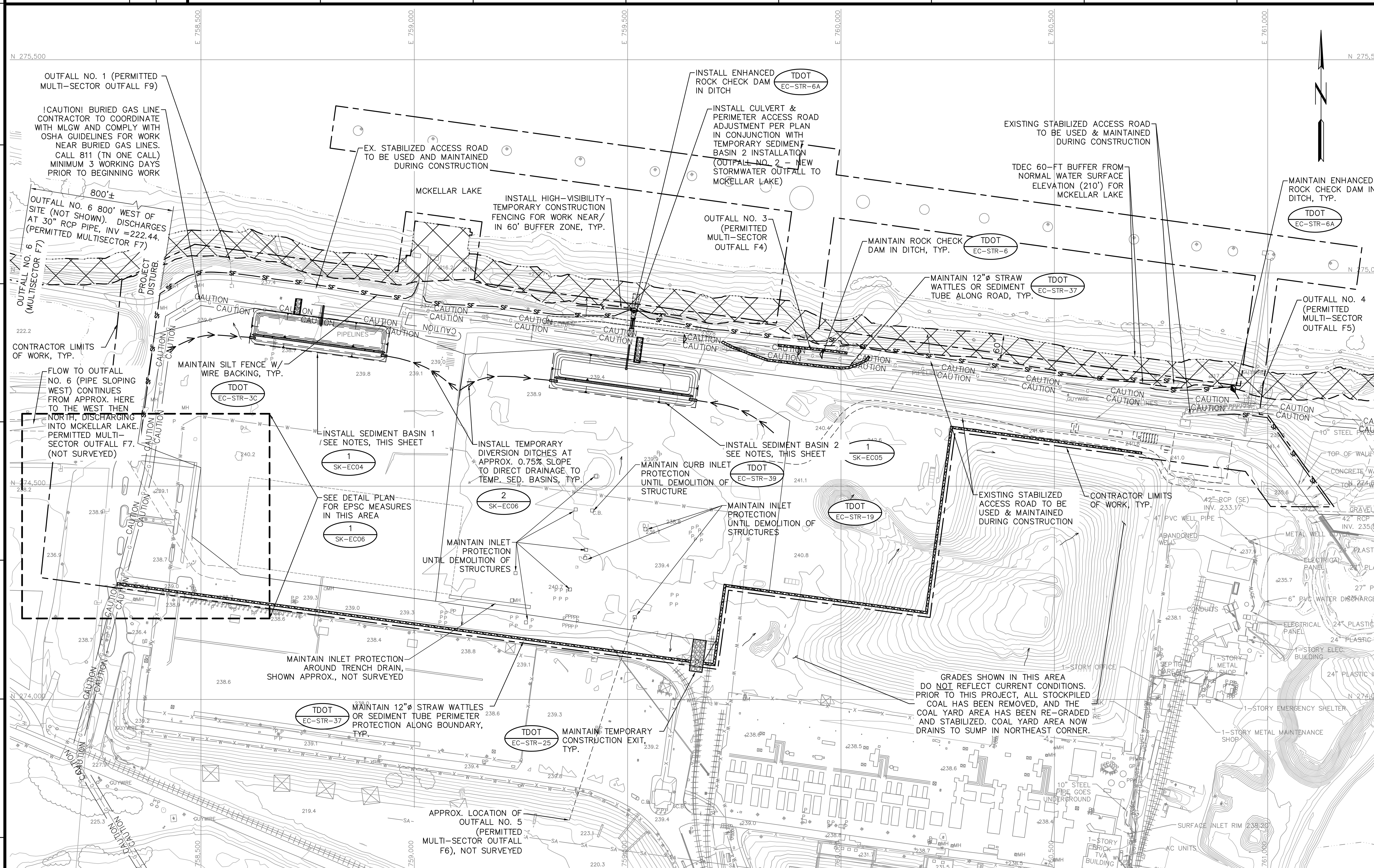
PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT DATE: 07/06/2022

38 | C | SK-EC01



SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

METADATA:

HORIZONTAL PROJECTION: PLANT LOCAL GROUND
PLANT LOCAL GROUND COORDINATES ARE BASED ON THE TENNESSEE NAD 27 STATE PLANE COORDINATE SYSTEM, BUT REPRESENT LOCATIONS ON THE GROUND. THEY ARE NOT EQUIVALENT TO GRID POSITIONS.
HORIZONTAL DATUM: LOCAL
VERTICAL DATUM: NGVD 29
H&V ACCURACY: GPS RTK
UNITS: US SURVEY FEET (SFT)

MAPPING SOURCE NOTE:

TOPOGRAPHIC MAPPING WAS OBTAINED FROM TUCK MAPPING SOLUTIONS, INC.
FLIGHT DATE: 03/11/2014; COMPLETION DATE: 08/25/2014
ADDITIONAL TOPOGRAPHIC INFORMATION WAS OBTAINED/CONFIRMED BY ALLEN & HOSHALL, INC. DATED 06/29/2016 AND BY STANTEC CONSULTING SERVICES, INC. DATED 09/24/2019 (IRA PROJECT & PARTIAL COAL YARD AREA; SHOWN IN PROFILE/SECTION VIEWS ONLY).

ADDITIONAL (NON-SURVEYED) TOPOGRAPHIC AND PLANIMETRICS FOR THE EXISTING RIP-RAP SEDIMENT BASIN ARE TAKEN FROM DESIGN INFORMATION PER TVA DRAWING 10W230-03. APPROXIMATE LIMITS AND ELEVATIONS OF EXISTING PLANT BUILDING BASEMENT ARE TAKEN FROM TVA-PROVIDED BUILDING ARCHITECTURAL PLANS DATED 11/16/1958.

STAGE II EPSC NOTES:

1. INSTALL TEMPORARY SEDIMENT BASINS FOLLOWING COMPLETION OF DEMOLITION WORK AND PRIOR TO BEGINNING ANY GRADING OR LAND DISTURBING ACTIVITIES.
2. SEE SHEETS SK-EC04 & SK-EC05 FOR SEDIMENT BASIN PLANS AND DETAILS.
3. THE INSTALLATION OF THE PROPOSED CULVERTS AT OUTFALL NO. 2 AND SUBSEQUENT DISCHARGE OF NEW STORMWATER FLOWS TO MCKELLAR LAKE CANNOT COMMENCE WITHOUT WRITTEN APPROVAL FROM THE OWNER BY SUBMITTAL.
4. MAINTAIN EACH TEMPORARY SEDIMENT BASIN UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED FOR THE CONTRIBUTING DRAINAGE AREA. WHEN THE CONTRIBUTING BASIN HAS BEEN STABILIZED TO THE POINT THAT THERE IS 3.5 ACRES REMAINING DISTURBED AREA (OR LESS) DRAINING TO THAT SEDIMENT BASIN, THE CONTRACTOR MAY REMOVE THAT POND AFTER RECEIVING WRITTEN APPROVAL FROM THE OWNER BY SUBMITTAL.

LEGEND

GAS VALVE
GUYWIRE
LIGHT POLE
MANHOLE
POST
SANITARY MANHOLE
SIGN
SPOT ELEVATION
TREE/SHRUB
UTILITY POLE
WATER METER
WATER VALVE
EDGE OF PAVED ROAD
EDGE OF GRAVEL ROAD
EDGE OF WATER
FENCE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
RAILROAD TRACK
OVERHEAD ELECTRIC LINE
SANITARY LINE
TELEPHONE LINE
TREE LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND TELEPHONE LINE
WATER LINE
GAS LINE
LIMITS OF CONSTRUCTION
UTILITY/PROJECT BASELINE
PROP. INDEX CONTOUR
PROP. INTERMEDIATE CONTOUR
DITCHLINE/EDGE OF WATER
PROPOSED SEEDED AREA
EROSION CONTROL BLANKET
EROSION CONTROL BLANKET
RIP RAP APRON
GRAVEL ROAD / DRIVEWAY
HIGH-VISIBILITY SAFETY FENCING
SILT FENCE
SEDIMENT TUBE
ROCK CHECK DAM
ENHANCED CHECK DAM
INLET PROTECTION

50 0 100 200 FEET
GRAPHIC SCALE: 1" = 100'
CONTOUR INTERVAL = 2 FEET

ISSUED FOR CONSTRUCTION

PLOT DATE: 07/12/2022 USER: BRADY, STEPHEN
\\US0229-PPFSS01\WORK_GROUP\1755\ACTIVE\175578052\TECHNICAL_PRODUCTION\DRAWING\SHEET_FILES\ALF16\REV0\REV1\SK-EC02.DWG

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R –	–	–	–	–	–	–	–	–	–	–	–
–											
R 0	07/30/21	NAP	NAP	TSM	HCE	N/A	N/A	TVA	609669	–	D
ISSUED FOR CONSTRUCTION AS PER PROJECT ID 609669											

DISCIPLINE INTERFACE
1
2
3
4

SCALE: 1"=100' EXCEPT AS NOTED

YARD
D4 PLANT SITE

PLANT SITE RESTORATION
EPSC PLAN
STAGE II

SEE 10W231-01 FOR LIST OF DESIGN, COMPANION, REFERENCE DRAWINGS AND SUPPORTING DESIGN CALCULATIONS NUMBER.

DESIGNED BY: | DRAWN BY: | CHECKED BY: | SUPERVISED BY: | REVIEWED BY: | APPROVED BY: | ISSUED BY:

Stantec
601 Grassmere Park Road, Suite 22
Nashville, Tennessee 37211
www.stantec.com

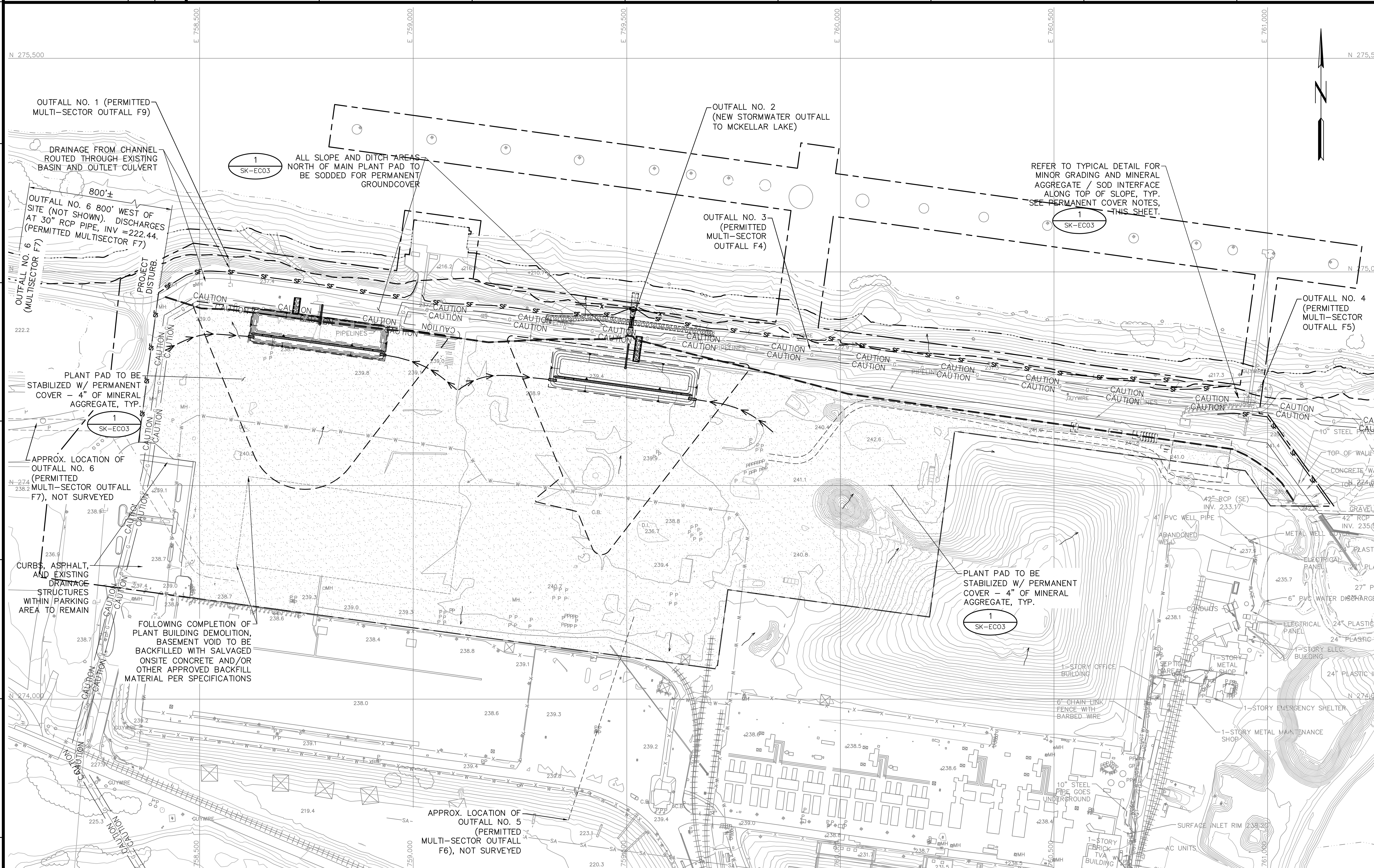
ALLEN FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R | DATE | 38 | C | SK-EC02 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY



SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

METADATA:

HORIZONTAL PROJECTION: PLANT LOCAL GROUND
PLANT LOCAL GROUND COORDINATES ARE BASED ON THE TENNESSEE NAD 27 STATE PLANE COORDINATE SYSTEM, BUT REPRESENT LOCATIONS ON THE GROUND. THEY ARE NOT EQUIVALENT TO GRID POSITIONS.
HORIZONTAL DATUM: LOCAL
VERTICAL DATUM: NGVD 29
H&V ACCURACY: GPS RTK
UNITS: US SURVEY FEET (SFT)

MAPPING SOURCE NOTE:

TOPOGRAPHIC MAPPING WAS OBTAINED FROM TUCK MAPPING SOLUTIONS, INC.
FLIGHT DATE: 03/11/2014; COMPLETION DATE: 08/25/2014
ADDITIONAL TOPOGRAPHIC INFORMATION WAS OBTAINED/CONFIRMED BY ALLEN & HOSHALL, INC. DATED 06/29/2016 AND BY STANTEC CONSULTING SERVICES, INC. DATED 09/24/2019 (IRA PROJECT & PARTIAL COAL YARD AREA; SHOWN IN PROFILE/SECTION VIEWS ONLY).

ADDITIONAL (NON-SURVEYED) TOPOGRAPHIC AND PLANIMETRICS FOR THE EXISTING RIP-RAP SEDIMENT BASIN ARE TAKEN FROM DESIGN INFORMATION PER TVA DRAWING 10W230-03. APPROXIMATE LIMITS AND ELEVATIONS OF EXISTING PLANT BUILDING BASEMENT ARE TAKEN FROM TVA-PROVIDED BUILDING ARCHITECTURAL PLANS DATED 11/16/1958.

STAGE III EPSC NOTES:

1. MAINTAIN EACH TEMPORARY SEDIMENT BASIN UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED FOR THE CONTRIBUTING DRAINAGE AREA. WHEN THE CONTRIBUTING BASIN HAS BEEN STABILIZED TO THE POINT THAT THERE IS 3.5 ACRES REMAINING DISTURBED AREA (OR LESS) DRAINING TO THAT SEDIMENT BASIN, THE CONTRACTOR MAY REMOVE THAT POND AFTER RECEIVING WRITTEN APPROVAL FROM THE OWNER BY SUBMITTAL.
2. ENTIRE DISTURBED AREA TO BE STABILIZED WITH MINERAL AGGRAGATE IN THE PLANT DEMOLITION AREA (SEE DETAIL THIS SHEET) OR WITH SODDING IN THE AREAS TO REMAIN LAWN (NORTH OF THE PLANT AREA)

LEGEND

GAS VALVE	UTILITY/PROJECT BASELINE
GUYWIRE	PROP. INDEX CONTOUR
LIGHT POLE	PROP. INTERMEDIATE CONTOUR
MANHOLE	DITCHLINE/EDGE OF WATER
POST	PROPOSED SEEDED AREA
SANITARY MANHOLE	EROSION CONTROL BLANKET
SIGN	EROSION CONTROL BLANKET
SPOT ELEVATION	RIP RAP APRON
TREE/SHRUB	GRAVEL ROAD / DRIVEWAY
UTILITY POLE	HIGH-VISIBILITY SAFETY FENCING
WATER METER	SILT FENCE
WATER VALVE	SEDIMENT TUBE
EDGE OF PAVED ROAD	ROCK CHECK DAM
EDGE OF GRAVEL ROAD	ENHANCED CHECK DAM
EDGE OF WATER	INLET PROTECTION
FENCE LINE	MINERAL AGGREGATE GROUNDCOVER
INDEX CONTOUR	
INTERMEDIATE CONTOUR	
RAILROAD TRACK	
OVERHEAD ELECTRIC LINE	
SANITARY LINE	
TELEPHONE LINE	
TREE LINE	
UNDERGROUND ELECTRIC LINE	
UNDERGROUND TELEPHONE LINE	
WATER LINE	
GAS LINE	
LIMITS OF CONSTRUCTION	

GRAPHIC SCALE: 1" = 100'
CONTOUR INTERVAL = 2 FEET

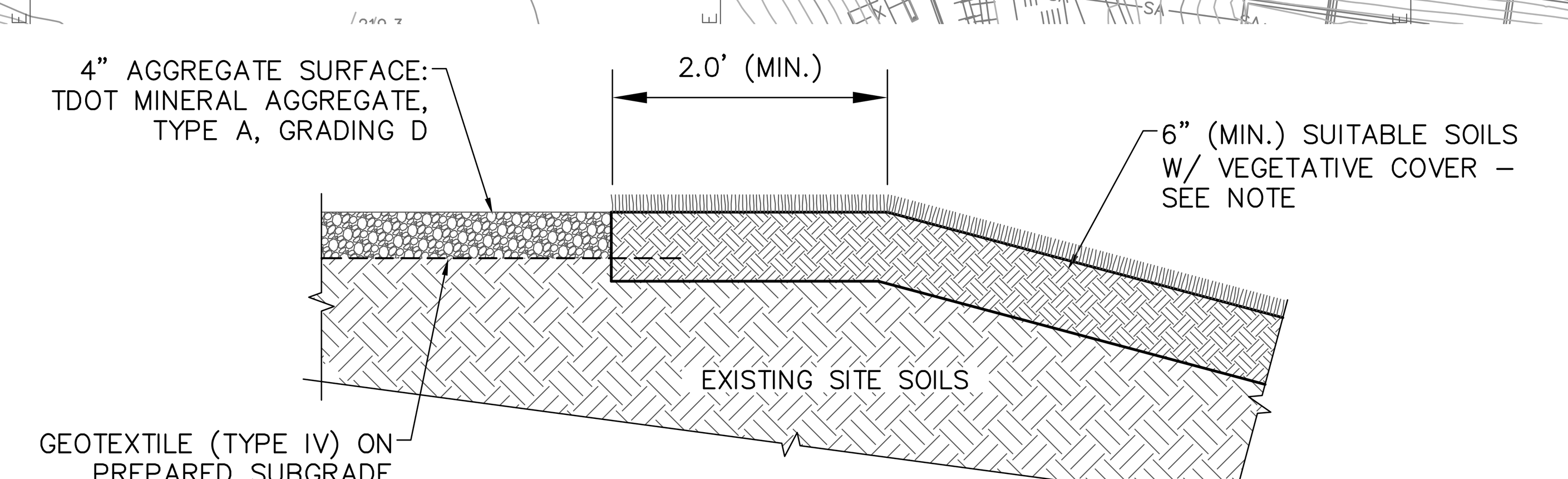
ISSUED FOR CONSTRUCTION

PERMANENT COVER NOTES:

ALL DISTURBED AREAS PER THIS PROJECT ARE TO BE STABILIZED WITH A PERMANENT COVER OF MIN. 4" MINERAL AGGREGATE, AS SHOWN PER DETAIL 1, THIS SHEET,, UNLESS OTHERWISE NOTED PER THESE PLANS.

PROJECT AREAS TO BE FINISHED WITH ALTERNATE PERMANENT COVER INCLUDE: FLEXAMAT LINING FOR THE EAST AND WEST DITCH, RIPRAP PROTECTION AND STABILIZATION, PROPOSED DRIVES/ROADWAYS, SLOPE/DITCH AREAS TO BE SODDED (AS SHOWN PER DETAILS 1 & 4, SHEET 10W231-16), AND OTHER AREAS AS NOTED IN THESE PLANS.

ALL PERMANENT COVER SURFACES SHALL BE TO FINAL GRADES AS SHOWN PER THESE PLANS. (REFER TO GRADING PLAN)



NOTE:
WHERE EXISTING SITE SOILS ARE DETERMINED TO BE UNSUITABLE TO SUPPORT VEGETATIVE COVER, THE FINISHED GRADE SHALL BE UNDERCUT 6" AND SUITABLE VEGETATIVE COVER SOIL SHALL BE PLACED TO THE REQUIRED FINISHED GRADES. ALTERNATELY, THE UPPER 6" OF EXISTING SITE SOILS MAY BE AMENDED TO PROVIDE A SUITABLE SOIL SURFACE FOR ESTABLISHING THE REQUIRED VEGETATIVE COVER.

1 SK-EC03 DETAIL – SURFACE STABILIZATION
NOT TO SCALE

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST
R 1	06/14/22	–	SDB	–	TM	–	–	–	–	–
R 0	07/30/21	NAP	NAP	TSM	HCE	N/A	N/A	TVA	609669	–
ISSUED FOR CONSTRUCTION AS PER PROJECT ID 609669										

SCALE: 1"=100' EXCEPT AS NOTED

SEE 10W231-01 FOR LIST OF DESIGN, COMPANION, REFERENCE DRAWINGS AND SUPPORTING DESIGN CALCULATIONS NUMBER.

YARD
D4 PLANT SITE

PLANT SITE RESTORATION EPSC PLAN STAGE III

DESIGNED BY: | DRAWN BY: | CHECKED BY: | SUPERVISED BY: | REVIEWED BY: | APPROVED BY: | ISSUED BY:

Stantec
601 Grassmere Park Road, Suite 22
Nashville, Tennessee 37211
www.stantec.com

ALLEN FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

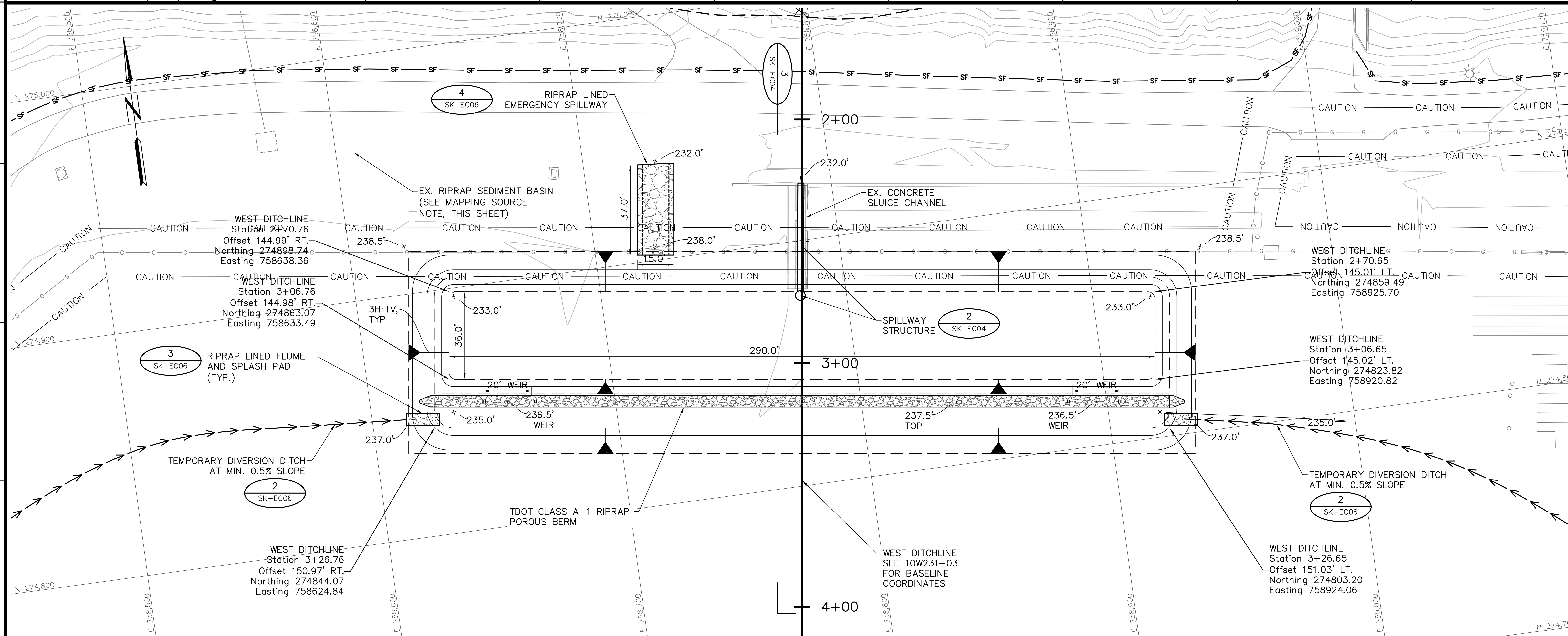
AUTOCAD R | 38 | C | SK–EC03 | R 0

STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

C.A.D. DRAWING DO NOT ALTER MANUALLY

38 C SK–EC03



1 SK-EC04 PLAN – SEDIMENT BASIN 1
SCALE: 1"=20'

SURVEY CONTROL NOTE:

A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751–8416 OR (423)751–2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

METADATA:

HORIZONTAL PROJECTION: PLANT LOCAL GROUND
PLANT LOCAL GROUND COORDINATES ARE BASED ON THE TENNESSEE NAD 27 STATE PLANE COORDINATE SYSTEM, BUT REPRESENT LOCATIONS ON THE GROUND. THEY ARE NOT EQUIVALENT TO GRID POSITIONS.
HORIZONTAL DATUM: LOCAL
VERTICAL DATUM: NGVD 29
H&V ACCURACY: GPS RTK
UNITS: US SURVEY FEET (SFT)

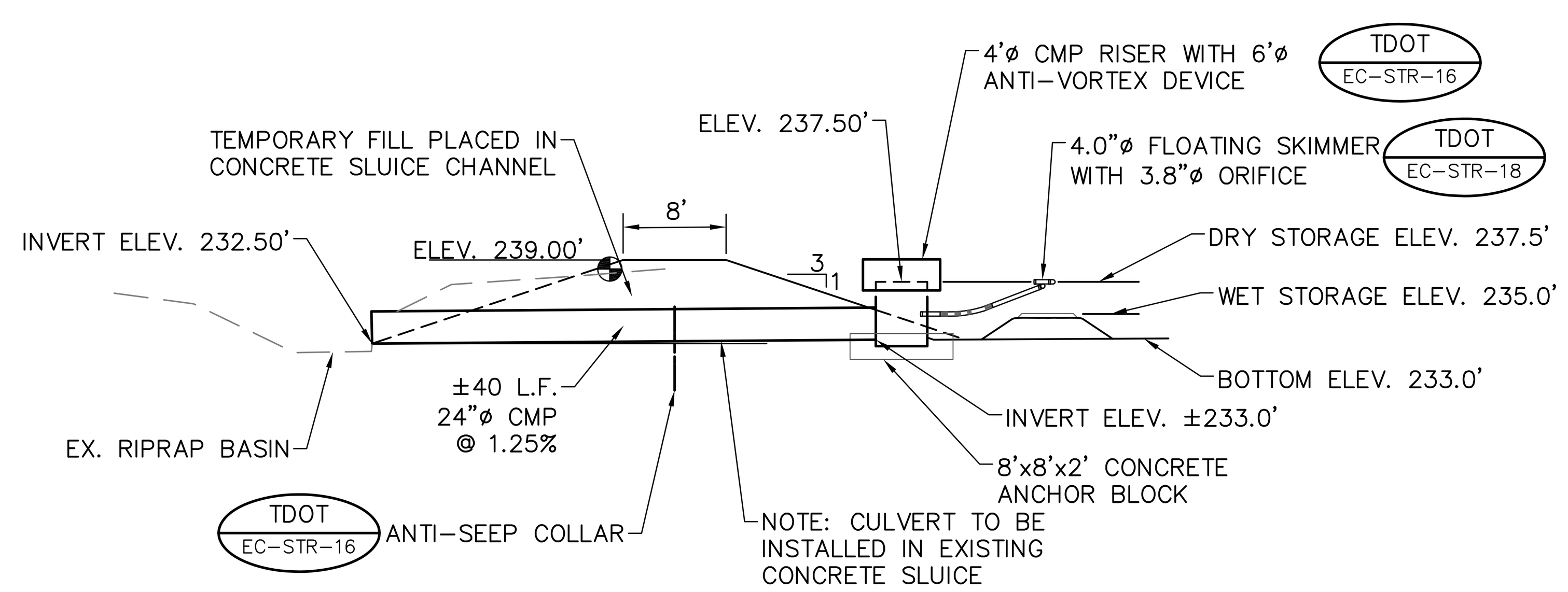
MAPPING SOURCE NOTE:

TOPOGRAPHIC MAPPING WAS OBTAINED FROM TUCK MAPPING SOLUTIONS, INC.
FLIGHT DATE: 03/11/2014; COMPLETION DATE: 08/25/2014
ADDITIONAL TOPOGRAPHIC INFORMATION WAS OBTAINED/CONFIRMED BY ALLEN & HOSHALL, INC. DATED 06/29/2016 AND BY STANTEC CONSULTING SERVICES, INC. DATED 09/24/2019 (IRA PROJECT & PARTIAL COAL YARD AREA; SHOWN IN PROFILE/SECTION VIEWS ONLY).

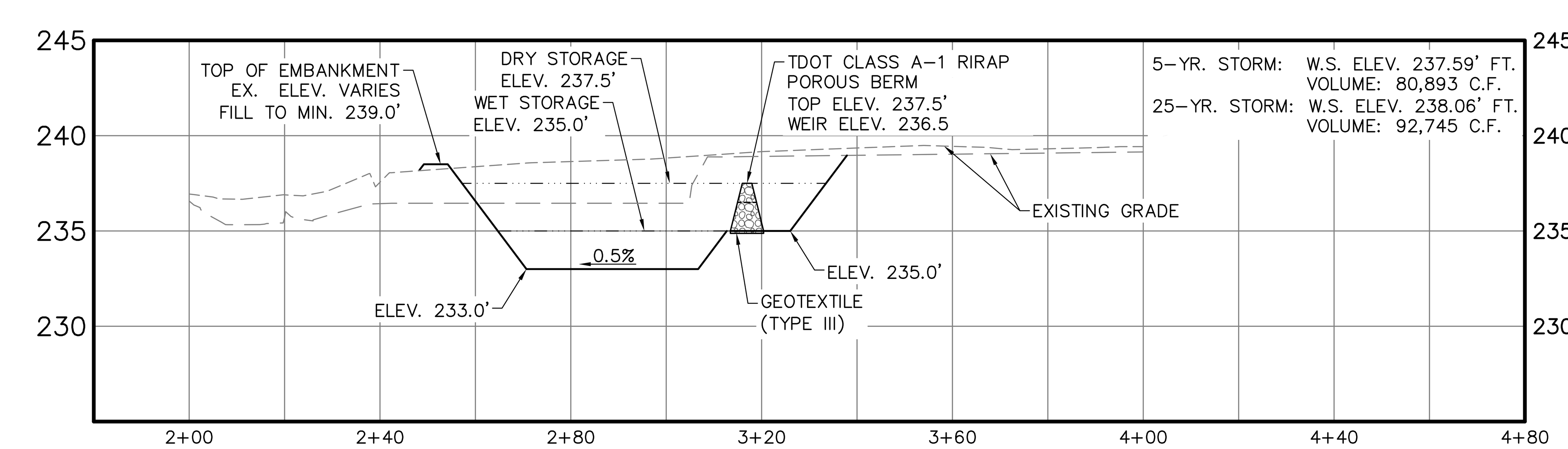
ADDITIONAL (NON-SURVEYED) TOPOGRAPHIC AND PLANIMETRICS FOR THE EXISTING RIP-RAP SEDIMENT BASIN ARE TAKEN FROM DESIGN INFORMATION PER TVA DRAWING 10W230-03. APPROXIMATE LIMITS AND ELEVATIONS OF EXISTING PLANT BUILDING BASEMENT ARE TAKEN FROM TVA-PROVIDED BUILDING ARCHITECTURAL PLANS DATED 11/16/1958.

LEGEND

GAS VALVE
GUYWIRE
LIGHT POLE
MANHOLE
POST
SANITARY MANHOLE
SIGN
SPOT ELEVATION
TREE/SHRUB
UTILITY POLE
WATER METER
WATER VALVE
EDGE OF PAVED ROAD
EDGE OF GRAVEL ROAD
EDGE OF WATER
FENCE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
RAILROAD TRACK
OVERHEAD ELECTRIC LINE
SANITARY LINE
TELEPHONE LINE
TREE LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND TELEPHONE LINE
WATER LINE
GAS LINE
LIMITS OF CONSTRUCTION
PROJECT BASELINE
UTILITY/PROJECT BASELINE
PROP. INDEX CONTOUR
PROP. INTERMEDIATE CONTOUR
DITCHLINE/EDGE OF WATER
PROPOSED SEEDED AREA
EROSION CONTROL BLANKET
EROSION CONTROL BLANKET
RIP RAP APRON
GRAVEL ROAD / DRIVEWAY
HIGH-VISIBILITY SAFETY FENCING
SILT FENCE
SEDIMENT TUBE
ROCK CHECK DAM
ENHANCED CHECK DAM
INLET PROTECTION



2 SK-EC04 DETAIL – SEDIMENT BASIN 1 SPILLWAY
SCALE: 1"=10'



3 SK-EC04 SECTION – SEDIMENT BASIN 1
SCALE: 1"=20' (HORIZONTAL) 1"=5' (VERTICAL)

ISSUED FOR CONSTRUCTION

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST
R 1	06/14/22	SDB	SDB	–	TM		–	–	–	–
R 0	07/30/21	NAP	NAP	TSM	HCE	N/A	N/A	TVA	609669	–

ISSUED FOR CONSTRUCTION AS PER PROJECT ID 609669

SCALE: AS SHOWN — EXCEPT AS NOTED

YARD
D4 PLANT SITE

PLANT SITE RESTORATION
EPSC PLAN
TEMPORARY SEDIMENT BASIN 1

SEE 10W231–01 FOR LIST OF DESIGN, COMPANION, REFERENCE DRAWINGS AND SUPPORTING DESIGN CALCULATIONS NUMBER.

Stantec
601 Grassmere Park Road, Suite 22
Nashville, Tennessee 37211
www.stantec.com

ALLEN FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R | 38 | C | SK–EC04 | R 0

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

STANTEC 0
TASK COMPLETED BY: REV NO.

PLOT FACTOR:1
W_TVA

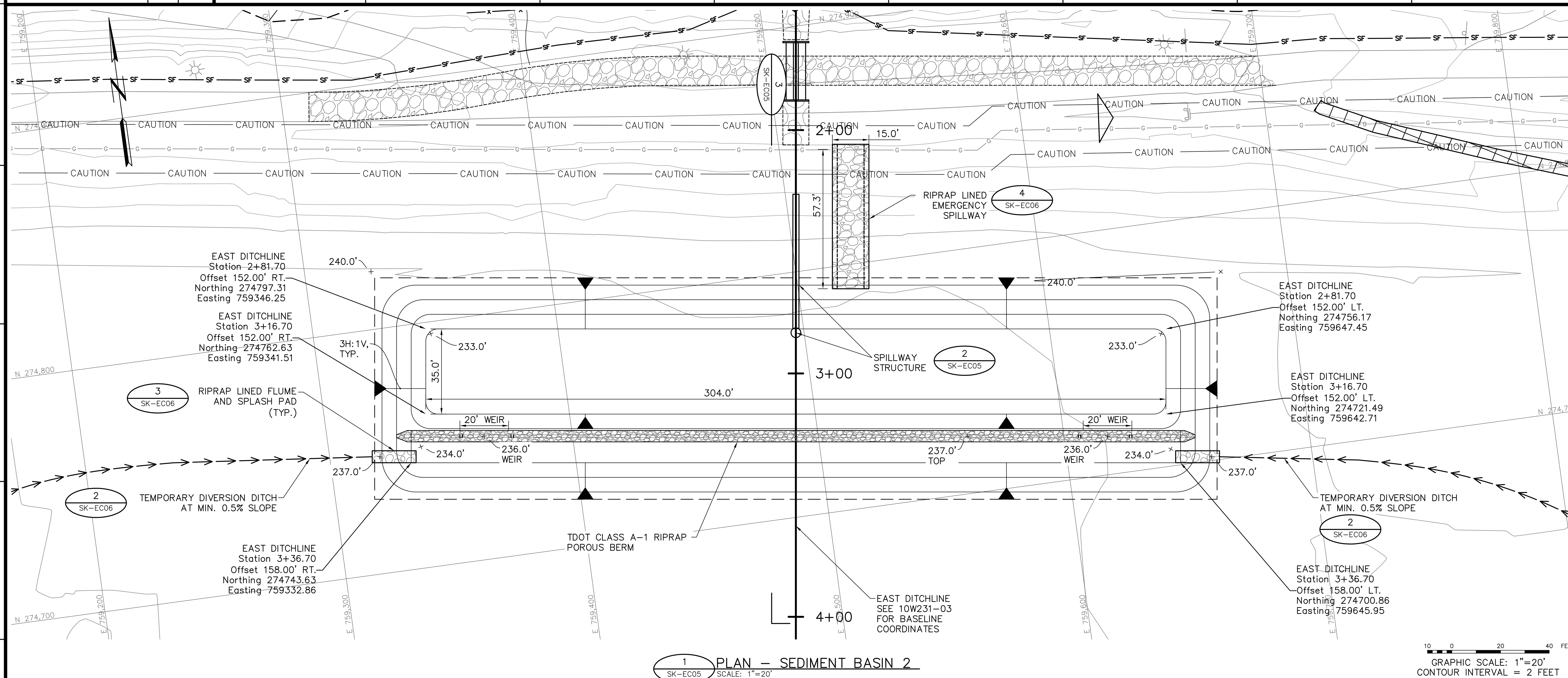
C.A.D. DRAWING
DO NOT ALTER MANUALLY

SURVEY CONTROL NOTE:
A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

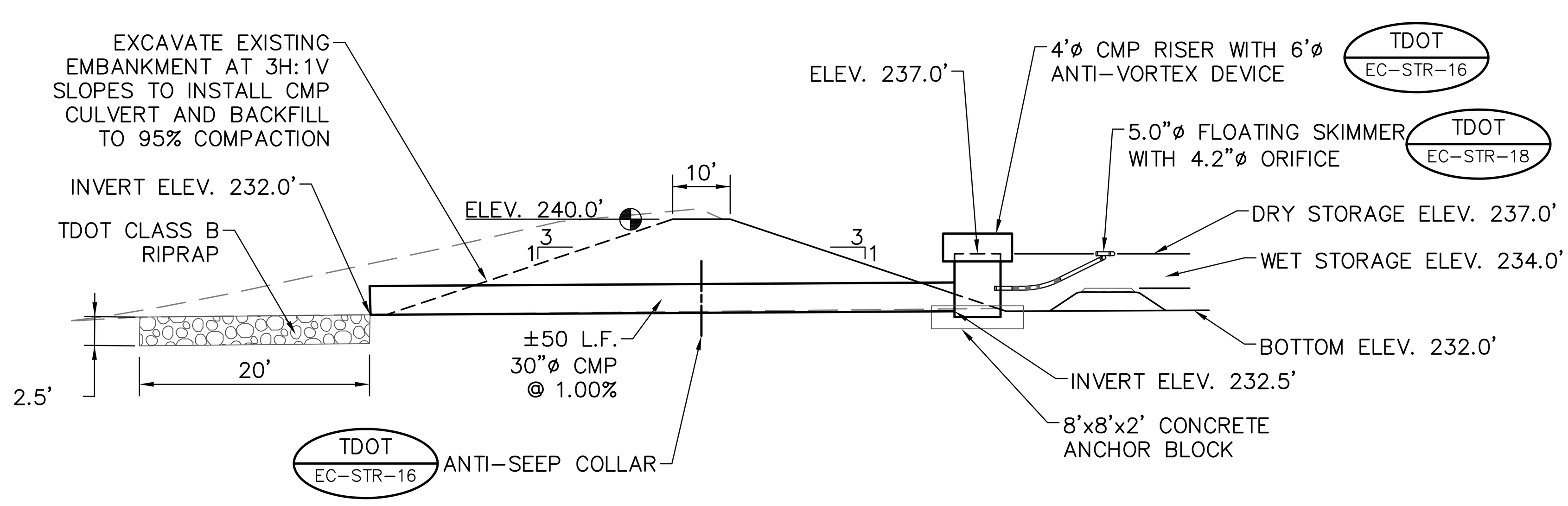
METADATA:
HORIZONTAL PROJECTION: PLANT LOCAL GROUND
PLANT LOCAL GROUND COORDINATES ARE BASED ON THE TENNESSEE NAD 27 STATE PLANE COORDINATE SYSTEM, BUT REPRESENT LOCATIONS ON THE GROUND. THEY ARE NOT EQUIVALENT TO GRID POSITIONS.
HORIZONTAL DATUM: LOCAL
VERTICAL DATUM: NGVD 29
H&V ACCURACY: GPS RTK
UNITS: US SURVEY FEET (SFT)

MAPPING SOURCE NOTE:
TOPOGRAPHIC MAPPING WAS OBTAINED FROM TUCK MAPPING SOLUTIONS, INC.
FLIGHT DATE: 03/11/2014; COMPLETION DATE: 08/25/2014
ADDITIONAL TOPOGRAPHIC INFORMATION WAS OBTAINED/CONFIRMED BY ALLEN & HOSHALL, INC. DATED 06/29/2016 AND BY STANTEC CONSULTING SERVICES, INC. DATED 09/24/2019 (IRA PROJECT & PARTIAL COAL YARD AREA; SHOWN IN PROFILE/SECTION VIEWS ONLY).

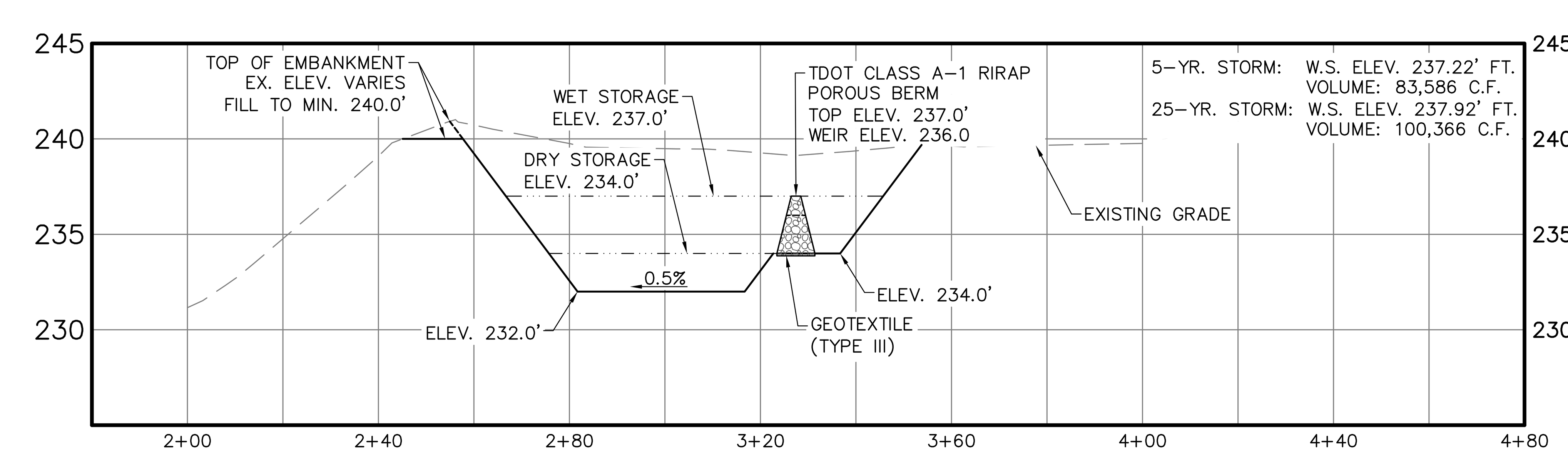
ADDITIONAL (NON-SURVEYED) TOPOGRAPHIC AND PLANIMETRICS FOR THE EXISTING RIP-RAP SEDIMENT BASIN ARE TAKEN FROM DESIGN INFORMATION PER TVA DRAWING 10W230-03. APPROXIMATE LIMITS AND ELEVATIONS OF EXISTING PLANT BUILDING BASEMENT ARE TAKEN FROM TVA-PROVIDED BUILDING ARCHITECTURAL PLANS DATED 11/16/1958.



1 SK-EC05 PLAN – SEDIMENT BASIN 2
SCALE: 1"=20'



2 SK-EC05 DETAIL – SEDIMENT BASIN 2 SPILLWAY
SCALE: 1"=10'



3 SK-EC05 SECTION – SEDIMENT BASIN 2
SCALE: 1"=20' (HORIZONTAL) 1"=5' (VERTICAL)

LEGEND

GAS VALVE
GUYWIRE
LIGHT POLE
MANHOLE
POST
SANITARY MANHOLE
SIGN
SPOT ELEVATION
TREE/SHRUB
UTILITY POLE
WATER METER
WATER VALVE
EDGE OF PAVED ROAD
EDGE OF GRAVEL ROAD
EDGE OF WATER
FENCE LINE
INDEX CONTOUR
INTERMEDIATE CONTOUR
RAILROAD TRACK
OVERHEAD ELECTRIC LINE
SANITARY LINE
TELEPHONE LINE
TREE LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND TELEPHONE LINE
WATER LINE
GAS LINE
LIMITS OF CONSTRUCTION
PROJECT BASELINE
UTILITY/PROJECT BASELINE
PROP. INDEX CONTOUR
PROP. INTERMEDIATE CONTOUR
DITCHLINE/EDGE OF WATER
PROPOSED SEEDED AREA
EROSION CONTROL BLANKET
EROSION CONTROL BLANKET
RIP RAP APRON
GRAVEL ROAD / DRIVEWAY
HIGH-VISIBILITY SAFETY FENCING
SILT FENCE
SEDIMENT TUBE
ROCK CHECK DAM
ENHANCED CHECK DAM
INLET PROTECTION

ISSUED FOR CONSTRUCTION

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST
R 1	06/14/22	SDB	SDB	–	TM	–	–	–	–	–
R 0	07/30/21	NAP	NAP	TSM	HCE	N/A	N/A	TVA	609669	–

ISSUED FOR CONSTRUCTION AS PER PROJECT ID 609669

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
D4 PLANT SITE

PLANT SITE RESTORATION
EPSC PLAN
TEMPORARY SEDIMENT BASIN 2

SEE 10W231-01 FOR LIST OF DESIGN, COMPANION, REFERENCE DRAWINGS AND SUPPORTING DESIGN CALCULATIONS NUMBER.

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

Stantec
601 Grassmere Park Road, Suite 22
Nashville, Tennessee 37211
www.stantec.com

ALLEN FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R | 38 | C | SK-EC05 | R 0

STANTEC 0
TASK COMPLETED BY: REV NO.

PLOT FACTOR:1
W_TVA

C.A.D. DRAWING
DO NOT ALTER MANUALLY

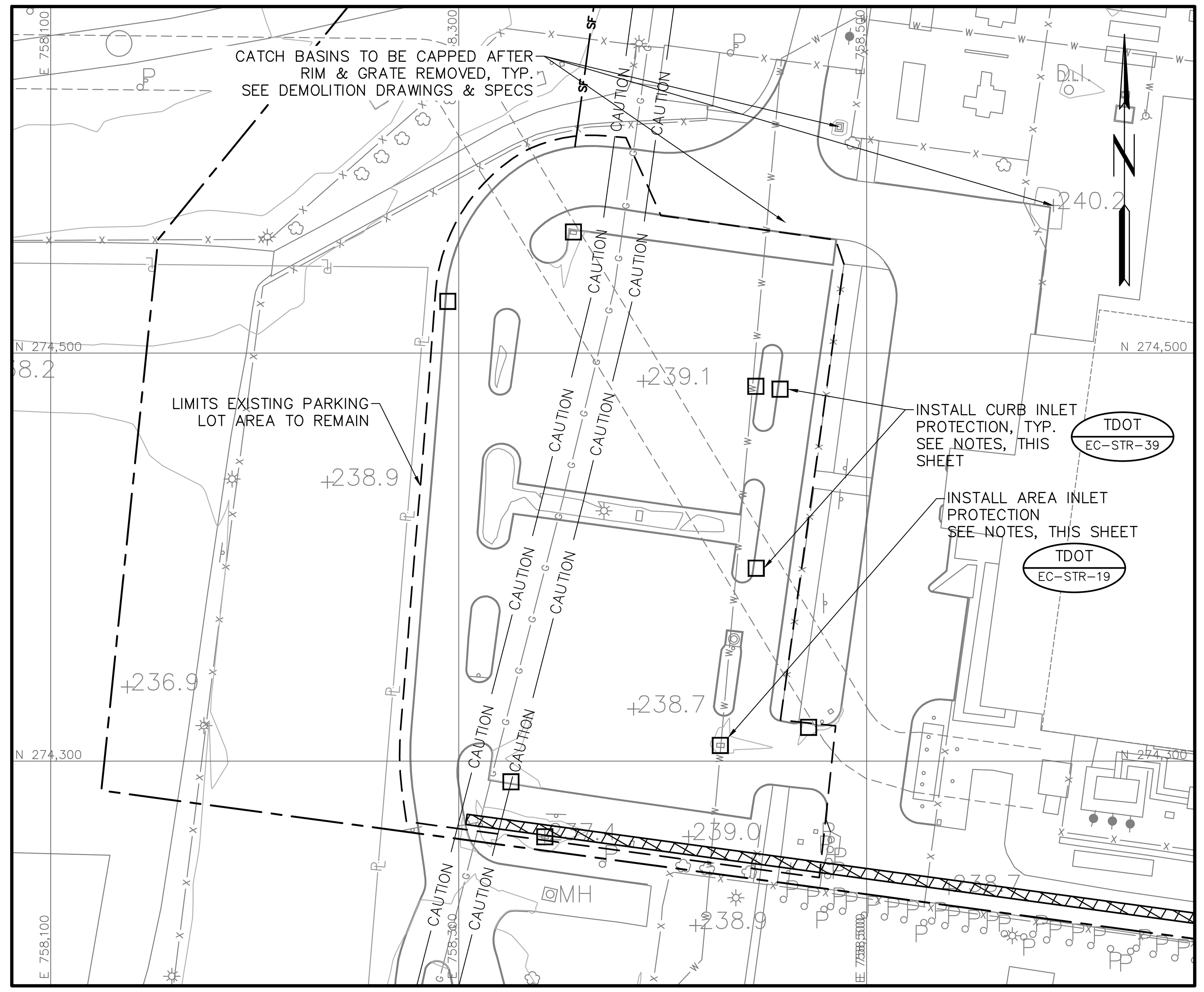
SURVEY CONTROL NOTE:
A GLOBAL POSITIONING SYSTEM (GPS) BASE STATION HAS BEEN ESTABLISHED AND TRANSFORMATION PARAMETERS DETERMINED BY TVA USING SELECTED SURVEY CONTROL MONUMENTS. CONTACT WITH TVA SURVEYING DEPARTMENT (423)751-8416 OR (423)751-2571 SHALL BE MADE BEFORE ANY SURVEY OR CONSTRUCTION WORK IS COMMENCED. BASE STATION FREQUENCIES AND TRANSFORMATION PARAMETERS WILL BE PROVIDED TO THE CONTRACTOR FOR USE IN CONSTRUCTION ACTIVITIES AT THE SITE. PREVIOUSLY USED OR ESTABLISHED CONTROL POINTS AND MONUMENTS SHALL NOT BE USED BY THE CONTRACTOR WITHOUT PRIOR APPROVAL BY TVA SURVEYING DEPARTMENT.

METADATA:
HORIZONTAL PROJECTION: PLANT LOCAL GROUND
PLANT LOCAL GROUND COORDINATES ARE BASED ON THE TENNESSEE NAD 27 STATE PLANE COORDINATE SYSTEM, BUT REPRESENT LOCATIONS ON THE GROUND. THEY ARE NOT EQUIVALENT TO GRID POSITIONS.
HORIZONTAL DATUM: LOCAL
VERTICAL DATUM: NGVD 29
H&V ACCURACY: GPS RTK
UNITS: US SURVEY FEET (SFT)

MAPPING SOURCE NOTE:
TOPOGRAPHIC MAPPING WAS OBTAINED FROM TUCK MAPPING SOLUTIONS, INC.
FLIGHT DATE: 03/11/2014; COMPLETION DATE: 08/25/2014
ADDITIONAL TOPOGRAPHIC INFORMATION WAS OBTAINED/CONFIRMED BY ALLEN & HOSHALL, INC. DATED 06/29/2016 AND BY STANTEC CONSULTING SERVICES, INC. DATED 09/24/2019 (IRA PROJECT & PARTIAL COAL YARD AREA; SHOWN IN PROFILE/SECTION VIEWS ONLY).

ADDITIONAL (NON-SURVEYED) TOPOGRAPHIC AND PLANIMETRICS FOR THE EXISTING RIP-RAP SEDIMENT BASIN ARE TAKEN FROM DESIGN INFORMATION PER TVA DRAWING 10W230-03. APPROXIMATE LIMITS AND ELEVATIONS OF EXISTING PLANT BUILDING BASEMENT ARE TAKEN FROM TVA-PROVIDED BUILDING ARCHITECTURAL PLANS DATED 11/16/1958.

EPSC NOTES:
1. NO PROPOSED DEMOLITION OR GRADING WORK IS PROPOSED WITHIN THE EXISTING PARKING LOT LIMITS AS SHOWN IN THE DETAIL PLAN, THIS SHEET.
2. ALL INLET PROTECTION SHALL BE INSTALLED PRIOR TO PROPOSED DEMOLITION AND GRADING WORK AND SHALL REMAIN IN PLACE FOR DURATION OF THE PROJECT (I.E. EPSC STAGES I-III) UNTIL FINAL STABILIZATION IS COMPLETE.
3. CATCH BASINS / DRAINAGE STRUCTURES ENCOUNTERED ELSEWHERE ON THE PROJECT WILL BE REMOVED OR ABANDONED IN PLACE DURING THE DEMOLITION WORK. SEE DEMOLITION PLANS AND SPECIFICATIONS FOR DETAILS.

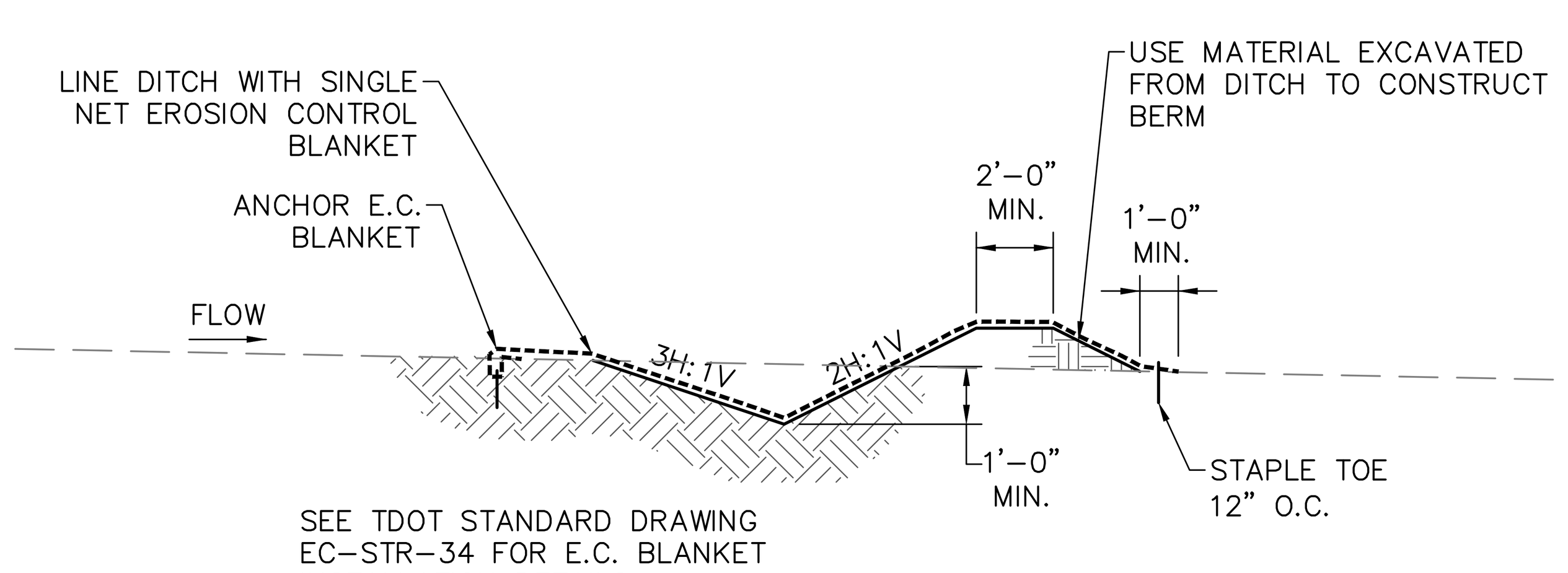


1 SK-EC06 DETAIL PLAN – PARKING AREA EPSC
SCALE: 1"=40'

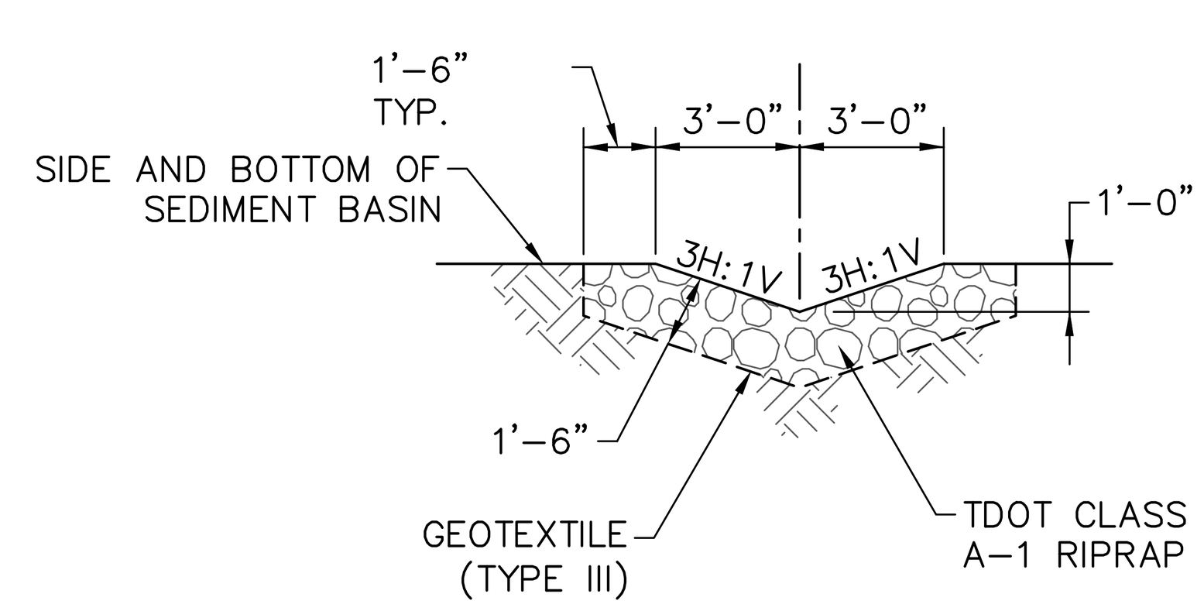
GRAPHIC SCALE: 1" = 40'
CONTOUR INTERVAL = N/A

LEGEND

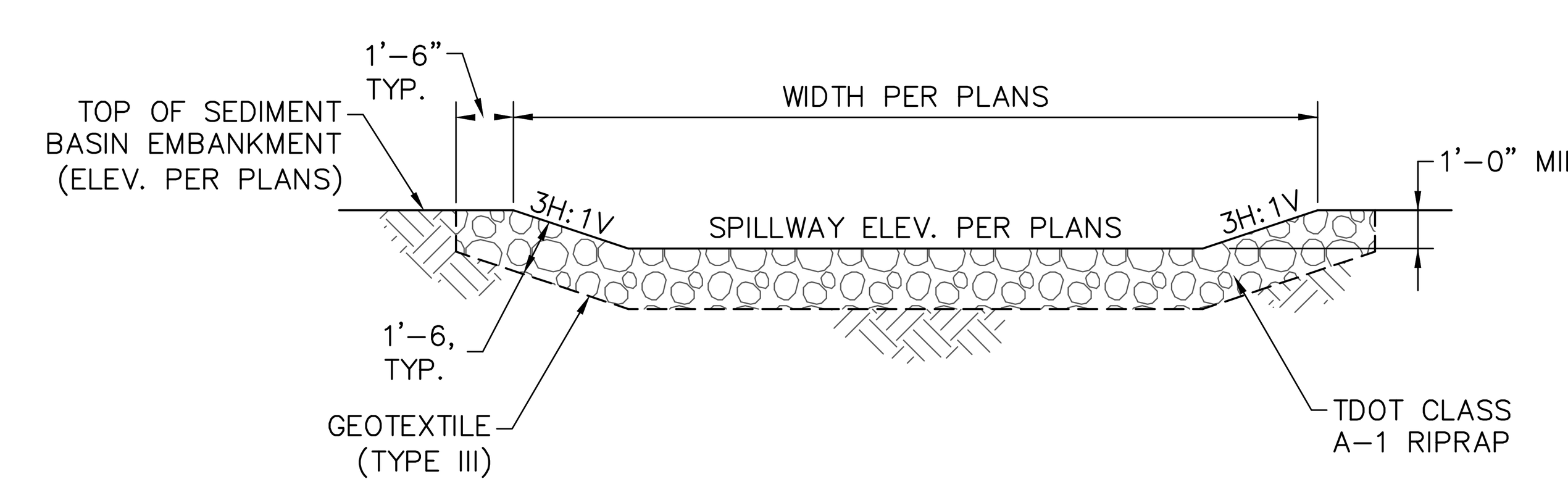
- GAS VALVE
- GUYWIRE
- LIGHT POLE
- MANHOLE
- POST
- SANITARY MANHOLE
- SIGN
- SPOT ELEVATION
- TREE/SHRUB
- UTILITY POLE
- WATER METER
- WATER VALVE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EDGE OF WATER
- FENCE LINE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- RAILROAD TRACK
- OVERHEAD ELECTRIC LINE
- SANITARY LINE
- TELEPHONE LINE
- TREE LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- WATER LINE
- GAS LINE
- LIMITS OF CONSTRUCTION
- UTILITY/PROJECT BASELINE
- PROP. INDEX CONTOUR
- PROP. INTERMEDIATE CONTOUR
- DITCHLINE/EDGE OF WATER
- PROPOSED SEEDED AREA
- EROSION CONTROL BLANKET
- EROSION CONTROL BLANKET
- RIP RAP APRON
- GRAVEL ROAD / DRIVEWAY
- HIGH-VISIBILITY SAFETY FENCING
- SILT FENCE
- SEDIMENT TUBE
- ROCK CHECK DAM
- ENHANCED CHECK DAM
- INLET PROTECTION



2 SK-EC06 DETAIL – TEMPORARY DIVERSION DITCH
SCALE: 1/4"=1'-0"



3 SK-EC06 DETAIL – RIP RAP FLUME
SCALE: 1/4"=1'-0"



4 SK-EC06 DETAIL – EMERGENCY SPILLWAY
SCALE: 1/4"=1'-0"

SECTION OR DETAIL NO.
SHEET WHERE SHOWN
REFERENCE KEY

ISSUED FOR CONSTRUCTION

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVWD	APPD	ISSD	PROJECT ID	AS CONST	REV CD
R 0	07/30/21	NAP	NAP	TSM	HCE	N/A	N/A	TVA	609669	–	D

ISSUED FOR CONSTRUCTION AS PER PROJECT ID 609669

SCALE: AS SHOWN EXCEPT AS NOTED

YARD
D4 PLANT SITE

PLANT SITE RESTORATION
EPSC PLAN
DETAILS

SEE 10W231-01 FOR LIST OF DESIGN, COMPANION, REFERENCE DRAWINGS AND SUPPORTING DESIGN CALCULATIONS NUMBER.

DESIGNED BY: | DRAWN BY: | CHECKED BY: | SUPERVISED BY: | REVIEWED BY: | APPROVED BY: | ISSUED BY:

Stantec
601 Grassmere Park Road, Suite 22
Nashville, Tennessee 37211
www.stantec.com

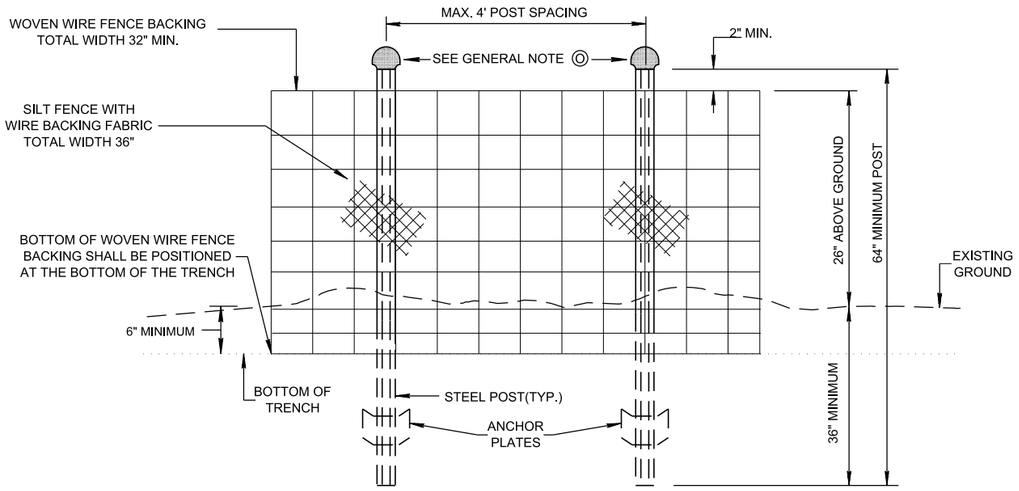
ALLEN FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R | DATE | 38 | C | SK-EC06 | R 0

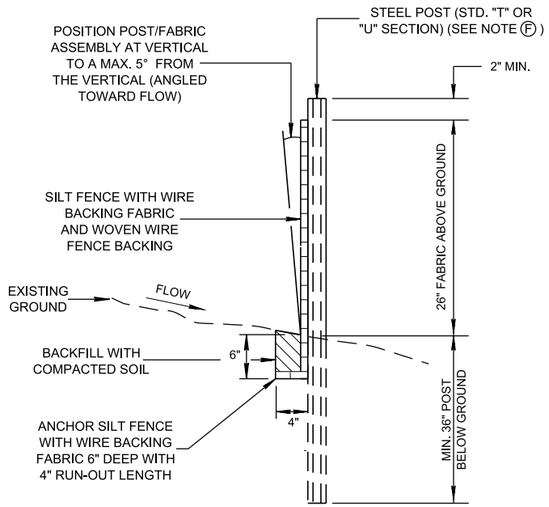
STANTEC | 0
TASK COMPLETED BY: | REV NO.

PLOT FACTOR:1
W_TVA

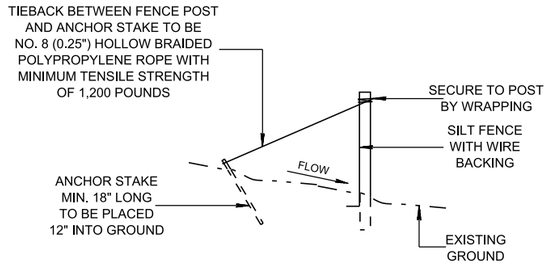
C.A.D. DRAWING
DO NOT ALTER MANUALLY



ELEVATION VIEW



SECTIONAL VIEW



SILT FENCE TIEBACK

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE WITH WIRE BACKING)

EROSION CONTROL PLAN LEGEND: * SFB * SFB * SFB * SILT FENCE WITH WIRE BACKING

NOT TO SCALE

SILT FENCE WITH WIRE BACKING FABRIC SPECIFICATIONS	
FABRIC PROPERTY AND TEST METHODS	**REQUIRED PHYSICAL PROPERTIES (MARV VALUES OF TEST DATA)**
GEOTEXTILE FABRIC TYPE	WOVEN MONOFILAMENT
APPARENT OPENING SIZE (ASTM D4751)	# 70 TO # 100 STANDARD SIEVE
WATER FLUX (ASTM D4491)	≥ 18 GPM/FT ^{2}
TENSILE STRENGTH (ASTM D4632)	≥ 310 LB. (WARP DIRECTION) X 200 LB. (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
BURST STRENGTH (ASTM D3786)	≥ 400 PSI
PUNCTURE STRENGTH (ASTM D4833)	≥ 105 LB.
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 100 LB. (WARP DIRECTION) X 60 LB. (FILL DIRECTION)

GENERAL NOTES

Ⓐ SILT FENCE WITH WIRE BACKING IS USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW ONLY. USE SILT FENCE WITH WIRE BACKING UP-GRADIENT TO, AND ALONG THE PERIMETER OF STREAMS, WETLANDS, PONDS, SPRINGS, OR OTHER NATURAL WATER RESOURCES LOCATED WITHIN OR ADJACENT TO THE PROJECT RIGHT-OF-WAY AND AT LARGE FILL SLOPES.

Ⓑ THE MAXIMUM DRAINAGE AREA SIZE FOR CONTINUOUS SILT FENCE WITH BACKING SHALL BE 1 ACRE PER 150 LINEAR FEET OF FENCE LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UP SLOPE SIDE SHALL BE 290 FEET (AS MEASURED ALONG THE GROUND SURFACE).

Ⓒ WHEN INSTALLED AT THE TOE OF A SLOPE SILT FENCE WITH WIRE BACKING SHOULD BE PLACED 5 FEET TO 10 FEET AWAY FROM THE TOE TO ALLOW SPACE FOR PONDING OF WATER, COLLECTION OF SEDIMENT, AND EASE OF MAINTENANCE AND REMOVAL.

Ⓓ WHEN TWO SECTIONS OF SILT FENCE WITH WIRE BACKING FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING EC-STR-3E.

Ⓔ MAINTENANCE SHALL BE PREFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND/OR WHEN EVIDENCE OF FILTER CLOGGING IS OBSERVED.

Ⓕ STEEL POSTS SHALL BE ROLLED FROM HIGH CARBON STEEL AND SHALL HAVE A MINIMUM WEIGHT OF 1.25 LB/FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH GRADE WEATHER RESISTANT STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED TO AID IN THE ATTACHMENT OF THE WIRE BACKING. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702.

Ⓖ STEEL POSTS SHALL HAVE A PROJECTION FOR FASTENING WIRE TO THEM. WOVEN WIRE FENCE BACKING TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. THE WIRE FASTENERS SHOULD BE EVENLY SPACED WITH AT LEAST SIX PER POST.

Ⓗ FABRIC SHALL BE FASTENED SECURELY TO WOVEN WIRE FENCE BACKING WITH THE TIES SPACED EVERY 24 INCHES ALONG TOP AND MIDSECTION.

Ⓘ WOVEN WIRE FENCE BACKING SHALL MEET THE REQUIREMENTS FOR ASTM A-116 FOR NO. 11 FARM, DESIGN NO. 832-6-11, CLASS 3 COATING.

Ⓙ SILT FENCE WITH BACKING SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOURS. THE BOTTOM OF THE FENCE AT GROUND LINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS ONE HALF PERCENT (± 0.5%). THE END OF A ROW OF SILT FENCE WITH WIRE BACKING SHOULD BE TURNED UP SLOPE FORMING A J-HOOK TO FILTER ANY CONCENTRATED FLOW BEHIND FENCE.

Ⓚ FOR TRENCH-BASED INSTALLATIONS, SILT FENCING WITH WIRE BACKING SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:

1. EXCAVATE TRENCH A MAXIMUM OF 4 INCHES WIDE AND 6 INCHES DEEP. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
2. DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL.
3. ATTACH WOVEN WIRE FENCE BACKING TO POSTS AND FABRIC TO THE WIRE BACKING USING WIRE TIES. SPACING AND DENSITY OF TIES SHALL BE INSTALLED ACCORDING TO NOTES Ⓖ AND Ⓗ.
4. INSTALL FABRIC IN TRENCH.
5. BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
6. COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).

Ⓛ ONLY SILT FENCE WITH WIRE BACKING FABRIC LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED. ANY PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE MAY ALSO BE USED.

Ⓜ SILT FENCE WITH WIRE BACKING SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:

209-08.02 TEMPORARY SILT FENCE (WITH BACKING), L.F.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE SILT FENCE WITH WIRE BACKING.

Ⓝ SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WITH WIRE BACKING WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER C.Y.

Ⓞ ORANGE SAFETY CAPS FOR METAL POSTS SHALL BE REQUIRED TO MEET OSHA REGULATION 1926.701. ALL COST OF THE CAPS TO BE INCLUDED IN THE COST OF THE FENCE.

REV. 12-18-03: MODIFIED TABLE 2 AND GENERAL NOTE Ⓔ.

- REV. 7-29-04: CHANGED VALUES IN TABLE 2 FROM MEAN TO MARV VALUES.
- REV. 4-15-06: MODIFIED FABRIC HEIGHT, ADDED NOTES Ⓙ AND Ⓚ. REVISED TABLE TITLE. REORDERED GENERAL NOTES. REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED NOTES, AND MISC. EDITS TO DRAWING.
- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.
- REV. 06-28-2019: ADDED NOTE Ⓞ. REDREW SHEET.

- MINOR REVISION – FHWA APPROVAL NOT REQUIRED

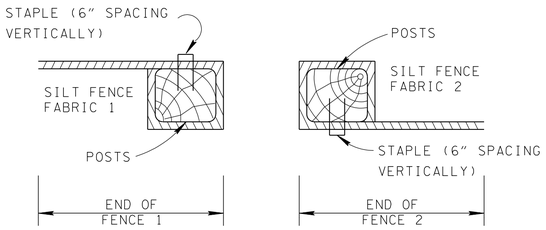
STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

SILT FENCE WITH WIRE BACKING

12-18-2002 EC-STR-3C

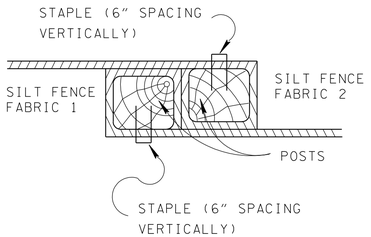
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: MISC. EDITS TO DRAWING, CHANGED DRAWING NAME, REFORMATTED SHEET.

STEP 1

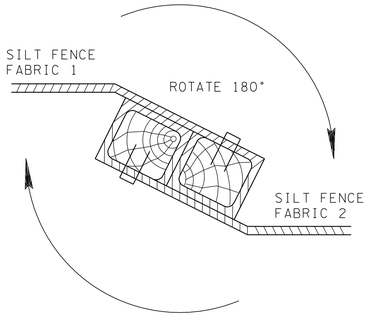


1. WRAP FABRIC AROUND END SUPPORTS AS SHOWN AND ANCHOR FABRIC TO POSTS.
2. POSITION POSTS/FABRIC AS SHOWN ABOVE.

STEP 2



STEP 3

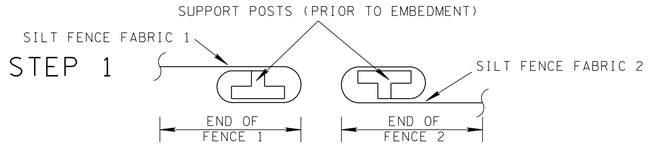


1. ROTATE BOTH POSTS WITH FABRIC CLOCKWISE AT LEAST 180°.
2. EMBED BOTH POSTS INTO GROUND PER SILT FENCE STANDARD DRAWING EC-STR-3B.

PLAN VIEW

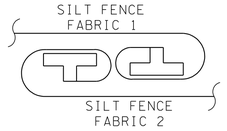
JOINING SILT FENCE FABRIC SECTIONS (WOOD POSTS)

STEP 1



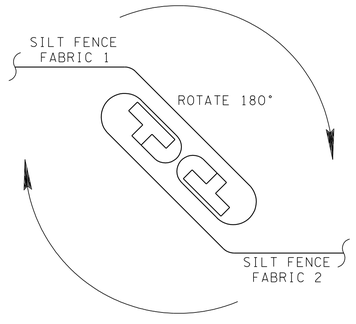
1. WRAP FABRIC AROUND END SUPPORTS AS SHOWN AND ANCHOR FABRIC TO POSTS.
2. POSITION POSTS/FABRIC AS SHOWN ABOVE.

STEP 2



1. POSITION THE SILT FENCE FABRIC 2 POST INSIDE OF THE SILT FENCE FABRIC 1 POST AS SHOWN ABOVE.

STEP 3



1. ROTATE BOTH POSTS WITH FABRIC CLOCKWISE AT LEAST 180°.
2. EMBED BOTH POSTS INTO GROUND PER APPLICABLE SILT FENCE STANDARD DRAWING. (EC-STR-3B, EC-STR-3C, OR EC-STR-3D)

PLAN VIEW

JOINING SILT FENCE FABRIC SECTIONS (STEEL POSTS)

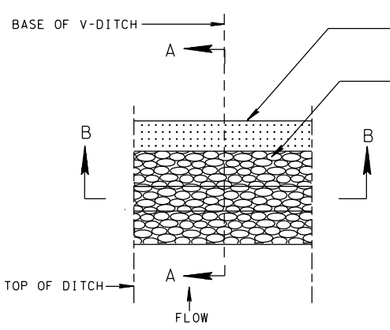
- MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

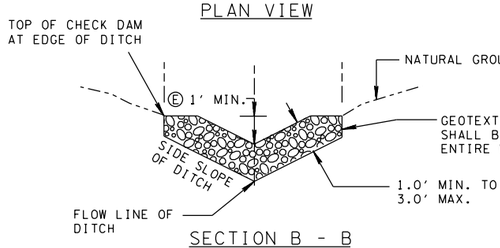
SILT FENCE FABRIC JOINING DETAILS

12-18-02 | EC-STR-3E

DETAIL FOR V-DITCH

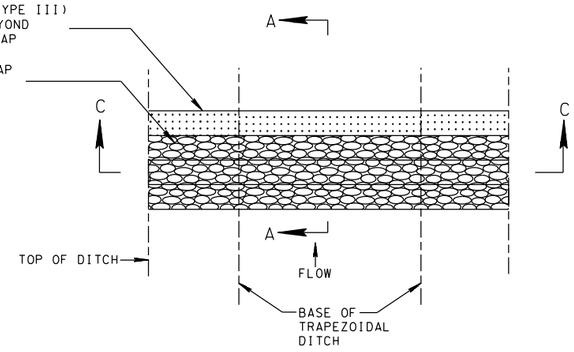


PLAN VIEW

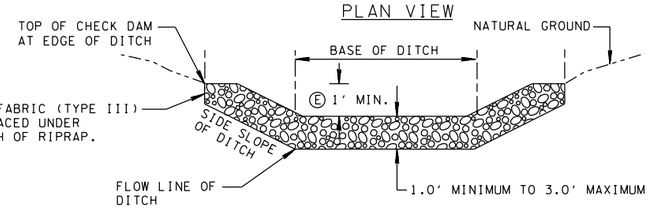


SECTION B - B

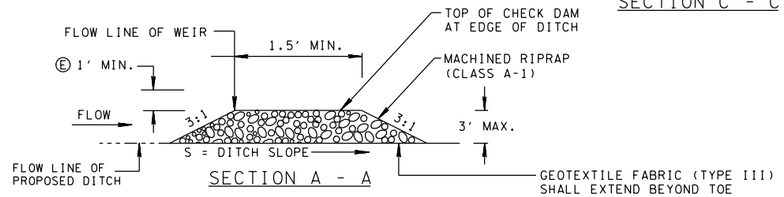
DETAIL FOR TRAPEZOIDAL DITCH



PLAN VIEW

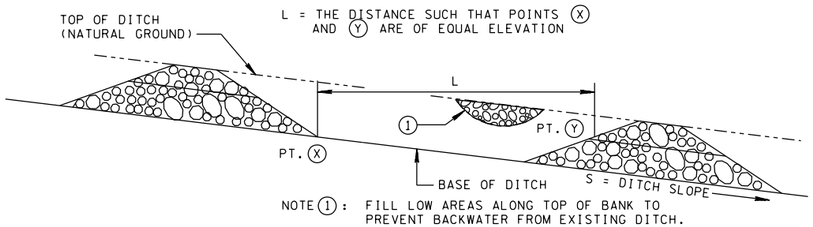


SECTION C - C



SECTION A - A

DETAIL FOR SPACING BETWEEN CHECK DAMS



NOTE ①: FILL LOW AREAS ALONG TOP OF BANK TO PREVENT BACKWATER FROM EXISTING DITCH.

ROCK CHECK DAM ESTIMATED QUANTITIES

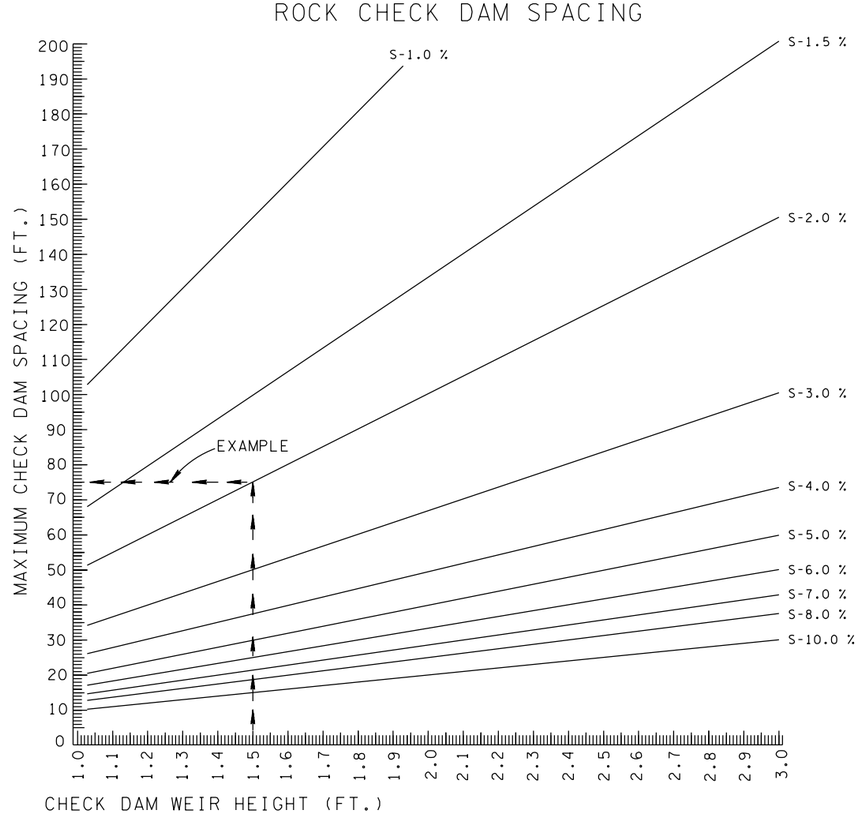
	2:1 DITCH SLOPE			3:1 DITCH SLOPE			4:1 DITCH SLOPE		
V-DITCH[1]	HEIGHT FT	RIP RAP TON	GEOTEXTILE SF	HEIGHT FT	RIP RAP TON	GEOTEXTILE SF	HEIGHT FT	RIP RAP TON	GEOTEXTILE SF
	1.5	6.5	16.8	1.5	9.2	23.7	1.5	12.0	30.9
	2.0	13.0	24.6	2.0	18.4	34.8	2.0	24.1	45.4
	2.5	22.8	33.9	2.5	32.3	48.0	2.5	42.1	62.5
	3.0	36.5	44.7	3.0	51.7	63.2	3.0	67.3	82.5
TRAPEZOIDAL DITCH[2]	HEIGHT FT	RIP RAP TON	GEOTEXTILE SF	HEIGHT FT	RIP RAP TON	GEOTEXTILE SF	HEIGHT FT	RIP RAP TON	GEOTEXTILE SF
	1.5	8.9	22.8	1.5	11.6	29.7	1.5	14.4	36.9
	2.0	16.9	31.9	2.0	22.3	42.1	2.0	27.9	52.7
	2.5	28.7	42.6	2.5	38.1	56.6	2.5	47.9	71.2
	3.0	44.7	54.7	3.0	59.8	73.2	3.0	75.5	92.4

1. ESTIMATED QUANTITIES BASED ON 4:1 SIDE SLOPES. QUANTITIES WILL VARY BASED ON ACTUAL DITCH CONFIGURATION.
2. ESTIMATED QUANTITIES BASED ON 4FT BOTTOM WIDTH, AND 4:1 SIDE SLOPES. QUANTITIES WILL VARY BASED ON ACTUAL DITCH CONFIGURATION.

EROSION CONTROL PLAN LEGEND : ROCK CHECK DAM (V-DITCH)

EROSION CONTROL PLAN LEGEND : ROCK CHECK DAM (TRAPEZOIDAL DITCH)

ROCK CHECK DAM SPACING



EXAMPLE: HEIGHT OF WEIR 1.5'; SLOPE 2%
EXTEND PERPENDICULAR FROM 1.5' HEIGHT TO INTERSECT S = 2.0% SLOPE
EXTEND 90° TO THE LEFT TO DETERMINE SPACING (75'+)

- REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-6 TO EC-STR-6.
- REV. 7-29-96: MADE MINOR CORRECTIONS TO GENERAL NOTES.
- REV. 4-15-98: CHANGED PAY ITEMS FOR CHECK DAMS.
- REV. 5-27-01: CHANGED DESCRIPTION FOR GEOTEXTILE FABRIC (TYPE III, CLASS A) TO GEOTEXTILE FABRIC (TYPE III).
- REV. 12-18-02: CHANGED GENERAL NOTE Ⓖ.
- REV. 1-22-03: CORRECTED NOTE IN SECTION A-A.
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: REMOVED TEMPORARY REFERENCE, REVISED NOTES, MISC. EDITS TO DRAWING, MODIFIED SPACING CHART.
- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.
- REV. 5-6-16: REVISED QUANTITIES TABLE, REVISED GENERAL NOTE Ⓘ. REVISED DITCH DETAIL.

ROCK CHECK DAM GENERAL NOTES

Ⓐ ROCK CHECK DAMS ARE TO BE USED FOR VELOCITY REDUCTION AND EROSION PREVENTION IN AREAS WHERE CONCENTRATED FLOW EXISTS. ROCK CHECK DAMS SHALL NOT BE USED IN STREAMS OR OTHER NATURAL WATER RESOURCES. ROCK CHECK DAMS ARE NOT TO BE USED FOR SEDIMENT CONTROL AND SHOULD NOT BE CONSIDERED A SEDIMENT TRAPPING DEVICE.

Ⓑ THE DRAINAGE AREA FOR THE ROCK CHECK DAMS SHALL BE 10 ACRES OR LESS.

Ⓒ ROCK CHECK DAMS MAY REMAIN IN PLACE AS PERMANENT CHECK DAMS, IF SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

Ⓓ THE CENTER OF THE ROCK CHECK DAM MUST BE AT LEAST ONE (1) FOOT LOWER THAN THE OUTER EDGES.

Ⓔ THE DEPTH OF FLOW ON THE CENTER OF THE STRUCTURE SHALL BE COMPUTED FOR THE PEAK FLOW RATE GENERATED BY THE 2-YEAR, 24-HOUR STORM IN ORDER TO ENSURE THAT THE TOP OF THE STRUCTURE WILL NOT BE OVERTOPPED. FOR SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPARIED STREAMS, THE DEPTH SHOULD BE DETERMINED FOR THE 5-YEAR, 24-HOUR PEAK FLOW RATE. THIS WILL ELIMINATE THE ROCK-SOIL FAILURE POINT WHERE THE ROCK CHECK DAM AND NATURAL GROUND MERGE.

Ⓕ FOR SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE MINIMUM HEIGHT OF THE STRUCTURE ABOVE THE DITCH BOTTOM SHALL BE INCREASED TO 2 FEET.

Ⓖ THE MAXIMUM SPACING BETWEEN ROCK CHECK DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE FLOW LINE OF THE WEIR OF THE DOWNSTREAM DAM (SEE ROCK CHECK SPACING GRAPH THIS SHEET).

Ⓗ ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

Ⓘ PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST FOR FILTER SOCK DITCH APPLICATION MAY BE USED AND SHALL BE PAID UNDER FOLLOWING ITEM NUMBER:

209-08.09 FILTER SOCK CHECK DAM PER EACH

Ⓙ ROCK CHECK DAMS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:

209-08.07 ROCK CHECK DAM PER EACH

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ROCK CHECK DAMS.

Ⓚ SEDIMENT SHALL BE REMOVED FROM BEHIND THE ROCK CHECK DAMS WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE DAM AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER CUBIC YARD.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

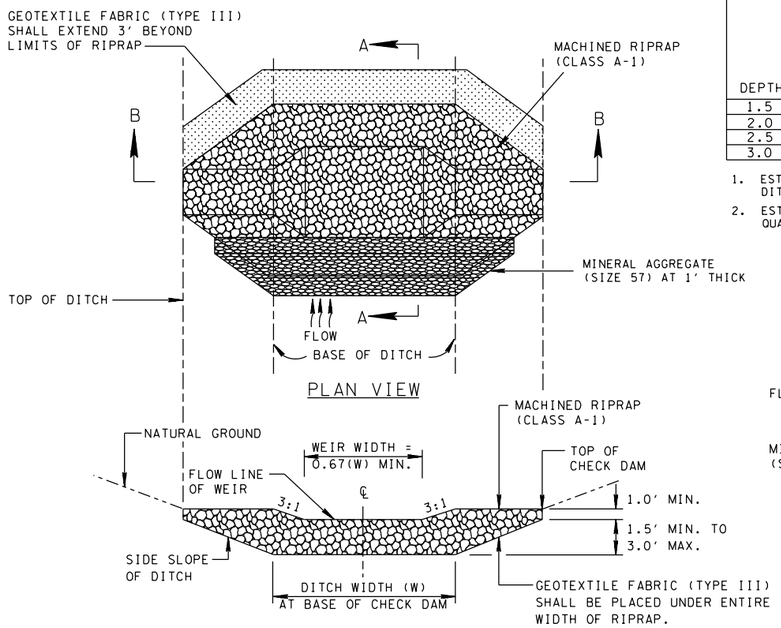
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROCK CHECK DAM

10-26-92 EC-STR-6

- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.
- REV. 5-6-16: REVISED GENERAL NOTE (H).

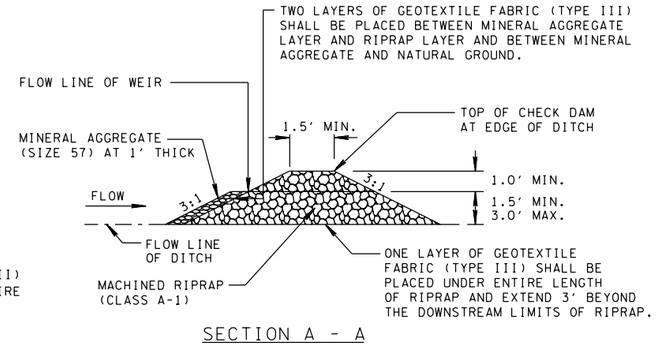
DETAIL FOR TRAPEZOIDAL DITCH



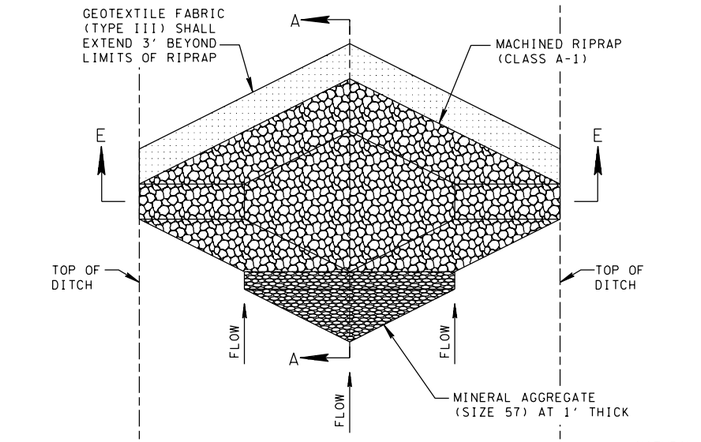
ENHANCED ROCK CHECK DAM ESTIMATED QUANTITIES

DEPTH	V-DITCH[1] MINERAL AGGREGATE (SIZE 57) (TON)	V-DITCH[1] MACHINED RIPRAP (CLASS A-1) (TON)	V-DITCH[1] GEOTEXTILE FABRIC (TYPE III) (S.Y.)	TRAPEZOIDAL DITCH[2] MINERAL AGGREGATE (SIZE 57) (TON)	TRAPEZOIDAL DITCH[2] MACHINED RIPRAP (CLASS A-1) (TON)	TRAPEZOIDAL DITCH[2] GEOTEXTILE FABRIC (TYPE III) (S.Y.)
1.5	0.21	12.2	31.7	0.29	17.2	40.3
2.0	0.33	20.2	44.0	0.44	27.6	54.7
2.5	0.48	31.1	58.3	0.62	41.2	71.0
3.0	0.66	45.1	74.7	0.83	58.3	89.3

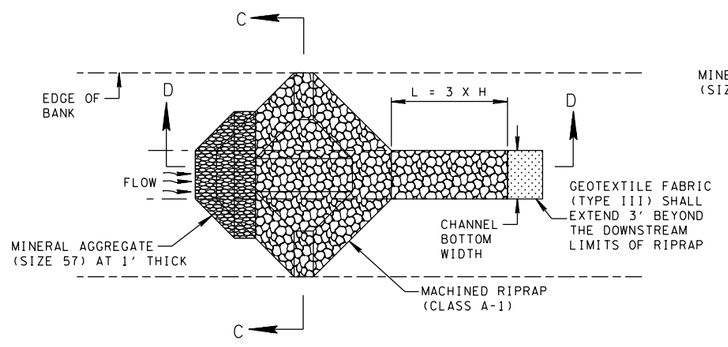
1. ESTIMATED QUANTITIES BASED ON 4:1 SIDE SLOPES. QUANTITIES WILL VARY BASED ON ACTUAL DITCH CONFIGURATION.
2. ESTIMATED QUANTITIES BASED ON 4FT BOTTOM WIDTH, 4 FT DEPTH, AND 4:1 SIDE SLOPES. QUANTITIES WILL VARY BASED ON ACTUAL DITCH CONFIGURATION.

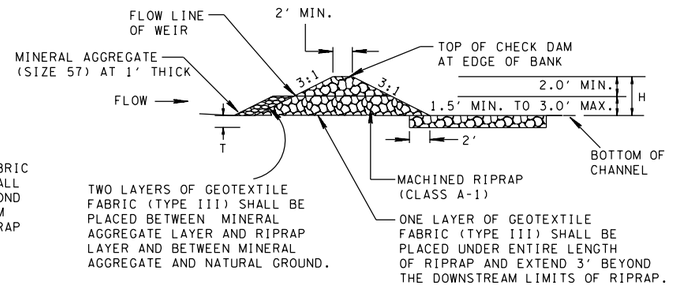


DETAIL FOR V-DITCH



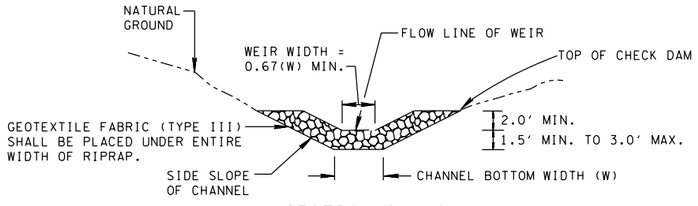
DETAIL FOR CHANNELS





SECTION D - D

T = 1.0' MINIMUM TO 1.5' MAXIMUM
H = HEIGHT OF CHECK DAM
L = LENGTH OF RIPRAP PAD
W = WIDTH OF DITCH (CHANNEL) BOTTOM



SECTION C - C

EROSION CONTROL PLAN LEGEND:

ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)

ENHANCED ROCK CHECK DAM (V-DITCH)

ENHANCED ROCK CHECK DAM (CHANNEL)

ENHANCED ROCK CHECK DAM GENERAL NOTES

(A) ENHANCED ROCK CHECK DAMS MAY BE USED TO REDUCE FLOW VELOCITIES TO ALLOW SEDIMENTS TO DROP OUT. THEY MAY BE EMPLOYED WHERE THE DRAINAGE AREA EXCEEDS THE MAXIMUM FOR ROCK CHECK DAMS OR WHERE A FILTRATION FUNCTION FOR VERY LOW FLOWS IS DESIRED. ENHANCED ROCK CHECK DAMS SHALL NOT BE USED IN STREAMS OR WETLANDS UNLESS PROVIDED FOR IN THE PERMITS.

(B) AT MOST SITES, THE MAXIMUM ALLOWABLE DRAINAGE AREA SHALL BE 30 ACRES. AT SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE MAXIMUM ALLOWABLE DRAINAGE AREA SHALL BE 20 ACRES.

(C) ENHANCED CHECK DAM MAY REMAIN IN PLACE AS PERMANENT CHECK DAM. IF SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

(D) THE CENTER OF THE ENHANCED ROCK CHECK DAM USED IN DITCHES MUST BE AT LEAST ONE (1) FOOT LOWER THAN THE OUTER EDGES. THE CENTER OF ENHANCED ROCK CHECK DAMS USED IN CHANNELS MUST BE AT LEAST TWO (2) FEET LOWER THAN THE OUTER EDGES.

(E) THE DEPTH OF FLOW ON THE CENTER OF THE STRUCTURE SHALL BE COMPUTED FOR THE PEAK FLOW RATE GENERATED BY THE 2-YEAR, 24-HOUR STORM IN ORDER TO ENSURE THAT THE TOP OF THE STRUCTURE WILL NOT BE OVERTOPPED. FOR SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT IMPAIRED STREAMS, THE DEPTH SHOULD BE DETERMINED FOR THE 5-YEAR, 24-HOUR PEAK FLOW RATE. THIS WILL ELIMINATE THE ROCK - SOIL FAILURE POINT WHERE THE ENHANCED ROCK CHECK DAM AND NATURAL GROUND MERGE.

(F) THE MAXIMUM SPACE BETWEEN ENHANCED ROCK CHECK DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM IS AT THE SAME ELEVATION AS THE FLOW LINE OF THE WEIR OF THE DOWNSTREAM DAM. (SEE ROCK CHECK DAM SPACING GRAPH ON EC-STR-6)

(G) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(H) PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST FOR FILTER SOCK DITCH APPLICATION MAY BE USED AND SHALL BE PAID UNDER FOLLOWING ITEM NUMBER:

209-08.09 FILTER SOCK CHECK DAM PER EACH

(I) ENHANCED ROCK CHECK DAMS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:

209-08.08 ENHANCED ROCK CHECK DAM PER EACH

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ENHANCED ROCK CHECK DAMS.

(J) SEDIMENT SHALL BE REMOVED FROM BEHIND THE ENHANCED ROCK CHECK DAM WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDMENT REMOVAL PER CUBIC YARD.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

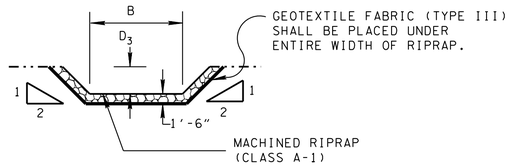
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENHANCED ROCK CHECK DAM

4-1-08 | EC-STR-6A

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-15 TO EC-STR-15.

- REV. 5-27-01: CHANGED REFERENCE TO RIP-RAP AND GEOTEXTILE FABRIC.
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING. CHANGED DRAWING NAME.
- REV. 4-1-08: REVISED GENERAL NOTES, MISC. DRAFTING EDITS.
- REV. 8-1-12: REVISED GENERAL NOTES, ADDED FLOATING OUTLET STRUCTURE, ADDED GENERAL NOTES H AND I.



SECTION D-D
EMERGENCY SPILLWAY

SEDIMENT BASIN GENERAL NOTES

(A) SEDIMENT BASINS DETAIN STORMWATER RUNOFF FROM A DISTURBED AREA FOR AN EXTENDED TIME, ALLOWING SEDIMENT TO SETTLE WHICH REDUCES THE QUANTITY OF SEDIMENT IN THE STORMWATER RELEASED FROM THE BASIN.

(B) THE DRAINAGE AREA FOR A SEDIMENT BASIN SHALL NOT EXCEED 50 ACRES.

(C) FOR SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE DESIGN STORM SHALL BE THE 5-YEAR EVENT. THE DESIGN MAY BE BASED ON THE 2-YEAR EVENT AT OTHER SITES.

(D) THE MINIMUM SEDIMENT STORAGE VOLUME BELOW THE DRY SEDIMENT STORAGE ELEVATION SHALL BE 134 CUBIC YARDS PER ACRE OF CONTRIBUTING DRAINAGE AREA.

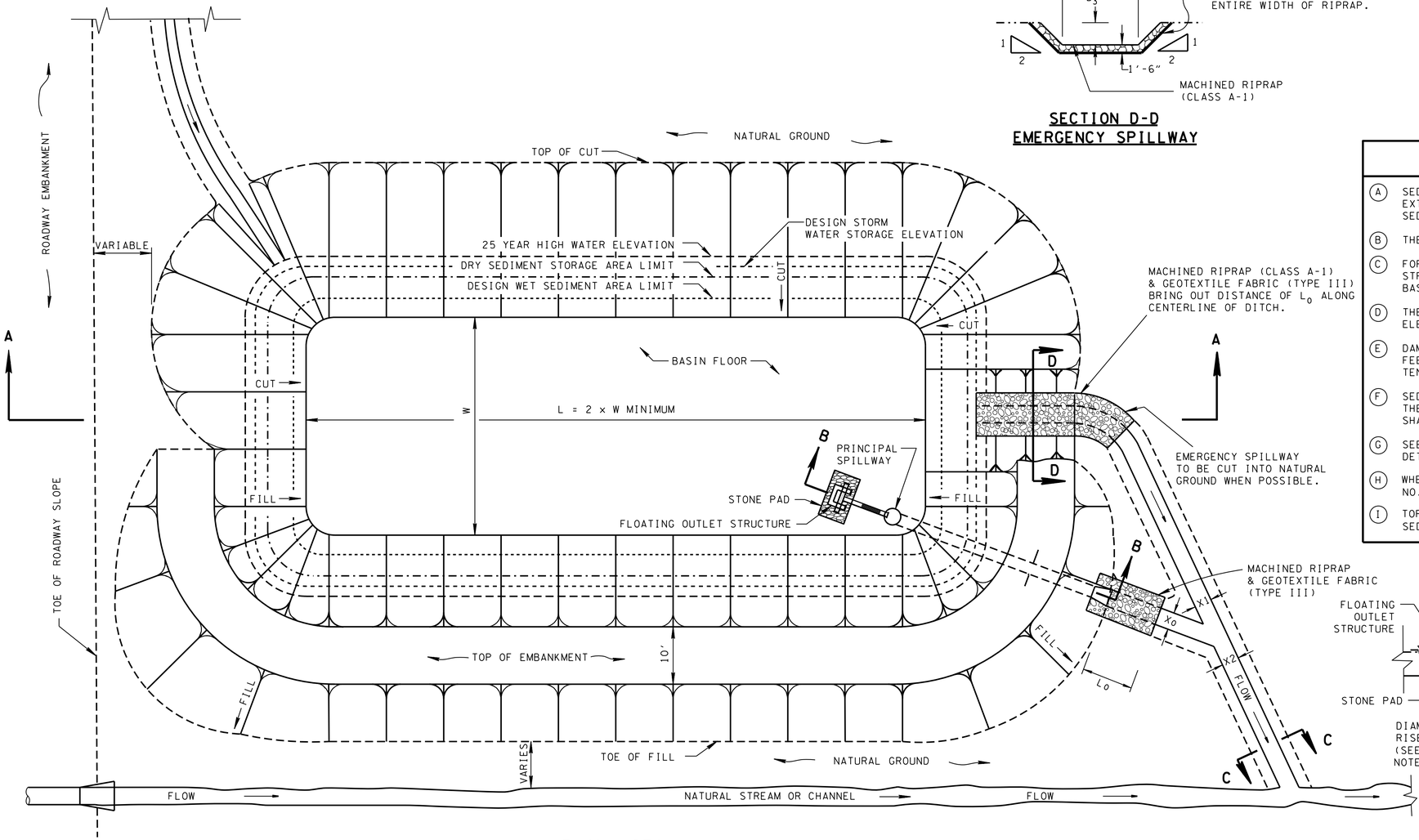
(E) DAMS THAT CAN STORE AT LEAST 30 ACRE-FEET OF RUNOFF OR ARE TWENTY (20) FEET OR MORE IN HEIGHT MUST MEET THE REQUIREMENTS ESTABLISHED BY THE TENNESSEE SAFE DAM ACT.

(F) SEDIMENT BASINS MAY REMAIN IN PLACE AS PERMANENT BASINS, AS INDICTED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THE DESIGN FOR PERMANENT BASINS SHALL BE APPROVED BY THE HYDRAULIC SECTION OF THE STRUCTURES DIVISION.

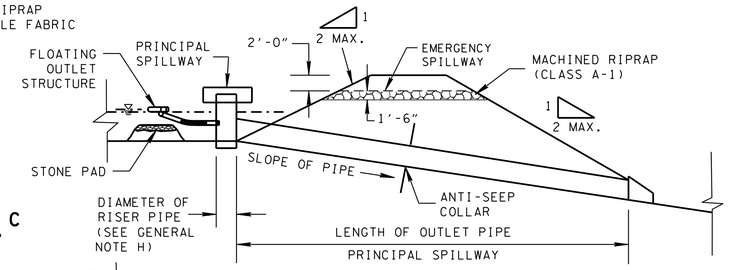
(G) SEE STANDARD DRAWINGS EC-STR-16, EC-STR-17 AND EC-STR-18 FOR ADDITIONAL DETAILS AND GENERAL NOTES NOT SHOWN ON THIS DRAWING.

(H) WHERE ACCEPTABLE, THE SQUARE CONCRETE NO. 42 CATCH BASIN WITH GRATE UNIT NO. 42 MAY BE USED IN LIEU OF USING ROUND PIPE FOR THE RISER.

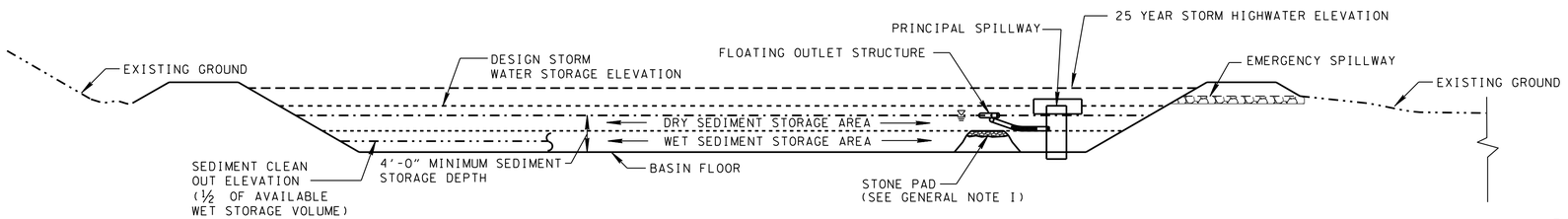
(I) TOP OF STONE PAD SHALL BE AT SAME ELEVATION AS THE TOP OF THE WET SEDIMENT STORAGE AREA.



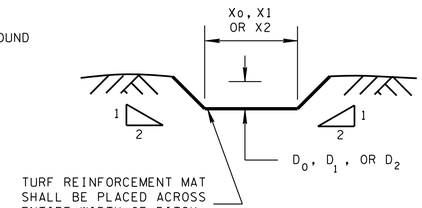
PLAN VIEW



SECTION B-B



SECTION A-A



SECTION C-C

EROSION CONTROL PLAN LEGEND: SEDIMENT BASIN

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEDIMENT BASIN

10-26-92 EC-STR-15

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-16 TO EC-STR-16.

☐ REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.

☐ REV. 4-1-08: REVISED GENERAL NOTES AND CHANGED DRAWING NAME.

☐ REV. 8-1-12: REVISED DEWATERING SYSTEM DETAIL.

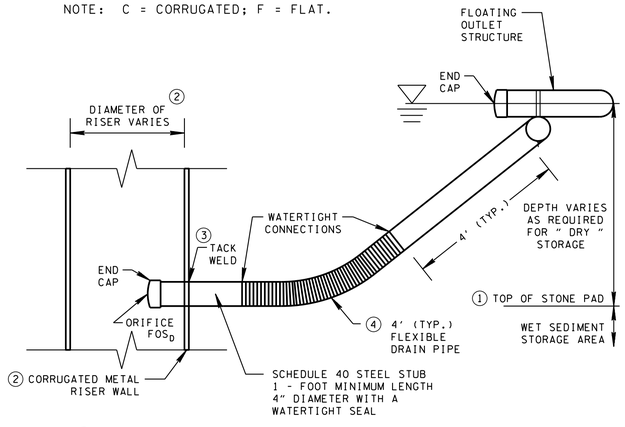
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DESIGN TABLE

RISER DIA. (IN)	CYLINDER		HEIGHT (INCHES)	MINIMUM SUPPORT BAR	MINIMUM TOP	
	DIAMETER (INCHES)	THICKNESS (GAUGE)			THICKNESS	STIFFENER
12	18	16	6	NO. 6 REBAR OR 1.5 X 1.5 X 0.19 ANGLE	16 GA. (F&C)	-
15	21	16	7	NO. 6 REBAR OR 1.5 X 1.5 X 0.19 ANGLE	16 GA. (F&C)	-
18	27	16	8	NO. 6 REBAR OR 1.5 X 1.5 X 0.19 ANGLE	16 GA. (F&C)	-
21	30	16	11	NO. 6 REBAR OR 1.5 X 1.5 X 0.19 ANGLE	16 GA. (C) 14 GA. (F)	-
24	36	16	13	NO. 6 REBAR OR 1.5 X 1.5 X 0.19 ANGLE	16 GA. (C) 14 GA. (F)	-
27	42	16	15	NO. 6 REBAR OR 1.5 X 1.5 X 0.19 ANGLE	16 GA. (C) 14 GA. (F)	-
36	54	16	17	NO.8 REBAR	14 GA. (C) 12 GA. (F)	-
42	60	16	19	NO.8 REBAR	14 GA. (C) 12 GA. (F)	-
48	72	16	21	1.25" PIPE OR 1.25 X 1.25 X 0.25 ANGLE	14 GA.(C) 10 GA.(F)	-
54	78	16	25	1.25" PIPE OR 1.25 X 1.25 X 0.25 ANGLE	14 GA.(C) 10 GA.(F)	-
60	90	14	29	1.5" PIPE OR 1.5 X 1.5 X 0.25 ANGLE	12 GA. (C) 8 GA. (F)	-
66	96	14	33	2" PIPE OR 2 X 2 X 0.19 ANGLE	12 GA.(C) 8 GA.(F) W/STIFFENER	2 X 2 X 0.25 ANGLE
72	102	14	36	2" PIPE OR 2 X 2 X 0.19 ANGLE	12 GA.(C) 8 GA.(F) W/STIFFENER	2.5 X 2.5 X 0.25 ANGLE
78	114	14	39	2.5" PIPE OR 2 X 2 X 0.25 ANGLE	12 GA.(C) 8 GA.(F) W/STIFFENER	2.5 X 2.5 X 0.25 ANGLE
84	120	12	42	2.5" PIPE OR 2.5 2.5 X 0.25 ANGLE	12 GA.(C) 8 GA.(F) W/STIFFENER	2.5 X 2.5 X 0.31 ANGLE

NOTE: THE CRITERION FOR SIZING THE CYLINDER IS THAT THE AREA BETWEEN THE INSIDE OF THE CYLINDER AND THE OUTSIDE OF THE RISER IS EQUAL TO OR GREATER THAN THE AREA INSIDE THE RISER. THEREFORE, THE ABOVE TABLE IS INVALID FOR USE WITH CONCRETE PIPE RISERS.

NOTE: CORRUGATION FOR 12" THRU 36" PIPE MEASURE 2.67" X 0.5"; FOR 42" THRU 84" THE CORRUGATION MEASURES 5" X 1" OR 8" X 1".

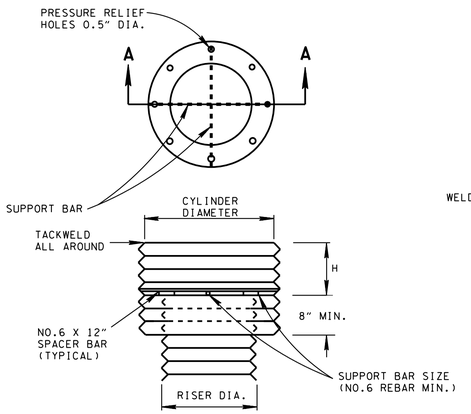
NOTE: C = CORRUGATED; F = FLAT.



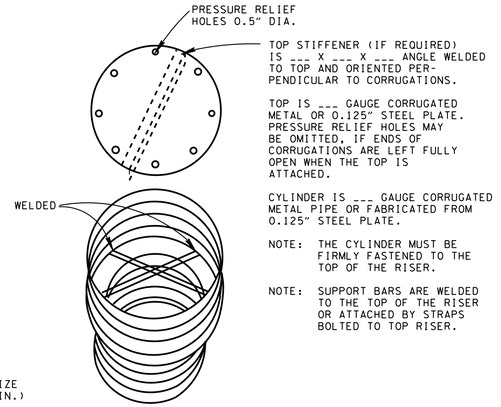
1. TOP OF STONE PAD SHALL BE AT SAME ELEVATION AS THE TOP OF THE WET SEDIMENT STORAGE AREA.
2. WHERE ACCEPTABLE, THE SQUARE CONCRETE NO. 42 CATCH BASIN WITH GRATE UNIT NO. 42 MAY BE USED IN LIEU OF USING ROUND PIPE FOR THE RISER.
3. WITH CONCRETE RISER, USE PVC SCHEDULE 40 STUB GROUTED TO CREATE A WATERTIGHT SEAL
4. DRAINAGE TUBING SHALL COMPLY WITH ASTM F667 AND AASHTO M294

DEWATERING SYSTEM DETAIL FOR SEDIMENT BASIN

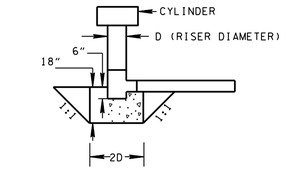
ANTI-VORTEX DEVICE DETAIL



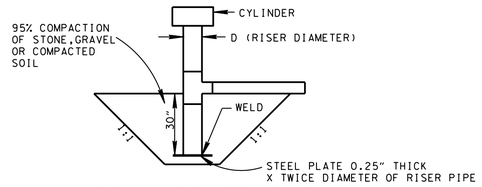
SECTION A - A



ISOMETRIC VIEW



TYPICAL FOR CONCRETE BASE



TYPICAL FOR STEEL BASE

TYPICAL ANTI-FLOTATION BLOCK DETAILS FOR RISERS TEN FEET OR LESS IN HEIGHT

NOTE: THE BASE OF THE PRINCIPAL SPILLWAY MUST BE FIRMLY ANCHORED TO PREVENT ITS FLOATING. IF THE RISER OF THE SPILLWAY IS GREATER THAN 10 FEET IN HEIGHT, COMPUTATIONS MUST BE MADE TO DETERMINE THE ANCHORING REQUIREMENTS. A MINIMUM FACTOR OF 1.25 SHALL BE USED (DOWNWARD FORCES = 1.25 X UPWARD FORCES).

ANTI - SEEP COLLAR DIAPHRAGM DIMENSION TABLE

DIA (IN)	GAUGE	MINIMUM DIAPHRAGM SIZE (IN)	FABRICATION DIM. FOR ½ DIAPHRAGM(INCH)	
			W (WIDTH)	H (HEIGHT)
8	16	58 X 58	58.5	30.5
10	16	58 X 58	58.5	30.5
12	16	60 X 60	64	32.5
15	16	63 X 63	68	34
18	16	66 X 66	69.25	35.5
21	16	69 X 69	72	37
24	14	72 X 72	72	38.5
30	14	78 X 78	82.5	41.5
36	14	84 X 84	88	44.5
42	14	90 X 90	93.25	47.5
48	14	96 X 96	96	50.5
54	14	102 X 102	101.25	53.5

ANTI-SEEP COLLAR DETAIL ASSEMBLY NOTES

(A1) UNASSEMBLED DIAPHRAGMS SHALL BE MARKED BY PAINTING OR TAGGING WHEN NECESSARY TO IDENTIFY MATCHING PAIRS TO SECURE A PROPER INSTALLATION.

(A2) THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND COUPLING BAND SHALL BE CAULKED WITH BITUMINOUS MASTIC AT TIME OF INSTALLATION. NEOPRENE GASKET 0.375" x 7" MINIMUM WIDTH MAY BE USED IN LIEU OF MASTIC.

(A3) ALL WELDS AND ALL HEAT AFFECTED AREAS ON ZINC COATED METAL SHALL BE THOROUGHLY CLEANED AND TREATED IN ACCORDANCE WITH SPECIFICATIONS (STEEL ONLY).

(A4) EACH DIAPHRAGM SHALL BE FURNISHED WITH TWO RODS AND NUTS AND TWO STANDARD TANK LUGS OR "L" LUGS FOR SECURING DIAPHRAGMS TO PIPE.

(A5) RODS FOR COLLAR COUPLING BANDS AND DIAPHRAGMS FOR 6" THRU 15" DIAMETER PIPE SHALL BE 0.375" DIAMETER AND FOR PIPE LARGER THAN 15" DIAMETER THE RODS SHALL BE 0.5" DIAMETER.

SEDIMENT BASIN GENERAL NOTES

(C1) THE LENGTH, L, AND WIDTH, W, OF THE BASIN MAY VARY TO CONFORM TO THE SPECIFIC SITE CONDITIONS, PROVIDED THE REQUIRED VOLUME IS MAINTAINED.

(C2) THE MINIMUM LENGTH TO WIDTH RATIO OF THE BASIN SHALL BE 2:1.

(C3) THE SEDIMENT STORAGE DEPTH SHALL BE A MINIMUM OF 4' - 0".

(C4) THE EMERGENCY SPILLWAY SHOULD BE LOCATED IN A CUT AREA WHENEVER POSSIBLE.

(C5) THE DIAMETER OF THE RISER SHALL BE DETERMINED BY THE RISER INFLOW CURVES SHOWN IN THE DESIGN DIVISION DRAINAGE MANUAL.

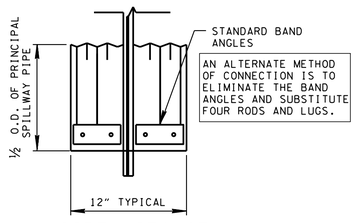
(C6) THE PRINCIPAL SPILLWAY CAPACITY SHALL BE BASED ON THE DESIGN STORM FREQUENCY WHEN AN EMERGENCY SPILLWAY IS USED, OR THE TWENTY-FIVE (25) YEAR STORM WHEN AN EMERGENCY SPILLWAY IS NOT USED. IF AN EMERGENCY SPILLWAY IS USED, IT SHALL BE DESIGNED FOR A 25-YEAR FLOOD. THE RIPRAP PLACED AT THE OUTFALL OF THE PRINCIPAL SPILLWAY OUTLET PIPE SHALL BE DESIGNED TO REMAIN STABLE UNDER THE FLOW CONDITIONS IMPOSED BY THE DESIGN PEAK FLOW RATE.

(C7) SEDIMENT BASIN VOLUME IS MEASURED FROM THE CREST OF THE PRINCIPAL SPILLWAY TO THE BOTTOM OF THE BASIN.

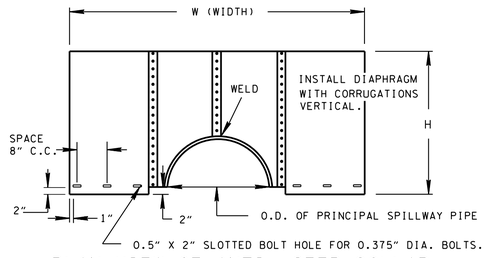
(C8) SEDIMENT SHALL BE REMOVED AND THE SEDIMENT BASIN RESTORED TO THE ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ½ OF THE WET STORAGE VOLUME. A SUITABLE MARKER SHALL BE INSTALLED IN THE BASIN TO INDICATE WHEN THE BASIN REQUIRES MAINTENANCE.

(C9) THE PIPE USED IN THE CONSTRUCTION OF THE PRINCIPAL SPILLWAY BARREL WILL BE PAID FOR IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 607, PIPE CULVERT AND STORM SEWERS.

(C10) SEE STANDARD DRAWINGS EC-STR-15, EC-STR-17 AND EC-STR-18 FOR ADDITIONAL DETAILS AND GENERAL NOTES NOT SHOWN ON THIS DRAWING.



SIDE VIEW OF ANTI-SEEP COLLAR



PLAN VIEW OF ANTI- SEEP COLLAR

NOTE: UPPER ONE HALF DIAPHRAGM SHOWN, OTHER HALF SAME EXCEPT SLOTS ARE VERTICAL

ANTI-SEEP COLLAR DETAIL

ANTI-SEEP COLLAR GENERAL NOTES

(B1) THE ANTI-SEEP COLLAR IS TO BE USED ON THE BARREL OF THE PRINCIPAL SPILLWAY TO REDUCE SEEPAGE LOSS AND PIPING FAILURE.

(B2) USE IF PIPE BARREL IS LARGER THAN 10 INCHES IN DIAMETER.

(B3) USE A MINIMUM OF ONE ANTI-SEEP COLLAR, IF THE EMBANKMENT IS 15 FEET OR LESS IN HEIGHT AND A MINIMUM OF TWO ANTI-SEEP COLLARS, IF THE EMBANKMENT IS GREATER THAN 15 FEET IN HEIGHT.

(B4) USE MAXIMUM SPACING BETWEEN COLLARS OF FOURTEEN TIMES THE PROJECTION OF THE COLLAR ABOVE THE PIPE, FROM THE DETAILS - THE COLLAR SPACING WOULD BE ONE - HALF THE DIAMETER OF THE PRINCIPAL SPILLWAY PIPE TIMES FOURTEEN.

(B5) COLLARS SHOULD NOT BE CLOSER THAN 2 FEET TO A PIPE JOINT.

(B6) PRECAUTIONS SHOULD BE TAKEN TO ENSURE 95 % COMPACTION IS ACHIEVED AROUND THE COLLARS.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

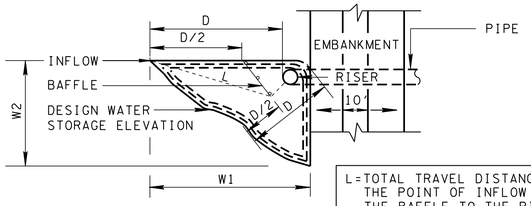
SEDIMENT BASIN RISER AND COLLAR APPURTENANCES

10-26-92 EC-STR-16

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-17 TO EC-STR-17.

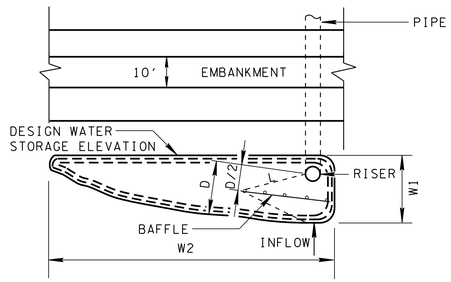
- REV. 5-27-01: CHANGED ITEM NO. 740-03.01 TO 740-10.03.
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING. CHANGED DRAWING NAME.
- REV. 4-15-06: REVISED NOTES.
- REV. 4-1-08: REVISED GENERAL NOTES, MINOR EDITS TO DRAWING, CHANGED DRAWING NAME, AND CHANGED LEGEND.
- REV. 8-1-12: REVISED DRAWING FOR FLOATING OUTLET STRUCTURE, ADDED PAY ITEM.

EXAMPLE PLAN VIEWS OF BAFFLE LOCATIONS IN SEDIMENT BASINS

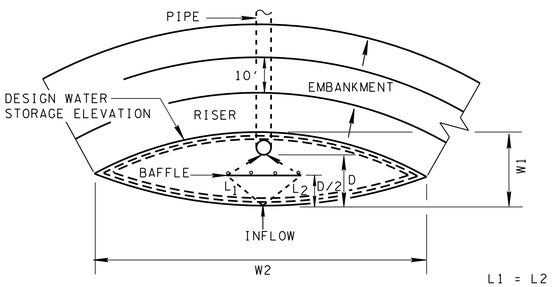


L=TOTAL TRAVEL DISTANCE FROM THE POINT OF INFLOW AROUND THE BAFFLE TO THE RISER

SHAPE NO.1

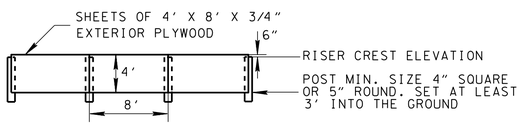


SHAPE NO.2

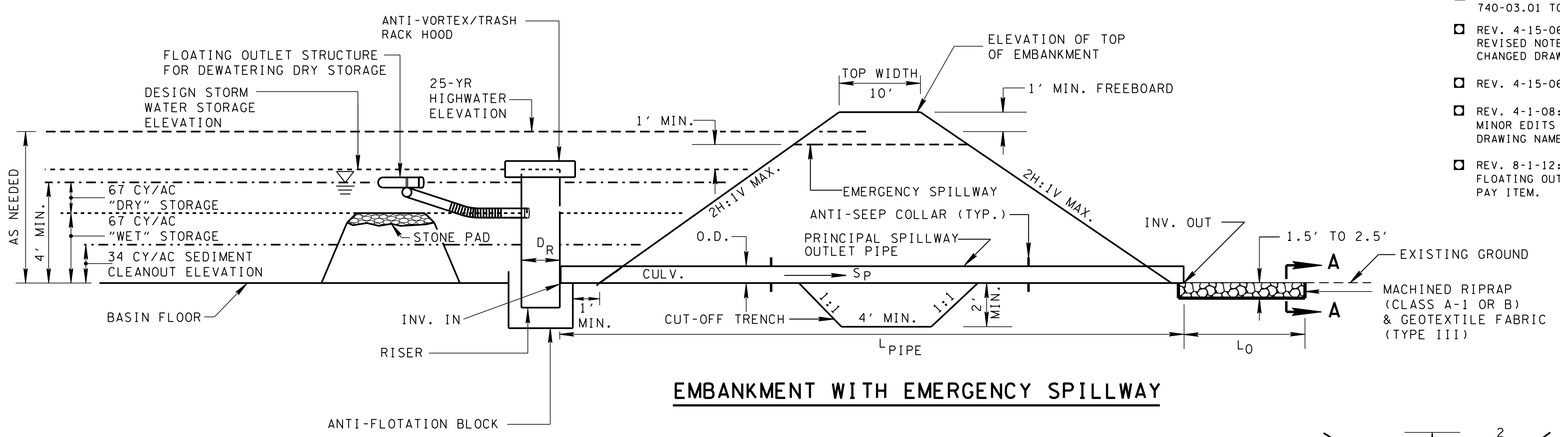


L1 = L2

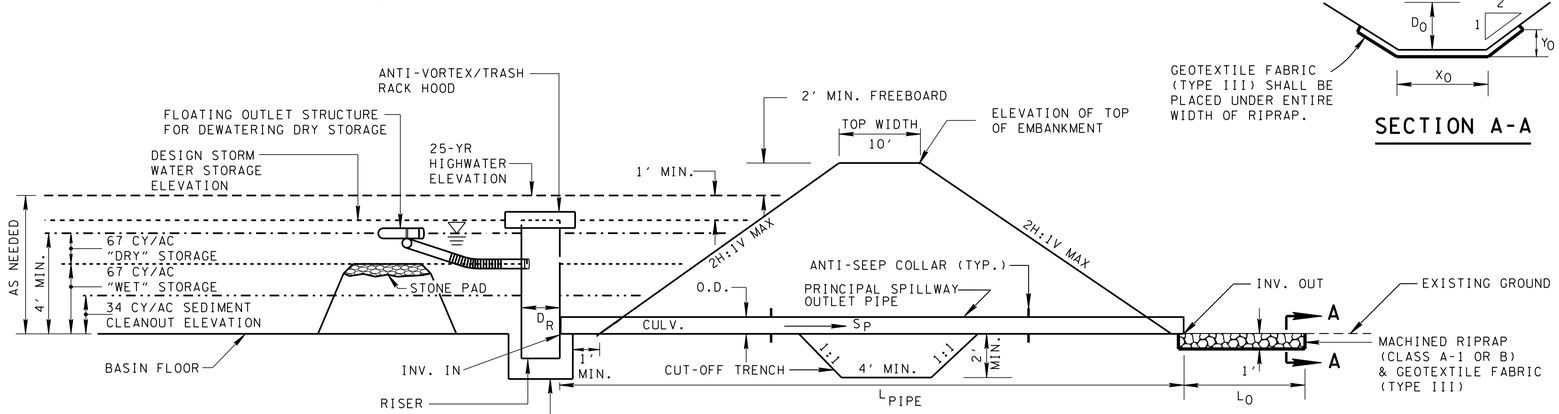
SHAPE NO.3



BAFFLE DETAIL



EMBANKMENT WITH EMERGENCY SPILLWAY



EMBANKMENT WITHOUT EMERGENCY SPILLWAY

(TEMPORARY ONLY)

(TO BE USED FOR SMALL SEDIMENT VOLUMES ONLY)

GEOTEXTILE FABRIC (TYPE III) SHALL BE PLACED UNDER ENTIRE WIDTH OF RIPRAP.

SECTION A-A

SEDIMENT BASIN GENERAL NOTES

(A) BAFFLES SHALL BE 4 FEET X 8 FEET X ¾ INCH EXTERIOR PLYWOOD, TYPE "PLYFORM" GRADE BB, D, AND ES.

(B) FOR EARTH-FILL EMBANKMENTS, A CUT-OFF TRENCH SHALL BE EXCAVATED ALONG THE CENTERLINE OF THE DAM. THE TRENCH MUST EXTEND AT LEAST ONE (1) FOOT INTO A STABLE, IMPERVIOUS LAYER OF SOIL AND HAVE A MINIMUM DEPTH OF TWO (2) FEET. THE MINIMUM BOTTOM WIDTH SHALL BE 4 FEET, BUT ALSO MUST BE WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THAN 1:1.

(C) THE EXPOSED SLOPES OF THE SEDIMENT BASIN SHOULD BE STABILIZED WITH TEMPORARY SEEDING WITH MULCH OR OTHER STABILIZATION METHODS.

(D) SEDIMENT BASINS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
209-05	SEDIMENT REMOVAL PER CUBIC YARD
209-11.01 THRU 209-11.09	SEDIMENT BASIN RISER (_ _") PER EACH
209-11.20	SEDIMENT BASIN BAFFLES PER LINEAR FOOT
209-20.21	SEDIMENT BASIN OUTLET STRUCTURE (DESCRIPTION) PER LS
607-37.02 THRU 607-37.13	_ _" CORRUGATED METAL PIPE CULVERT PER LINEAR FOOT
709-05.06	MACHINED RIP-RAP (CLASS A-1) PER TON
709-05.08	MACHINED RIP-RAP (CLASS B) PER TON
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL) PER SQUARE YARD
801-01.07	TEMPORARY SEEDING (WITH MULCH) PER UNIT

(E) PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR THE CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE SEDIMENT BASIN.

SEE STANDARD DRAWINGS EC-STR-15. EC-STR-16 AND EC-STR-18 FOR ADDITIONAL DETAILS AND GENERAL NOTES NOT SHOWN ON THIS DRAWING.

EROSION CONTROL PLAN LEGEND: SEDIMENT BASIN

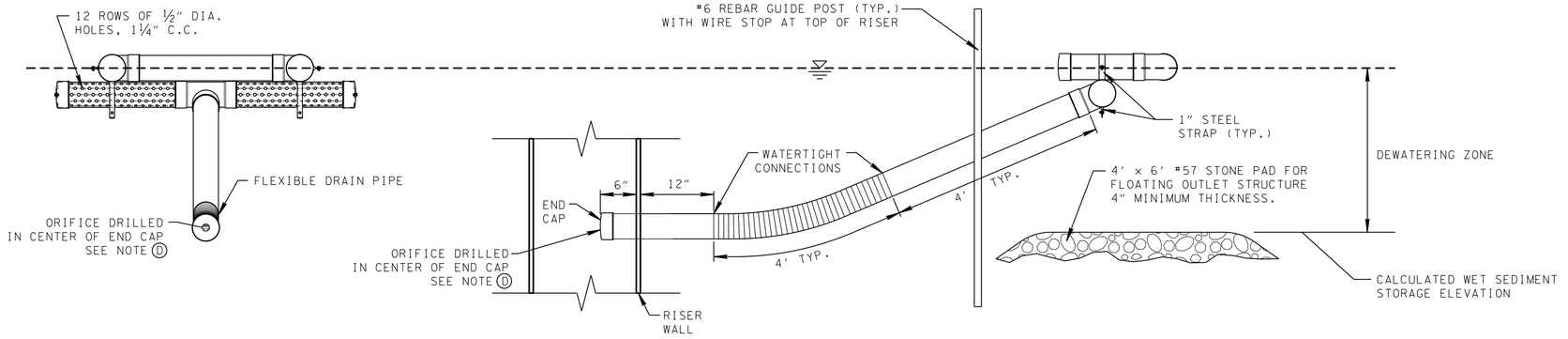
☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

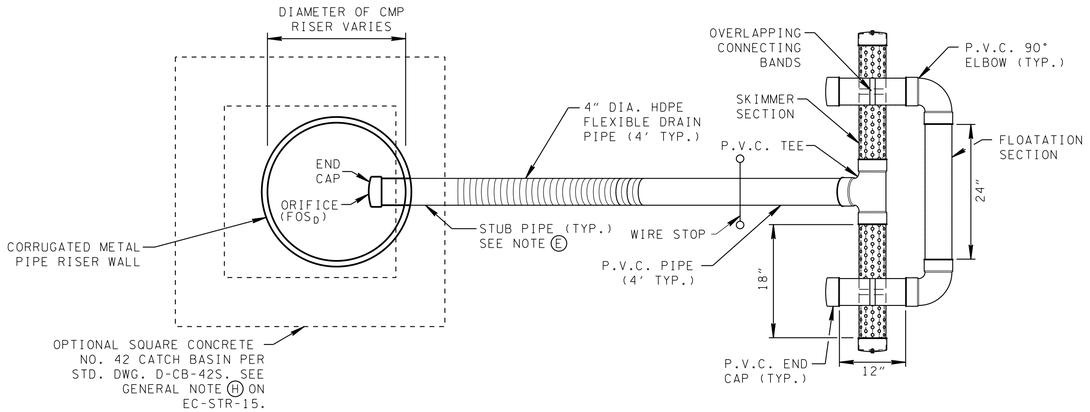
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEDIMENT BASIN EMBANKMENT DETAILS

10-26-92 EC-STR-17



FRONT VIEW **SIDE VIEW**



PLAN VIEW

FLOATING OUTLET STRUCTURE

ORIFICE SIZE, FOS$_D$ (IN.)	DISCHARGE, Q (FT^3/SEC)	EQUATIONS FOR MINIMUM AND MAXIMUM ORIFICE SIZE
1"	0.019	$Q_{MAX} = \frac{\text{DEWATERING ZONE VOLUME (FT}^3\text{)}}{259200}$
1.5"	0.041	
2"	0.074	
2.5"	0.116	
3"	0.167	$Q_{MIN} = \frac{\text{DEWATERING ZONE VOLUME (FT}^3\text{)}}{604800}$
3.5"	0.227	
4"	0.297	

PROCEDURE FOR ORIFICE SELECTION

(1) KNOWING THE SIZE AND SHAPE OF THE DEWATERING ZONE, CALCULATE THE VOLUME OF WATER (CUBIC FEET) FROM THE BOTTOM OF THE DEWATERING ZONE TO THE TOP OF THE DEWATERING ZONE.

(2) SOLVE FOR Q_{MAX} AND Q_{MIN} BASED ON THE VOLUME OF THE DEWATERING ZONE.

(3) SELECT AN ORIFICE SIZE (FOS$_D$) THAT HAS A CORRESPONDING DISCHARGE BETWEEN Q_{MAX} AND Q_{MIN}.

FLOATING OUTLET STRUCTURE GENERAL NOTES

(A) ALL P.V.C. PIPES ARE TO BE 4" I.D. SCHEDULE 40.

(B) ALL JOINTS OF THE FLOATATION SECTION SHALL BE SOLVENT WELDED TO ENSURE AN AIRTIGHT ASSEMBLY. CONTRACTOR TO CONDUCT A TEST TO CHECK FOR LEAKS PRIOR TO INSTALLATION. JOINTS OF THE SKIMMER SECTION NEED NOT BE WATER-TIGHT.

(C) 4" HDPE FLEXIBLE DRAIN PIPE IS TO BE ATTACHED TO THE BASIN OUTLET STRUCTURE WITH WATER-TIGHT CONNECTIONS.

(D) ORIFICE IS TO BE SIZED ACCORDINGLY TO STORAGE VOLUME AND TO SLOWLY RELEASE RUNOFF. THE BASIN DEWATERING TIME SHOULD BE NO LESS THAN 3 DAYS.

(E) FOR CORRUGATED METAL RISER, STUB PIPE SHALL BE SCHEDULE 40 STEEL PIPE TACK WELDED TO CREATE A WATERTIGHT SEAL. FOR CONCRETE RISER, STUB PIPE SHALL BE SCHEDULE 40 P.V.C. PIPE GROUTED TO CREATE A WATERTIGHT SEAL.

(F) MATERIALS:

SOLID PIPE - 4" SCHEDULE 40 P.V.C.
PERFORATED PIPE - 4" SCHEDULE 40 P.V.C.
90° TEE (1 EA.) - 4" SCHEDULE 40 P.V.C.
90° ELBOW (2 EA.) 4" SCHEDULE 40 P.V.C.
CAP (4 EA.) - 4" SCHEDULE 40 P.V.C., SOLID
FLEXIBLE PIPE - 4" CORRUGATED HDPE (NON-PERFORATED)
MINERAL AGGREGRATE - SIZE #57

(G) FLOATING OUTLET STRUCTURE SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

209-20.21 SEDIMENT BASIN OUTLET STRUCTURE (DESCRIPTION) L.S.

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR THE CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE FLOATING OUTLET STRUCTURE, INCLUDING REPLACMENT OF THE STONE PAD AS NECESSARY.

(H) SEE THE QPL FOR APPROVED ALTERNATE FLOATING OUTLET STRUCTURES. THE ORIFICE SIZING PROCEDURE ON THIS SHEET IS NOT VALID FOR ALTERNATE FLOATING OUTLET STRUCTURES. ALTERNATE FLOATING OUTLET STRUCTURES SHALL BE DESIGNED TO ACHIEVE A SIMILAR DEWATERING TIME.

(I) SEE STANDARD DRAWINGS EC-STR-15, EC-STR-16 AND EC-STR-17 FOR ADDITIONAL DETAILS AND GENERAL NOTES NOT SHOWN ON THIS DRAWING.

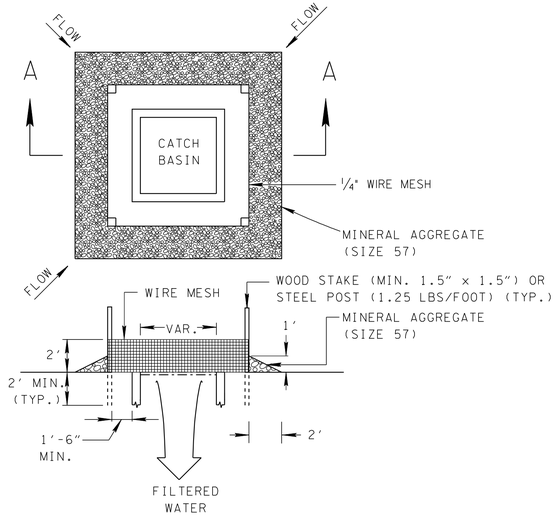
NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEDIMENT BASIN FLOATING OUTLET STRUCTURE

8-01-12 EC-STR-18

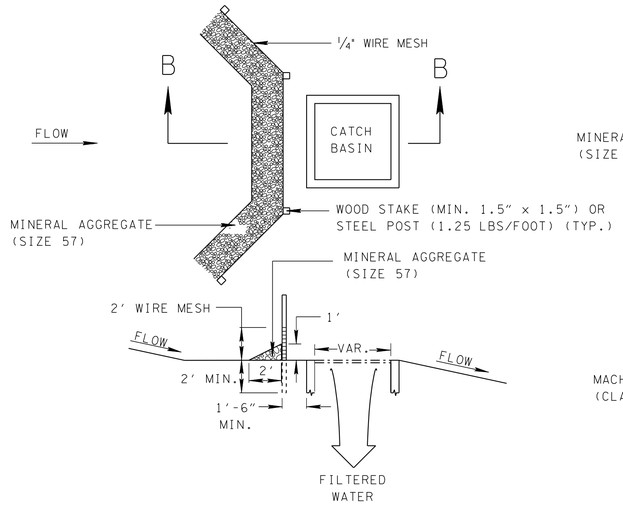
CATCH BASIN PROTECTION (TYPE B)



SECTION A-A

EROSION CONTROL PLAN LEGEND: (B) CATCH BASIN PROTECTION (TYPE B)

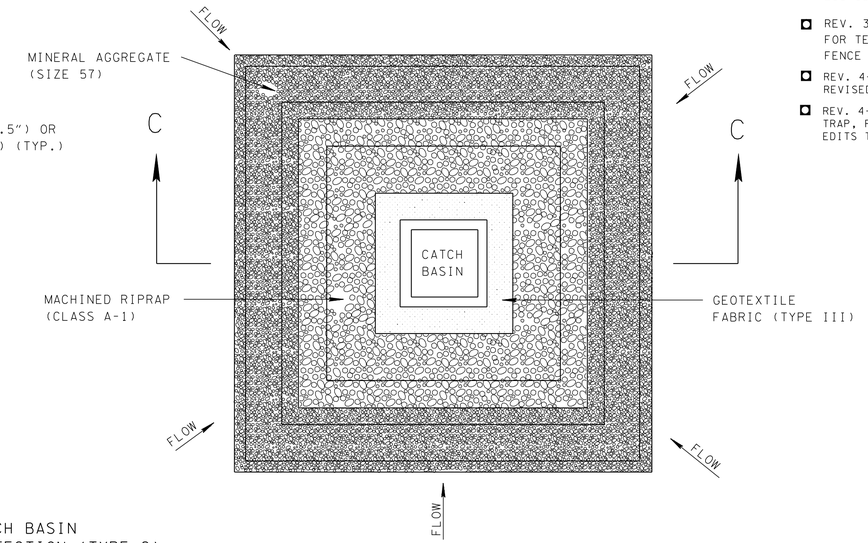
CATCH BASIN PROTECTION (TYPE C)



SECTION B-B

EROSION CONTROL PLAN LEGEND: (C) CATCH BASIN PROTECTION (TYPE C)

CATCH BASIN PROTECTION (TYPE A)

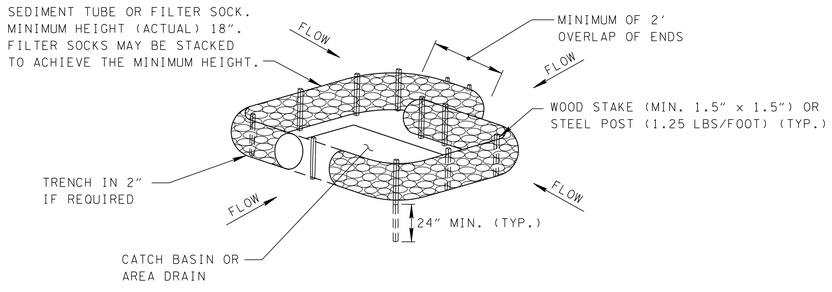


EROSION CONTROL PLAN LEGEND: (A) CATCH BASIN PROTECTION (TYPE A)

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-19 TO EC-STR-19.

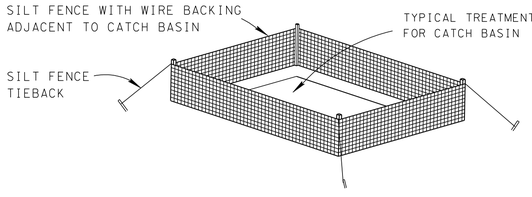
- REV. 5-27-01: CHANGED ITEM NO. 303-15.01 TO 303-10.01.
- REV. 12-18-02: IN CATCH BASIN SILT FENCE SILT TRAP CHANGED TYPE OF SILT FENCE FROM SILT FENCE (WITHOUT BACKING) TO SILT FENCE (WITH BACKING) AND PAY ITEM FROM 209-08 TO 209-08.02.
- REV. 3-15-04; CHANGED LEGENDS FOR TEMPORARY ROCK AND SILT FENCE CATCH BASIN PROTECTION.
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: REPLACED HAY BALE SILT TRAP, REVISED GENERAL NOTES, AND MISC. EDITS TO DRAWING.

CATCH BASIN PROTECTION (TYPE D)

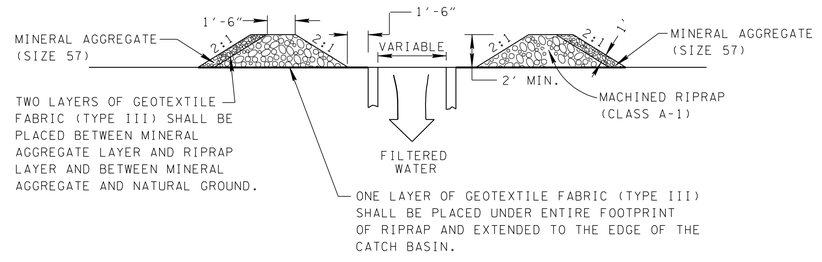


EROSION CONTROL PLAN LEGEND: (D) CATCH BASIN PROTECTION (TYPE D)

CATCH BASIN PROTECTION (TYPE E)



EROSION CONTROL PLAN LEGEND: (E) CATCH BASIN PROTECTION (TYPE E)



SECTION C-C

CATCH BASIN PROTECTION GENERAL NOTES

(A) CATCH BASIN PROTECTION IS USED TO PREVENT SEDIMENT IN CONSTRUCTION SITE RUNOFF FROM ENTERING A STORM SEWER SYSTEM.

(B) TYPE B, TYPE C, TYPE D (SEDIMENT TUBE), AND TYPE E SHOULD ONLY BE USED IN UNPAVED AREAS. TYPE A AND TYPE D (FILTER SOCK) MAY BE USED IN BOTH UNPAVED AND PAVED AREAS.

(C) TYPE B, TYPE C, TYPE D, AND TYPE E HAVE A MAXIMUM DRAINAGE AREA OF 1 ACRE. TYPE A HAS A MAXIMUM DRAINAGE AREA OF 2 ACRES.

(D) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(E) THE WIRE MESH USED IN TYPE B AND TYPE C SHALL BE A MINIMUM 19 GAGE HARDWARE CLOTH WITH ¼ INCH MESH OPENINGS.

(F) FOR INSTALLATION DETAILS FOR SILT FENCE WITH WIRE BACKING (EC-STR-3C), FILTER SOCK (EC-STR-8), AND SEDIMENT TUBE (EC-STR-37) REFER TO THEIR RESPECTIVE STANDARD DRAWING. FILTER SOCKS MAY NOT REQUIRE STAKING WHEN APPROVED BY THE ENGINEER.

(G) ANY PRODUCT LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE IS ALSO ACCEPTABLE.

(H) CATCH BASIN PROTECTION SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

209-40.30	CATCH BASIN PROTECTION (TYPE A) PER EACH
209-40.31	CATCH BASIN PROTECTION (TYPE B) PER EACH
209-40.32	CATCH BASIN PROTECTION (TYPE C) PER EACH
209-40.33	CATCH BASIN PROTECTION (TYPE D) PER EACH
209-40.34	CATCH BASIN PROTECTION (TYPE E) PER EACH

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF CATCH BASIN PROTECTION.

(I) SEDIMENT SHALL BE REMOVED FROM BEHIND THE CATCH BASIN PROTECTION WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL, PER CUBIC YARD.

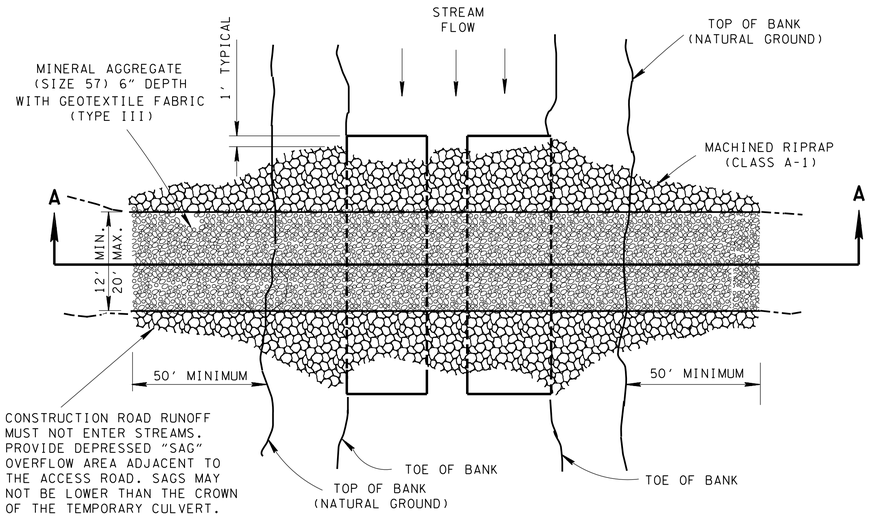
MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

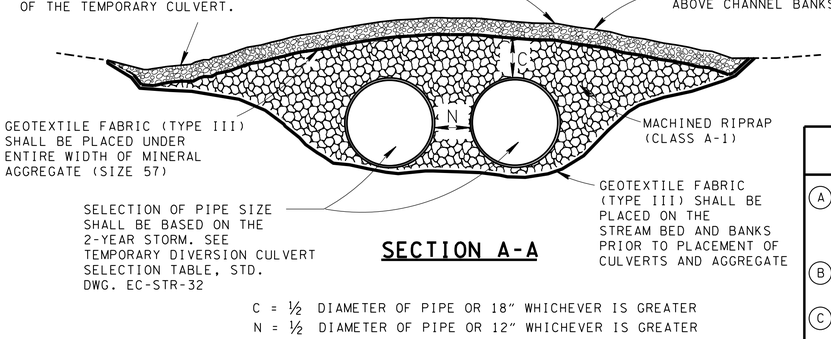
CATCH BASIN PROTECTION

10-26-92 EC-STR-19

TEMPORARY CULVERT CROSSING



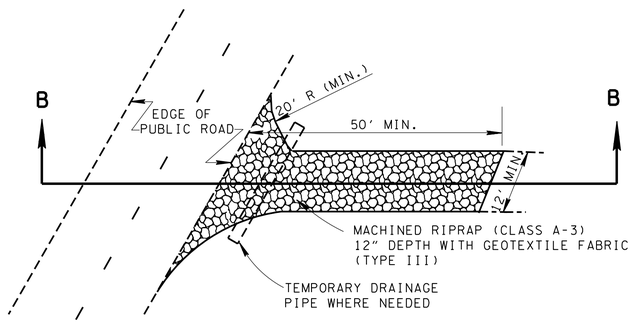
PLAN VIEW OF TEMPORARY CULVERT CROSSING



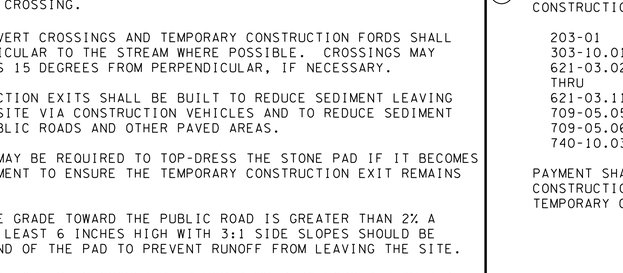
SECTION A-A

C = ½ DIAMETER OF PIPE OR 18" WHICHEVER IS GREATER
N = ½ DIAMETER OF PIPE OR 12" WHICHEVER IS GREATER

TEMPORARY CONSTRUCTION EXIT



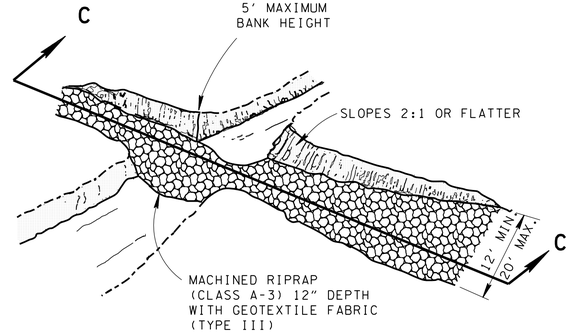
PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD



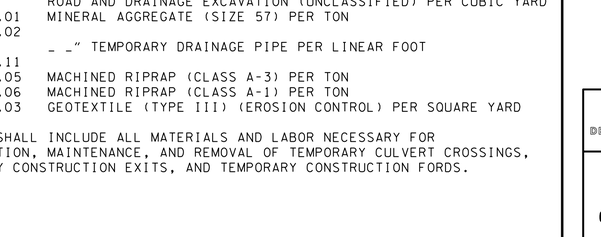
SECTION B-B

TEMPORARY CONSTRUCTION FORD

(NOT TO BE PLACED IN STREAMS)



PLAN VIEW OF TEMPORARY CONSTRUCTION FORD



SECTION C-C

EROSION CONTROL PLAN LEGEND:

TCC — TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)

TCE — TEMPORARY CONSTRUCTION EXIT

TCF — TEMPORARY CONSTRUCTION FORD

GENERAL NOTES

(A) TEMPORARY CULVERT CROSSINGS SHALL CONSIST OF ONE OR MORE TEMPORARY DRAINAGE PIPES INSTALLED ACROSS A FLOWING WATER COURSE FOR USE BY CONSTRUCTION EQUIPMENT. THE TEMPORARY DRAINAGE PIPES WILL VARY IN SIZE FROM EIGHTEEN TO SEVENTY-TWO INCHES IN DIAMETER.

(B) MINIMIZE CLEARING OF VEGETATION FROM STREAM BANKS WHEN USING TEMPORARY CULVERT CROSSINGS.

(C) TEMPORARY CULVERT CROSSINGS SHALL BE SEPARATED FROM FLOWING WATER DURING THEIR CONSTRUCTION AND REMOVAL.

(D) PROVISION SHOULD BE MADE TO PREVENT CONSTRUCTION ROAD RUNOFF FROM ENTERING THE STREAM.

(E) TEMPORARY CULVERT CROSSINGS SHOULD BE REMOVED, INCLUDING THE AGGREGATE AND GEOTEXTILE, AS SOON AS POSSIBLE AFTER THE CROSSING IS NO LONGER REQUIRED. ANY EXPOSED AREAS SHOULD BE IMMEDIATELY STABILIZED.

(F) FOR SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT -IMPAIRED STREAMS, A 9-INCH LAYER OF MACHINED RIPRAP (CLASS A-3) SHALL BE SUBSTITUTED FOR THE MINERAL AGGREGATE (SIZE 57) USED TO TOP-DRESS A TEMPORARY CULVERT CROSSING.

(G) ALL TEMPORARY CULVERT CROSSINGS AND TEMPORARY CONSTRUCTION FORDS SHALL BE PLACED PERPENDICULAR TO THE STREAM WHERE POSSIBLE. CROSSINGS MAY DEVIATE AS MUCH AS 15 DEGREES FROM PERPENDICULAR, IF NECESSARY.

(H) TEMPORARY CONSTRUCTION EXITS SHALL BE BUILT TO REDUCE SEDIMENT LEAVING THE CONSTRUCTION SITE VIA CONSTRUCTION VEHICLES AND TO REDUCE SEDIMENT TRACKING ON TO PUBLIC ROADS AND OTHER PAVED AREAS.

(I) ADDITIONAL STONE MAY BE REQUIRED TO TOP-DRESS THE STONE PAD IF IT BECOMES CLOGGED WITH SEDIMENT TO ENSURE THE TEMPORARY CONSTRUCTION EXIT REMAINS EFFECTIVE.

(J) ON SITES WHERE THE GRADE TOWARD THE PUBLIC ROAD IS GREATER THAN 2% A MOUNTABLE BERM AT LEAST 6 INCHES HIGH WITH 3:1 SIDE SLOPES SHOULD BE PROVIDED AT THE END OF THE PAD TO PREVENT RUNOFF FROM LEAVING THE SITE.

(K) TEMPORARY CONSTRUCTION EXITS SHOULD BE REMOVED WHEN NO LONGER REQUIRED. ANY EXPOSED AREAS SHOULD BE IMMEDIATELY STABILIZED.

(L) TEMPORARY CONSTRUCTION FORDS ARE EFFECTIVE FOR INFREQUENT CROSSINGS OF DITCHES OR SWALES. THEY SHALL NOT BE USED IN STREAMS, WETLANDS OR OTHER NATURAL WATER RESOURCES.

(M) TEMPORARY CONSTRUCTION FORDS SHOULD BE CONSTRUCTED TO MINIMIZE THE BLOCKAGE OF FLOW AND TO ALLOW FREE FLOW OVER THE FORD. THE MAXIMUM AMOUNT OF BLOCKAGE ALLOWED IS THE LESSER OF TWELVE INCHES OR ONE-HALF THE HEIGHT OF THE EXISTING BANKS.

(N) A MOUNTABLE BERM AT LEAST 6 INCHES HIGH WITH 3:1 SIDE SLOPES SHOULD BE PROVIDED ON EITHER SIDE OF THE CHANNEL TO PREVENT RUNOFF FROM ENTERING THE CHANNEL.

(O) TEMPORARY CONSTRUCTION FORDS SHOULD BE REMOVED WHEN NO LONGER REQUIRED. THE CHANNEL BANKS SHOULD BE RESTORED TO THEIR ORIGINAL DIMENSIONS. ANY EXPOSED AREAS SHOULD BE IMMEDIATELY STABILIZED.

(P) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(Q) TEMPORARY CULVERT CROSSINGS, TEMPORARY CONSTRUCTION EXITS, AND TEMPORARY CONSTRUCTION FORDS SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) PER CUBIC YARD
303-10.01	MINERAL AGGREGATE (SIZE 57) PER TON
621-03.02 THRU 621-03.11	_ _" TEMPORARY DRAINAGE PIPE PER LINEAR FOOT
709-05.05	MACHINED RIPRAP (CLASS A-3) PER TON
709-05.06	MACHINED RIPRAP (CLASS A-1) PER TON
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL) PER SQUARE YARD

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY CULVERT CROSSINGS, TEMPORARY CONSTRUCTION EXITS, AND TEMPORARY CONSTRUCTION FORDS.

- REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-25 TO EC-STR-25.
- REV. 5-27-01: CHANGED ITEM NO. 303-15.01 TO 303-10.01. CHANGED DESCRIPTIONS IN ITEM NOS. 621-03.02 TO 621-03.10, AND 709-05.05 TO 709-05.07.
- REV. 12-18-02: CHANGED GENERAL NOTE (B).
- REV. 1-22-03: CORRECTED GENERAL NOTE (C).
- REV.7-29-03: ADDED GEOTEXTILE FABRIC TO TEMPORARY CULVERT CROSSING AND TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAILS. CHANGED MINERAL AGGREGATE TO CLASS A-3 RIPRAP IN TEMPORARY CONSTRUCTION ROAD ENTRANCE DETAIL. CHANGED GENERAL NOTES (D) AND (F).
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: REVISED VARIOUS GENERAL NOTES, MISC. EDITS TO DRAWING, AND REMOVED CLASS A-2 RIPRAP.
- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

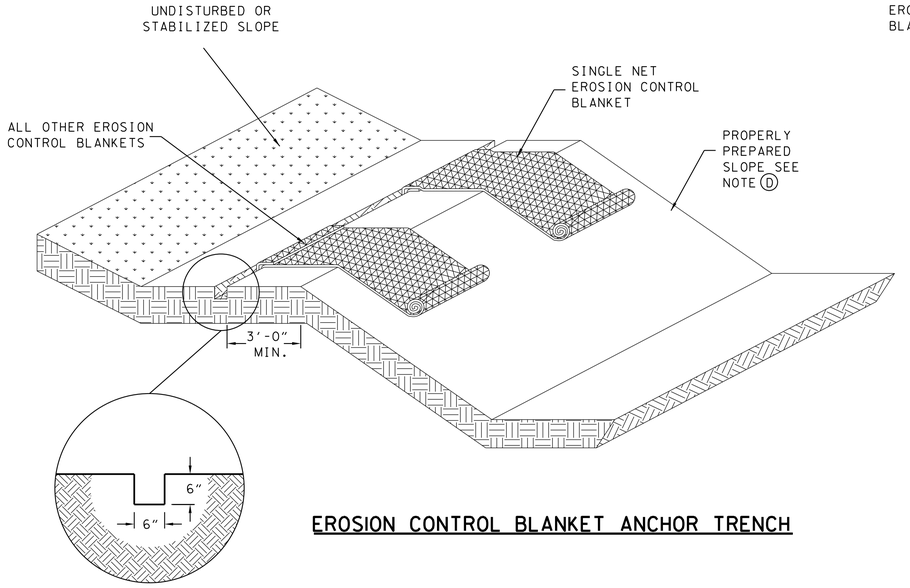
☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

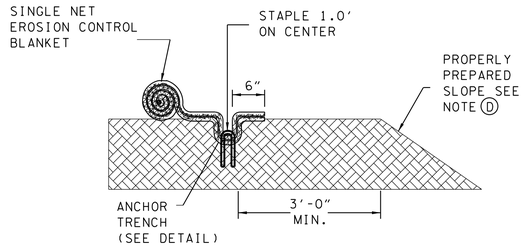
TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD

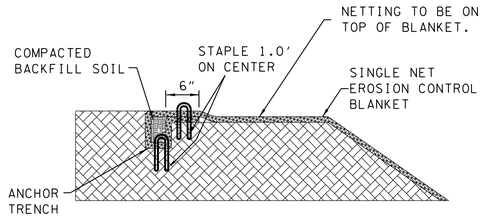
10-26-92 EC-STR-25



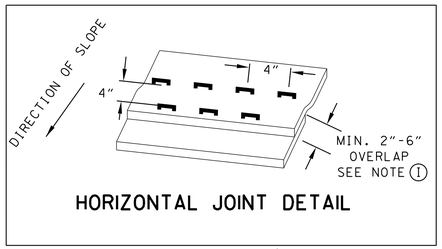
EROSION CONTROL BLANKET ANCHOR TRENCH

TRENCH DETAIL

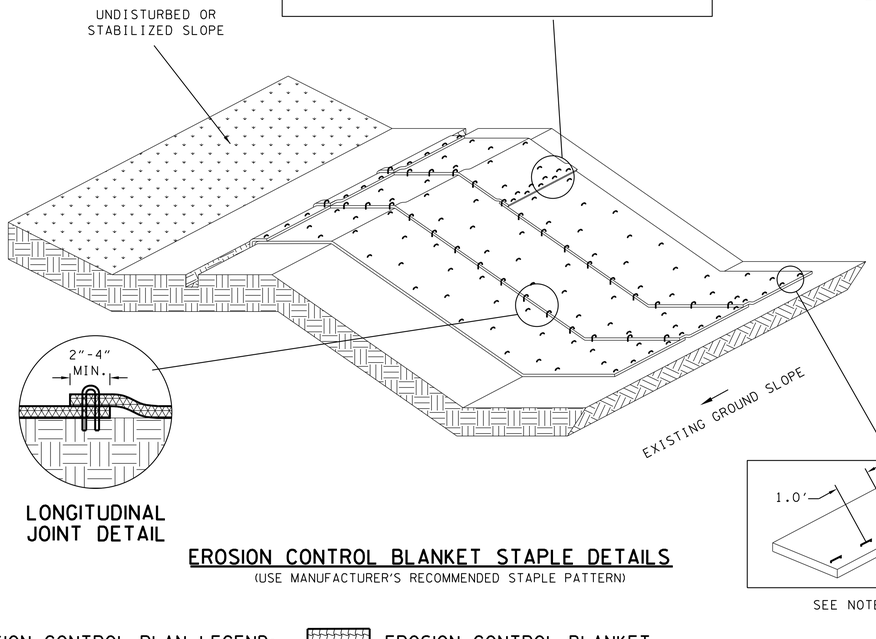




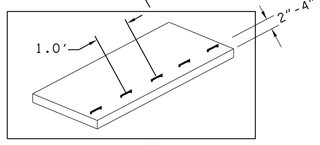
ANCHOR TRENCH DETAILS
SINGLE NET EROSION CONTROL BLANKETS



HORIZONTAL JOINT DETAIL

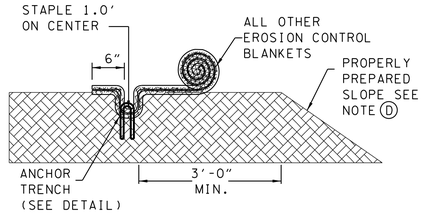


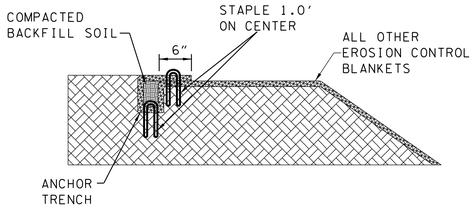
LONGITUDINAL
JOINT DETAIL



SEE NOTE (J)

EROSION CONTROL BLANKET STAPLE DETAILS
(USE MANUFACTURER'S RECOMMENDED STAPLE PATTERN)





ANCHOR TRENCH DETAILS
ALL OTHER EROSION CONTROL BLANKETS

EROSION CONTROL BLANKET SLOPE INSTALLATION GENERAL NOTES

(A) EROSION CONTROL BLANKETS ARE INTENDED TO BE USED AS AN IMMEDIATE MULCH COVER FOR DISTURBED SLOPES THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED.

(B) EROSION CONTROL BLANKETS MAY ALSO BE USED AS CHANNEL LINERS WHERE THE ANTICIPATED MAXIMUM SHEAR STRESS IS LOW. REFER TO EC-STR-36 FOR INSTALLATION DETAILS.

(C) EROSION CONTROL BLANKETS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS. WHEN NOT AVAILABLE, INSTALL ACCORDING TO NOTES D THRU J.

(D) STEP ONE: SITE PREPARATION
THE SITE SHOULD BE FINE GRADED TO A SMOOTH PROFILE AND RELATIVELY FREE FROM ALL WEEDS, CLODS, STONES, ROOTS, STICKS, RIVULETS, GULLIES, CRUSTING AND CAKING. FILL ANY VOIDS AND MAKE SURE THE SLOPE IS COMPACTED PROPERLY.

(E) STEP TWO: SEEDING
SEEDING WITHOUT MULCH SHOULD BE APPLIED TO THE AREA TO BE VEGETATED.

(F) STEP THREE: PREPARE THE ANCHOR TRENCH
AT THE TOP OF THE SLOPE EXCAVATE AN ANCHOR TRENCH 6 INCHES DEEP BY 6 INCHES WIDE. THE EROSION CONTROL BLANKET WILL BE ANCHORED INTO THE TRENCH BY STAPLES. ALLOW A MINIMUM OF 3 FEET FROM THE CREST OF THE SLOPE TO THE ANCHOR TRENCH.

(G) STEP FOUR: SECURE THE EROSION CONTROL BLANKET IN THE ANCHOR TRENCH
BEGIN EROSION CONTROL BLANKET PLACEMENT 30 INCHES ABOVE THE ANCHOR TRENCH. RUN THE EROSION CONTROL BLANKET INTO THE ANCHOR TRENCH. ANCHOR THE EROSION CONTROL BLANKET WITH STAPLES ONE FOOT ON CENTER IN THE ANCHOR TRENCH. BE SURE TO DRIVE STAPLES OR STAKES FLUSH WITH THE SOIL SURFACE. BACKFILL THE ANCHOR TRENCH AND COMPACT THE SOIL. PLACE SEED OVER THE COMPACTED SOIL. COVER THE COMPACTED SOIL WITH THE REMAINING 12 INCHES OF THE TERMINAL END OF THE EROSION CONTROL BLANKET. STAPLE OR STAKE TERMINAL END DOWN SLOPE OF THE ANCHOR TRENCH ON ONE FOOT CENTERS.

(H) STEP FIVE: EROSION CONTROL BLANKET DEPLOYMENT
STARTING AT THE CREST OF THE SLOPE, ROLL THE EROSION CONTROL BLANKET DOWN THE SLOPE IN A CONTROLLED MANNER. APPROXIMATELY EVERY 20-25 FEET PULL THE EROSION CONTROL BLANKET TO TAKE OUT ANY EXCESS SLACK. THE GOAL IS TO HAVE THE EROSION CONTROL BLANKET CONTOUR AND INITIATE CONTACT WITH THE SOIL.

(I) STEP SIX: STAPLE OR STAKE THE EROSION CONTROL BLANKET
SECURE THE OVERLAP OR THE EDGES WITH STAPLES. THE TYPICAL INSTALLATION WILL REQUIRE ONE STAPLE PLACED AT THREE TO FIVE FEET INTERVALS ALONG THE VERTICAL LENGTH OF THE EROSION CONTROL BLANKET. STAPLES SHOULD BE STAGGERED EVERY 18 TO 24 INCHES HORIZONTALLY ACROSS THE EROSION CONTROL BLANKET. IF THE EROSION CONTROL BLANKET NEEDS TO BE SPLICED IN THE MIDDLE OF A SLOPE BE SURE THE EROSION CONTROL BLANKET IS "SHINGLED" WITH UP-SLOPE EROSION CONTROL BLANKET OVERLAPPING THE DOWN-SLOPE EROSION CONTROL BLANKET. THERE SHOULD BE A MINIMUM OF 4-INCHES OF OVERLAP IN A SPLICE. USE A STAPLE CHECK SLOT TO SECURE THE OVERLAP. A STAPLE CHECK SLOT IS MADE BY PLACING A ROW OF STAPLES 4-INCHES ON CENTER AND THEN PLACING A SECOND ROW OF STAPLES 4-INCHES ON CENTER, STAGGERED FROM THE FIRST ROW.

(J) STEP SEVEN: SECURING THE EROSION CONTROL BLANKET AT THE TOE OF SLOPE
ROLL THE EROSION CONTROL BLANKET 24-INCHES PAST THE TOE OF THE SLOPE. STAPLE OR STAKE TERMINAL END OF THE EROSION CONTROL BLANKET ON ONE FOOT CENTERS.

(K) ONLY EROSION CONTROL BLANKETS LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED.

(L) EROSION CONTROL BLANKETS FOR SLOPE INSTALLATION SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

801-02	SEEDING (WITHOUT MULCH) PER UNIT
801-02.01	CROWN VETCH MIXTURE (WITHOUT MULCH) PER UNIT
801-02.08	TEMPORARY SEEDING (WITHOUT MULCH) PER UNIT
805-12.01	EROSION CONTROL BLANKET (TYPE I) PER SQUARE YARD
805-12.02	EROSION CONTROL BLANKET (TYPE II) PER SQUARE YARD
805-12.03	EROSION CONTROL BLANKET (TYPE III) PER SQUARE YARD
805-12.04	EROSION CONTROL BLANKET (TYPE IV) PER SQUARE YARD

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF EROSION CONTROL BLANKETS.

EROSION CONTROL PLAN LEGEND: EROSION CONTROL BLANKET

REV. 12-18-95: CHANGED DRAWING NO. FROM ESC-STR-34 TO EC-STR-34.

☐ REV. 1-22-03: LAPPED LONGITUDINAL SEAM IN ISOMETRIC VIEW. REMOVED ITEM 805-12.01 FROM GENERAL NOTE (G) SINCE TYPE I BLANKETS ARE NO LONGER USED.

☐ REV. 1-19-05: CHANGED GENERAL NOTE (B). CHANGED PLAN VIEW AND LONGITUDINAL SEAM VEIW.

☐ REV. 4-1-08: REDREW REVISED GENERAL NOTES, ADDED STANDARD SYMBOL, REVISED INSTALLATION DETAILS.

☐ REV. 8-1-12: MINOR EDITS TO DRAWING AND GENERAL NOTES.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

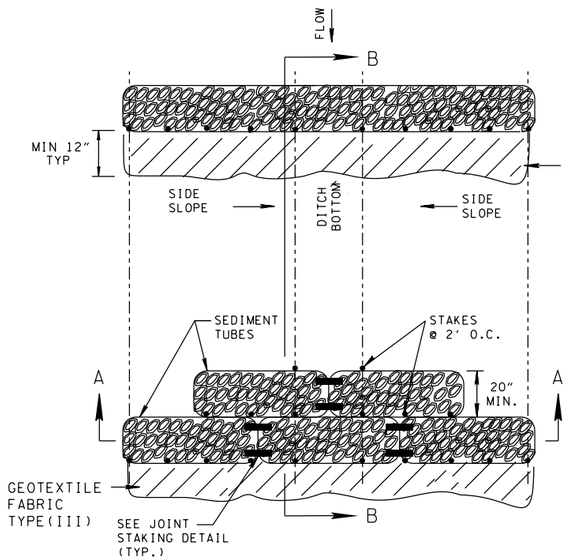
NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
BLANKET FOR
SLOPE INSTALLATION

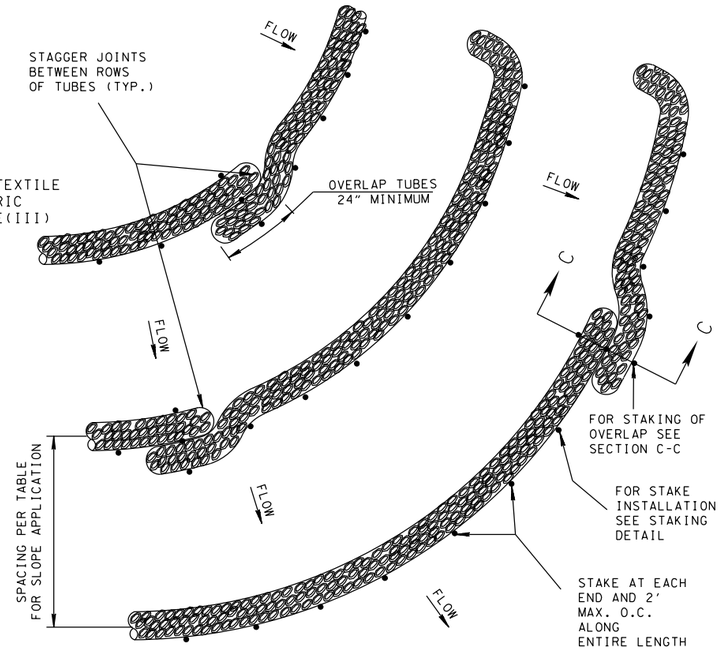
10-26-92 EC-STR-34

- ☐ REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- ☐ REV. 4-1-08: REMOVED TEMPORARY REFERENCE, ADDED OVERLAP DETAIL, OTHER MINOR MISC. EDITS, REVISED GENERAL NOTES.
- ☐ REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.
- ☐ REV. 6-10-14: MODIFIED SPACING TABLES. ADDED GEOTEXTILES ADDED NOTE (P).



PLAN VIEW FOR DITCH APPLICATION

SEE NOTE (G)



PLAN VIEW FOR SLOPE APPLICATION

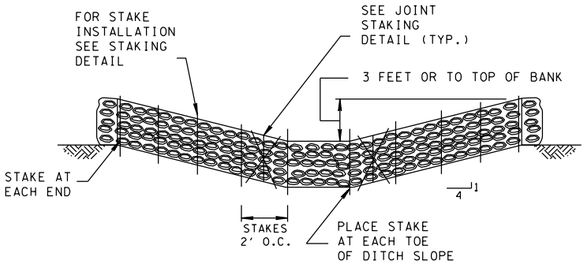
(P)

SEDIMENT TUBE SPACING FOR SLOPE APPLICATION					
SLOPE	8"	12"	18"	20"	24"
2%	70'	80'	N/A	N/A	N/A
5%	30'	60'	80'	N/A	N/A
10%	20'	30'	70'	80'	80'
6:1	N/A	20'	40'	50'	55'
4:1	N/A	20'	30'	30'	30'
3:1	N/A	N/A	20'	20'	25'
2:1	N/A	N/A	20'	20'	20'

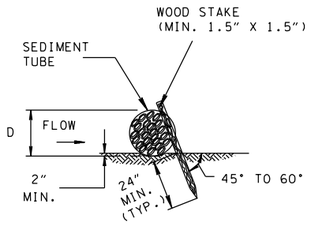
N/A = NOT RECOMMENDED
SPACING NOT TO EXCEED 80'

SEDIMENT TUBE SPACING TABLE FOR DITCH APPLICATION	
SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	80'
2%	80'
3%	50'
4%	40'
5%	30'
6%	20'
GREATER THAN 6%	20'

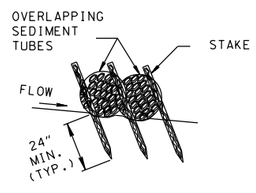
BASED ON A 20" SEDIMENT TUBE
SEE TABLE ON EC-STR-6 FOR OTHER HEIGHTS.



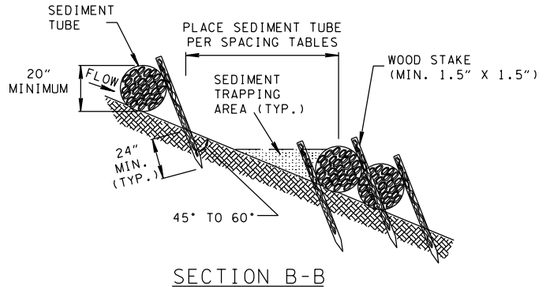
SECTION A-A



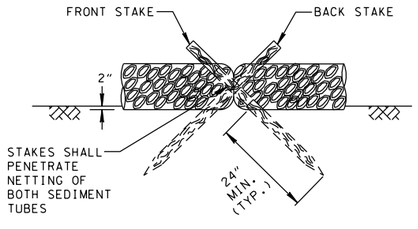
STAKING DETAIL



SECTION C-C



SECTION B-B



JOINT STAKING DETAIL

(DITCH APPLICATION ONLY)

EROSION CONTROL PLAN LEGEND: TUBE••TUBE••TUBE SEDIMENT TUBE

SEDIMENT TUBE GENERAL NOTES

(A) SEDIMENT TUBES CAN BE PLACED AT THE TOP, ON THE FACE, OR AT THE TOE OF SLOPES TO INTERCEPT RUNOFF, REDUCE FLOW VELOCITY, RELEASE THE RUNOFF AS SHEET FLOW AND PROVIDE REMOVAL OF SEDIMENT FROM THE RUNOFF.

(B) SEDIMENT TUBES SHALL BE INSTALLED ALONG OR ON THE GROUND CONTOUR, AT THE TOE OF SLOPES, OR IN A DITCH TO HELP REDUCE THE EFFECTS OF SOIL EROSION AND RETAIN SEDIMENT. SEDIMENT TUBES SHOULD NOT BE USED IN DITCHES OR STREAMS.

(C) FOR DITCH APPLICATIONS, THE MAXIMUM DRAINAGE AREA SHALL BE 15 ACRES. AT SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE MAXIMUM DRAINAGE AREA SHALL BE 10 ACRES. FOR SLOPE APPLICATIONS, THE MAXIMUM DRAINAGE AREAS SHALL BE ¼ ACRE PER 100 LF OF TUBE.

(D) SEDIMENT TUBES SHALL NOT BE USED ON PAVEMENT, ROCKY SOILS, OR AT ANY OTHER LOCATIONS WHERE THE STAKES CANNOT BE DRIVEN TO THE REQUIRED DEPTH.

(E) SEDIMENT TUBES SHALL BE MANUFACTURED FROM WOOD EXCELSIOR, RICE OR WHEAT STRAW, COCONUT FIBERS, OR HARDWOOD MULCH THAT IS ENCLOSED BY A TUBULAR FLEXIBLE NETTING MATERIAL. ALL MATERIALS INCLUDING THE NETTING SHALL BE BIODEGRADABLE.

(F) PINE NEEDLE AND LEAF MULCH FILLED SEDIMENT TUBES AND STRAW BALES ARE NOT ACCEPTABLE MATERIALS.

(G) THE DIAMETER OF A SEDIMENT TUBE SHALL BE A MINIMUM OF 8 INCHES AND A MAXIMUM OF 24 INCHES. DIAMETER TOLERANCE IS 2 INCHES. FOR DITCH APPLICATIONS, SEDIMENT TUBES SHALL BE A MINIMUM OF 20 INCHES.

(H) SEDIMENT TUBES SHALL BE INSTALLED WITH WOODEN STAKES (MIN. 1.5" x 1.5" ACTUAL). THE STAKE SHALL BE EMBEDDED A MINIMUM OF 2 FEET.

(I) SEDIMENT TUBES SHALL BE TRENCHED IN A MINIMUM OF 2 INCHES.

(J) IF MORE THAN ONE SEDIMENT TUBE IS PLACED IN A ROW IN SLOPE APPLICATION, THE TUBES SHALL BE OVERLAPPED A MINIMUM OF 24 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT. WHEN USED IN DITCHES, TWO ROWS OF TUBE SHALL BE PLACED ON THE CHANNEL BOTTOM WITH STAGGERED JOINTS AS SHOWN.

(K) FOR DITCH APPLICATIONS, SEDIMENT TUBES SHALL BE A MINIMUM OF 20 INCH DIAMETER AND SHALL BE PLACED PERPENDICULAR TO THE FLOW OF WATER. SEDIMENT TUBES SHALL CONTINUE UP THE SIDE SLOPES A MINIMUM OF 3 FEET PLUS THE DIAMETER OF THE TUBE, OR TO THE TOP OF THE DITCH, WHICHEVER IS LESS.

(L) SEDIMENT TUBES USED IN SLOPE APPLICATIONS MAY REMAIN IN PLACE TO BIODEGRADE. FOR DITCH APPLICATIONS SEDIMENT TUBES SHALL BE COMPLETELY REMOVED AFTER FULLY ESTABLISHED VEGETATION HAS COMPLETELY DEVELOPED.

(M) SEDIMENT TUBES SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS NUMBERS:

740-11.01 TEMPORARY SEDIMENT TUBE (8 INCH) PER LINEAR FOOT
740-11.02 TEMPORARY SEDIMENT TUBE (12 INCH) PER LINEAR FOOT
740-11.03 TEMPORARY SEDIMENT TUBE (18 INCH) PER LINEAR FOOT
740-11.04 TEMPORARY SEDIMENT TUBE (20 INCH) PER LINEAR FOOT
740-11.05 TEMPORARY SEDIMENT TUBE (24 INCH) PER LINEAR FOOT

PAYMENT SHALL INCLUDE ALL MATERIALS (INCLUDING GEOTEXTILE FABRIC IF USED) AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF SEDIMENT TUBE.

(N) ONLY SEDIMENT TUBES LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED.

(O) SEDIMENT SHALL BE REMOVED FROM BEHIND THE SEDIMENT TUBE WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL PER CUBIC YARD.

(P) GEOTEXTILE FABRIC REQUIRED FOR SLOPE APPLICATION STEEPER THAN 6:1.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

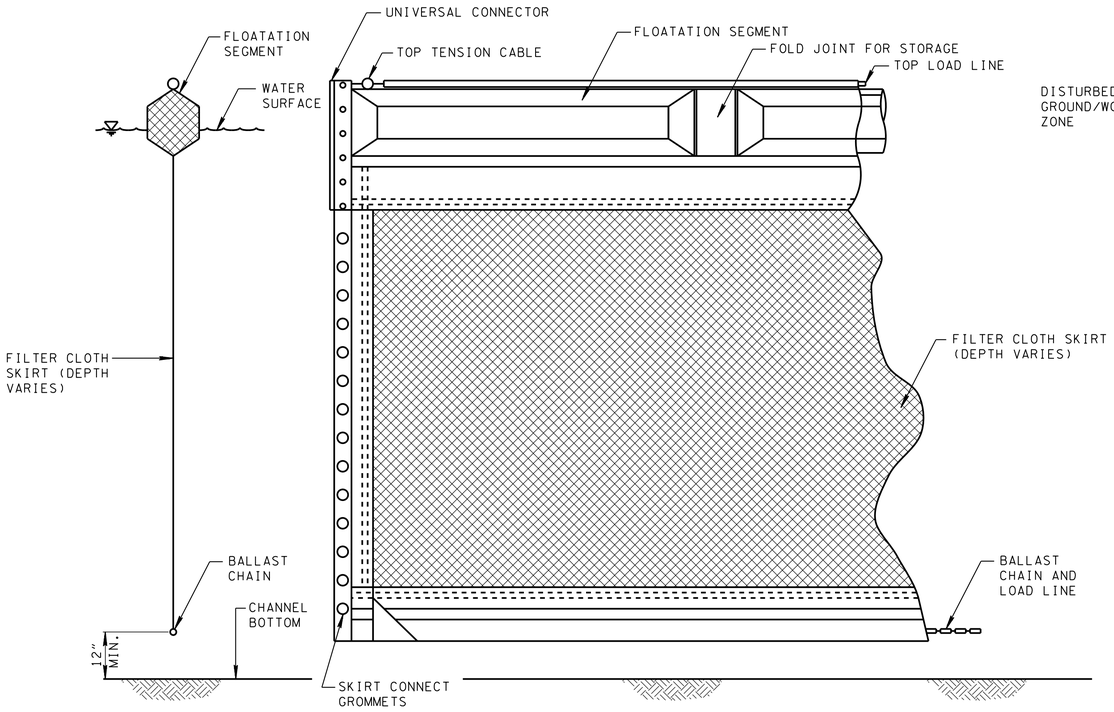
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEDIMENT TUBE

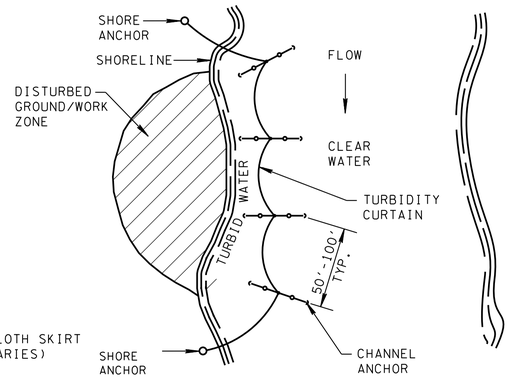
1-20-06 EC-STR-37

- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: REVISED GENERAL NOTES.
- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

FLOATING TURBIDITY CURTAIN

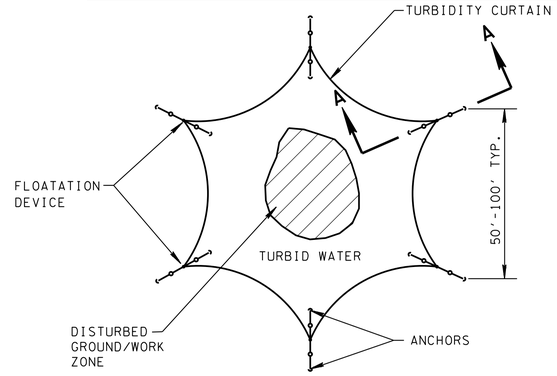


TYPICAL ANCHORING PLAN FOR SHORELINE/RIVER EDGE WORK



PLAN VIEW

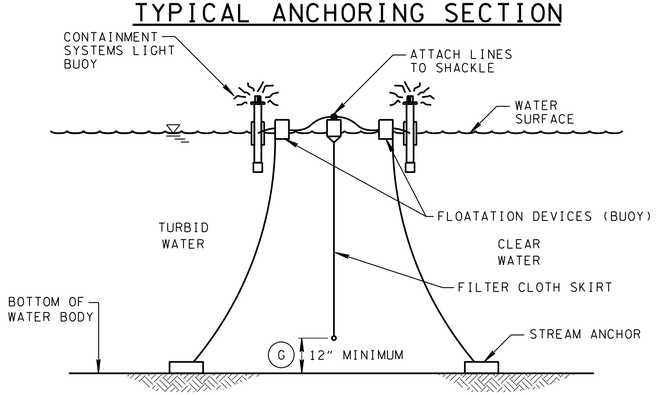
TYPICAL ANCHORING PLAN FOR MID CHANNEL WORK (BRIDGE PIER, CAISSON, ETC.)



PLAN VIEW

PHYSICAL PROPERTIES OF TURBIDITY CURTAIN FABRIC	
PHYSICAL PROPERTY	MINIMUM REQUIREMENT
THICKNESS, MILS	45
WEIGHT, OZ. / SQ. YD.	18
GRAB TENSILE STRENGTH, LBS.	300
UV INHIBITOR	MUST BE INCLUDED
APPARENT OPENING SIZE (AOS)	FINER THAN OR EQUAL TO #70 U.S. STANDARD SIEVE

TYPICAL ANCHORING SECTION



SECTION A-A

AUTOMATIC FLASHING LIGHT BUOY (ON AT DUSK-OFF AT DAWN) 100' ON CENTER SHALL BE USED IN NAVIGABLE CHANNELS ONLY

EROSION CONTROL PLAN LEGEND: FLOATING TURBIDITY CURTAIN

FLOATING TURBIDITY CURTAIN GENERAL NOTES

(A) FLOATING TURBIDITY CURTAINS (ALSO KNOWN AS TURBIDITY BARRIERS OR SILT CURTAINS) CREATE A BARRIER TO PREVENT TURBID WATER FROM ENTERING CLEAR WATER. FLOATING TURBIDITY CURTAINS SHOULD BE USED TO ISOLATE ACTIVE CONSTRUCTION AREAS WITHIN OR ADJACENT TO A BODY OF WATER TO MINIMIZE THE MIGRATION OF SILT LADEN WATER OUT OF THE CONSTRUCTION ZONE.

(B) TURBIDITY CURTAINS SHALL NOT BE INSTALLED PERPENDICULAR ACROSS THE MAIN FLOW OF A SIGNIFICANT BODY OF MOVING WATER.

(C) FLOATING TURBIDITY CURTAINS SHALL NOT BE USED WHERE THE ANTICIPATED FLOW VELOCITIES WILL EXCEED 5 FT/SEC.

(D) TURBIDITY CURTAINS SHALL BE ANCHORED TO PREVENT DRIFT SHOREWARD OR DOWNSTREAM. ANCHORAGE SHALL BE INSTALLED ON BOTH SHORE AND STREAM SIDE. CURTAINS SHALL BE INSTALLED AS CLOSE TO PROJECT SITE AS POSSIBLE. BARRIERS SHOULD BE A BRIGHT COLOR (YELLOW OR "INTERNATIONAL" ORANGE ARE RECOMMENDED) THAT WILL ATTRACT THE ATTENTION OF NEARBY BOATERS.

(E) SHORE ANCHORS SHALL CONSIST OF A POST WITH DEADMAN OR APPROVED EQUAL. STREAM ANCHORS SHALL BE OF SUFFICIENT SIZE TO STABILIZE THE BARRIER WITH NUMBER AND SPACING DEPENDENT ON WATERWAY VELOCITIES AND MANUFACTURER'S RECOMMENDATIONS.

(F) IN SHALLOW WATER (2 FEET OF DEPTH OR LESS) A TURBIDITY CURTAIN MAY BE INSTALLED ON STAKES DRIVEN INTO THE BED OF THE WATER BODY.

(G) FABRIC SECTIONS SHALL BE CONNECTED END TO END WITH A MINIMUM 5/8 INCH DIAMETER POLYPROPYLENE ROPE. FABRIC SHALL BE SEAMED TOGETHER IN A MANNER THAT RETAINS THE OVERALL TENSILE STRENGTH.

(H) DESIGN OF CURTAIN AND ANCHORAGE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. FILTER CLOTH SKIRT SHOULD BE ABLE TO WITHSTAND THE FORCES IMPARTED ON IT DUE TO THE EXPECTED WIND VELOCITY OR STREAM VELOCITY. FABRIC SHALL BE MADE OF A NON-DETERIORATING MATERIAL, SUCH AS PLASTIC OR NYLON, WHICH WILL ALLOW WATER TO PASS THROUGH WHILE STILL RETAINING SEDIMENT.

(I) THE TURBIDITY CURTAIN AND ADJACENT WORK AREAS SHALL NOT BE DISTURBED 12 HOURS PRIOR TO REMOVAL FROM WATER BODY. MAINTENANCE SHALL BE PERFORMED AS NEEDED. CONTRACTOR SHALL REMOVE THE CURTAIN AT COMPLETION OF WORK IN A MANNER THAT WILL PREVENT SILTATION OF THE WATERWAY. DURING REMOVAL, EXTREME CARE SHOULD BE TAKEN NOT TO DISTURB ANY SEDIMENT DEPOSITS.

(J) MAINTAIN 12" MINIMUM GAP BETWEEN SKIRT BOTTOM AND CHANNEL BOTTOM TO PREVENT ACCUMULATED SEDIMENT FROM PULLING TOP OF CURTAIN BELOW WATER SURFACE.

(K) IN WIND OR WAVE ACTION SITUATIONS, THE MAXIMUM DEPTH OF THE CURTAIN SHALL BE 12 FEET.

(L) CONCENTRATED FLOWS SHALL NOT DISCHARGE BEYOND FLOATING TURBIDITY CURTAIN. CURTAINS ARE NOT TO BE INSTALLED ACROSS FLOWING BODY OF WATER.

(M) WHEN INSTALLED IN A NAVIGABLE WATERWAY, BUOYS SHOULD BE LIT ACCORDING TO REGULATORY AGENCY STANDARDS.

(N) WHEN ESTIMATING THE LENGTH OF TURBIDITY CURTAIN, ALLOW 10 TO 20 PERCENT VARIANCE IN STRAIGHT LINE MEASUREMENT.

(O) FLOATING TURBIDITY CURTAIN SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBERS:

209-13.04 TURBIDITY CURTAIN (DESCRIPTION) PER LINEAR FOOT
209-13.05 TURBIDITY CURTAIN (DESCRIPTION) PER LINEAR FOOT
209-13.06 TURBIDITY CURTAIN (DESCRIPTION) PER LINEAR FOOT
209-13.07 TURBIDITY CURTAIN (DESCRIPTION) PER LINEAR FOOT
209-13.08 TURBIDITY CURTAIN (DESCRIPTION) PER LINEAR FOOT

PAYMENT SHALL INCLUDE ALL MATERIAL AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TURBIDITY CURTAINS

(P) ONLY FLOATING TURBIDITY CURTAINS LISTED ON THE QUALIFIED PRODUCTS LIST MAY BE USED. ANY PRODUCTS LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE IS ALSO ACCEPTABLE.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

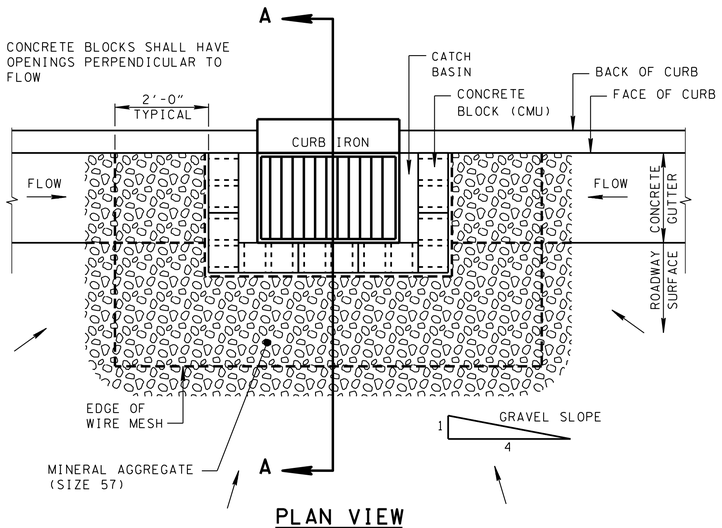
FLOATING TURBIDITY CURTAIN

1-20-06 EC-STR-38

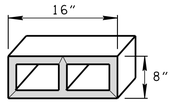
- REV. 4-15-06: REFORMATTED SHEET, REVISED NOTES, MISC. EDITS TO DRAWING.
- REV. 4-1-08: MISC. MINOR EDITS AND GENERAL NOTE REVISIONS.
- REV. 8-1-12: MINOR EDITS TO GENERAL NOTES.

CURB INLET PROTECTION TYPE 1

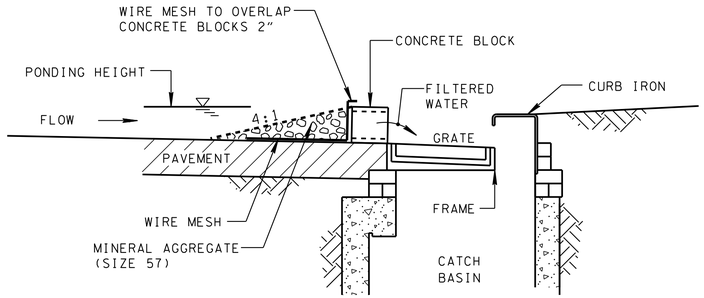
LOW VOLUME, LOW SPEED TRAFFIC AREAS ONLY



PLAN VIEW



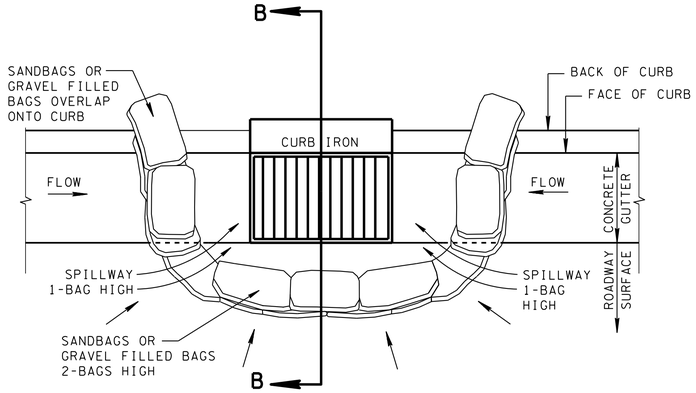
TYPICAL CMU



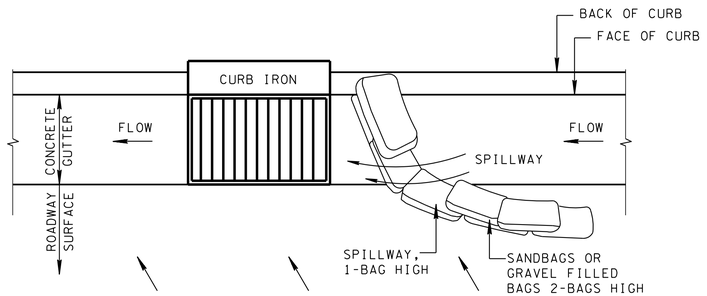
SECTION A-A

CURB INLET PROTECTION TYPE 2

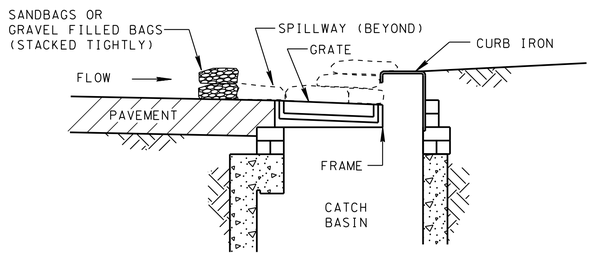
LOW VOLUME, LOW SPEED TRAFFIC AREAS ONLY



PLAN VIEW - INLET AT SAG



PLAN VIEW - INLET ON GRADE



SECTION B-B

CURB INLET PROTECTION TYPE 1 GENERAL NOTES

(A1) CURB INLET PROTECTION (TYPE 1) IS USED TO INTERCEPT SEDIMENT AND PREVENT SEDIMENT LADEN WATER FROM ENTERING STORM SEWER SYSTEMS. THIS DEVICE IS INTENDED AS A SECONDARY SEDIMENT CONTROL MEASURE. CURB INLET PROTECTION (TYPE 1) IS USED IN AREAS WHERE PONDING IS NOT A CONCERN AND ADEQUATE AREA IS AVAILABLE FOR PONDING.

(A2) MAXIMUM DRAINAGE AREA IS 1 ACRE.

(A3) CONCRETE BLOCKS SHALL BE PLACED LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET. THE ENDS OF ADJACENT BLOCKS SHOULD ABUT TIGHTLY TOGETHER.

(A4) ADDITIONAL BLOCKS WITH OPENINGS PERPENDICULAR TO FLOW MAY BE REQUIRED DEPENDING ON AMOUNT OF FLOW AND AVAILABLE PONDING AREA.

(A5) WIRE MESH SHALL BE 19 GUAGE GALVANIZED HARDWARE CLOTH WITH ¼ INCH OPENINGS. WIRE SHALL BE SHAPED TO FIT SECURELY AGAINST CONCRETE BLOCK AND SHALL LAP OVER THE TOP OF THE BLOCK A MINIMUM OF 2 INCHES.

(A6) CURB INLET PROTECTION (TYPE 1) SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER.

209-09.40 CURB INLET PROTECTION (TYPE 1) PER EACH

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF CURB INLET PROTECTION (TYPE 1).

(A7) ANY PRODUCT LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE IS ALSO ACCEPTABLE.

(A8) MAINTENANCE SHALL BE PERFORMED AS NEEDED. FOR PROPER FUNCTION, SEDIMENT REMOVAL SHALL BE PERFORMED CONTINUOUSLY AND/OR AFTER EVERY RAIN EVENT AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL, PER CUBIC YARD.

CURB INLET PROTECTION TYPE 2 GENERAL NOTES

(B1) CURB INLET PROTECTION (TYPE 2) IS USED TO INTERCEPT SEDIMENT AND PREVENT SEDIMENT LADEN WATER FROM ENTERING STORM SEWER SYSTEMS. THIS DEVICE IS INTENDED AS A SECONDARY SEDIMENT CONTROL MEASURE. CURB INLET PROTECTION (TYPE 2) IS USED IN AREAS WHERE PONDING IS NOT A CONCERN AND ADEQUATE AREA IS AVAILABLE FOR PONDING.

(B2) MAXIMUM DRAINAGE AREA IS 1 ACRE.

(B3) MAXIMUM TOP OF SPILLWAY ELEVATION = TOP OF CURB ELEVATION MINUS 1 INCH.

(B4) BAGS SHALL BE MADE OF EITHER BURLAP OR GEOTEXTILE FABRIC AND FILLED WITH CLEAN MINERAL AGGREGATE (SIZE 57) OR SAND.

(B5) PACK SAND/GRAVEL FILLED BAGS TIGHTLY TOGETHER END TO END TO ENSURE NO SEDIMENT FLOWS BETWEEN OR UNDERNEATH THE BAGS. WHERE TIGHT FIT IS UNACHIEVABLE, INSTALL GEOTEXTILE FABRIC (TYPE III) ALONG THE UPSTREAM FACE OF THE BAGS LAPPING OVER THE TOP BAGS 6 INCHES AND EXTENDING GEOTEXTILE FABRIC (TYPE III) A MINIMUM OF 18 INCHES UPSTREAM OF THE BAGS. COVER GEOTEXTILE FABRIC (TYPE III) WITH MINERAL AGGREGATE (SIZE 57) STONE WEDGE TO THE TOP OF THE BAGS.

(B6) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(B7) AN OVERFLOW SPILLWAY SHALL BE PROVIDED BY LEAVING AN OPENING OF ONE SAND OR GRAVEL BAG WIDE AND HIGH AS SHOWN. STORMS GREATER THAN 2-YEAR, 24 HOUR STORM SHOULD NOT OVERTOP THE CURB.

(B8) CURB INLET PROTECTION (TYPE 2) SHALL BE PAID FOR UNDER THE FOLLOWING ITEM NUMBER:

209-09.41 CURB INLET PROTECTION (TYPE 2) PER EACH

PAYMENT SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF CURB INLET PROTECTION (TYPE 2).

(B9) ANY PRODUCT LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE IS ALSO ACCEPTABLE.

(B10) MAINTENANCE SHALL BE PERFORMED AS NEEDED. FOR PROPER FUNCTION SEDIMENT REMOVAL SHALL BE PERFORMED CONTINUOUSLY AND/OR AFTER EVERY RAIN EVENT AND PAID FOR UNDER ITEM NUMBER 209-05, SEDIMENT REMOVAL, PER CUBIC YARD.

EROSION CONTROL PLAN LEGEND: ① CURB INLET PROTECTION (TYPE 1)

EROSION CONTROL PLAN LEGEND: ② CURB INLET PROTECTION (TYPE 2)

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

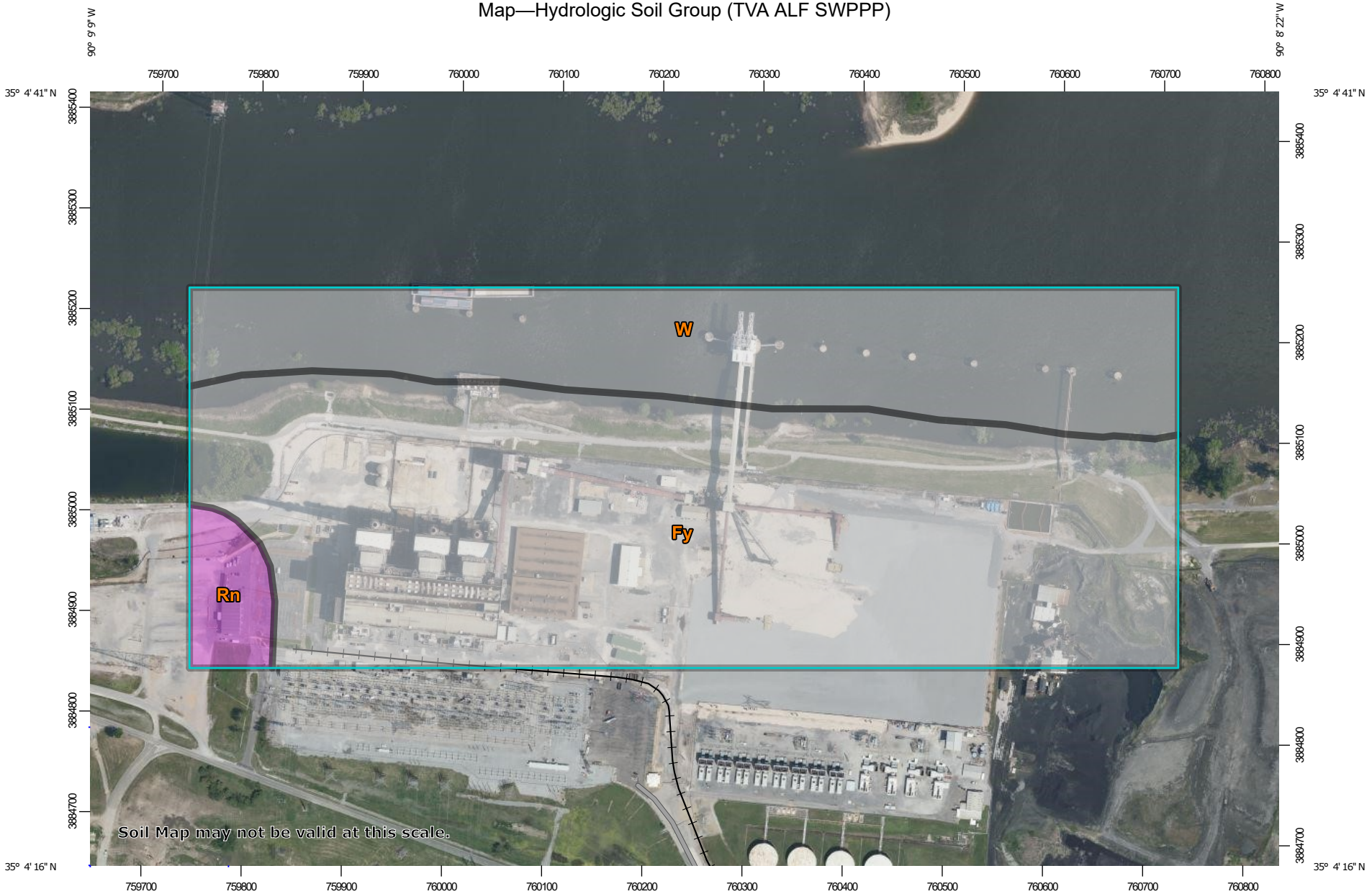
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CURB INLET PROTECTION TYPE 1 & 2

1-20-06 EC-STR-39

Appendix B
SOILS INFORMATION

Map—Hydrologic Soil Group (TVA ALF SWPPP)



Map Scale: 1:5,430 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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: Shelby County, Tennessee
Survey Area Data: Version 17, Sep 14, 2021

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

Date(s) aerial images were photographed: May 1, 2020—May 9, 2020

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.

Table—Hydrologic Soil Group (TVA ALF SWPPP)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Fy	Filled land, sandy (udorthent, loamy)		62.0	67.0%
Rn	Robinsonville silt loam	A	3.0	3.2%
W	Water		27.5	29.8%
Totals for Area of Interest			**92.6**	**100.0%**

Rating Options—Hydrologic Soil Group (TVA ALF SWPPP)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix C
RUNOFF CURVE NUMBER CALCULATIONS (TR-55)

RUNOFF CURVE NUMBER – EXISTING CONDITIONS

(TR-55 Worksheet 2)

Existing Conditions

Runoff Curve Number (CN)

Soil Name and Hydrologic Group	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Figure 2-3	CN [1] Figure 2-4	Area (acres)	Product of CN x Area
Fy Fill B	Open space (lawns, parks), good condition (soil fill w/ established veg.)	61			6.54	398.9
Fill B	Gravel – roads, rip rap slopes / ditches	85			19.67	1672.0
—	Buildings / Concrete Paving	98			15.06	1475.9
—	Open Water	100			5.64	564.0
[1] Use only one CN source per line				**Totals**	46.91	4110.8
weighted CN = $\frac{\text{total Product}}{\text{total Area}}$				**Use CN**		**87.6**

Source: (210-VI-TR-55, Second Ed., June 1986)

Avg. curve number for pervious areas:

$$CN = \frac{398.9}{6.54} = 61$$

Avg. curve number for impervious areas:

$$CN = \frac{1672.0 + 1475.9 + 564.0}{19.67 + 15.06 + 5.64} = 91.9$$

RUNOFF CURVE NUMBER – POST-CONSTRUCTION

(TR-55 Worksheet 2)

Post-Construction Conditions

Runoff Curve Number (CN)

Soil Name and Hydrologic Group	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Figure 2-3	CN [1] Figure 2-4	Area (acres)	Product of CN x Area
Fy Fill B	Open space (lawns, parks), good condition (soil fill w/ established veg.)	61			6.40	390.4
Fill B	Gravel – roads, rip rap slopes / ditches	85			32.15	2732.75
—	Buildings / Concrete Paving	98			2.17	212.7
—	Open Water	100			6.19	619.0
[1] Use only one CN source per line				**Totals**	46.91	3954.85
weighted CN = $\frac{\text{total Product}}{\text{total Area}}$					**Use CN**	**84.3**

Source: (210-VI-TR-55, Second Ed., June 1986)

Avg. curve number for pervious areas:

$$CN = \frac{390.4}{6.40}$$

$$= 61$$

Avg. curve number for impervious areas:

$$CN = \frac{2732.75 + 212.7 + 619.0}{32.15 + 2.17 + 6.19}$$

$$= 88.2$$

Appendix D
HYDROLOGIC & TEMPORARY SEDIMENT BASIN SIZING CALCULATIONS

D.1 SEDIMENT BASIN 1 DESIGN SUMMARY

Drainage Basin Parameters:

1. Total Drainage Area: 8.31 acres (on-site)
2. Time of Concentration, Tc: 5.0 min (TR-55 analysis)
3. SCS Curve Number, CN: 86
4. Incoming 5-yr, 24 hour peak flow, Q_p: 44.99 cfs (TR-55 analysis)
5. Incoming 25-yr, 24 hour peak flow, Q_p: 65.25 cfs (TR-55 analysis)
6. Permanent pool depth of 2 ft
7. Wet storage (permanent pool) basis: 67 CY/ac on-site
8. Dry storage (basin + forebay) basis: 67 CY/ac on-site

Basin Design:

Area selected on site based on initial runoff calculation of Q_p for the 5-yr storm:

$A_s = 0.01Q_p = 0.01(44.99 \text{ cfs}) = 0.45 \text{ ac} = 19{,}602 \text{ ft}^2$

from Pond Report: at EL. 237.5 ft, A = 24,409 ft^2 OK

From layout, bottom of pond set at Elevation 233.0 ft, top of wet storage/bottom of forebay set at Elevation 235.0 ft, and top of dry storage (riser elevation) was set at Elevation 237.5 ft to allow sufficient storage for the 5-year storm event. The forebay was located to comprise approximately 25% of the total dry storage volume.

Required basin volumes based on sediment load:

Wet storage = (67 CY/ac) x (8.31 ac) = 557CY = 15,039 ft^3

Total Dry storage = (67 CY/ac) x (8.31 ac) = 557CY = 15,039 ft^3

In Main Basin = 0.75 x 15,039 ft^3 = 11,279 ft^3

Forebay = 0.25 x 15,039 ft^3 = 3,760 ft^3

Available storage from Pond Report in TR-55 analysis:

Wet storage: 24,870 ft^3 (El. 233.0' to El. 235.0') OK

Total Dry storage: 78,675 ft^3 - 24,870 ft^3 = 53,805 ft^3 (El. 235.0 to El. 237.5) OK

Forebay = 10,409 ft^3 (modeled)

In Main Basin = 53.805 ft^3 - 10,409 ft^3 = 43,396 ft^3 OK

D.2 SEDIMENT BASIN 2 DESIGN SUMMARY

Drainage Basin Parameters:

1. Total Drainage Area: 10.58 acres (on-site)
2. Time of Concentration, Tc: 5.9 min (TR-55 analysis)
3. SCS Curve Number, CN: 86
4. Incoming 5-yr, 24 hour peak flow, Q_p: 57.27 cfs (TR-55 analysis)
5. Incoming 25-yr, 24 hour peak flow, Q_p: 83.07 cfs (TR-55 analysis)
6. Permanent pool depth of 2 ft
7. Wet storage (permanent pool) basis: 67 CY/ac on-site
8. Dry storage (basin + forebay) basis: 67 CY/ac on-site

Basin Design:

Area selected on site based on initial runoff calculation of Q_p for the 5-yr storm:

$A_s = 0.01Q_p = 0.01(57.27 \text{ cfs}) = 0.57 \text{ ac} = 24{,}829 \text{ ft}^2$

from Pond Report: at EL. 237.0 ft, A = 26,386 ft^2 OK

From layout, bottom of pond set at Elevation 232.0 ft, top of wet storage/bottom of forebay set at Elevation 234.0 ft, and top of dry storage (riser elevation) was set at Elevation 237.0 ft to allow sufficient storage for the 5-year storm event. The forebay was located to comprise approximately 25% of the total dry storage volume.

Required basin volumes based on sediment load:

Wet storage = (67 CY/ac) x (10.58 ac) = 709 CY = 19,143 ft^3

Total Dry storage = (67 CY/ac) x (10.58 ac) = 709 CY = 19,143 ft^3

In Main Basin = 0.75 x 19,143 ft^3 = 14,357 ft^3

Forebay = 0.25 x 19,143 ft^3 = 4,786 ft^3

Available storage from Pond Report in TR-55 analysis:

Wet storage: 21,519 ft^3 (El. 232.0' to El. 234.0') OK

Total Dry storage: 78,329 ft^3 – 21,519 ft^3 = 56,810 ft^3 (El. 234.0 to El. 237.0) OK

Forebay = 12,685 ft^3 (modeled)

In Main Basin = 56,810 ft^3 – 12,685 ft^3 = 44,125 ft^3 OK

Hydraflow Table of Contents

5 - Year

25 - Year

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2

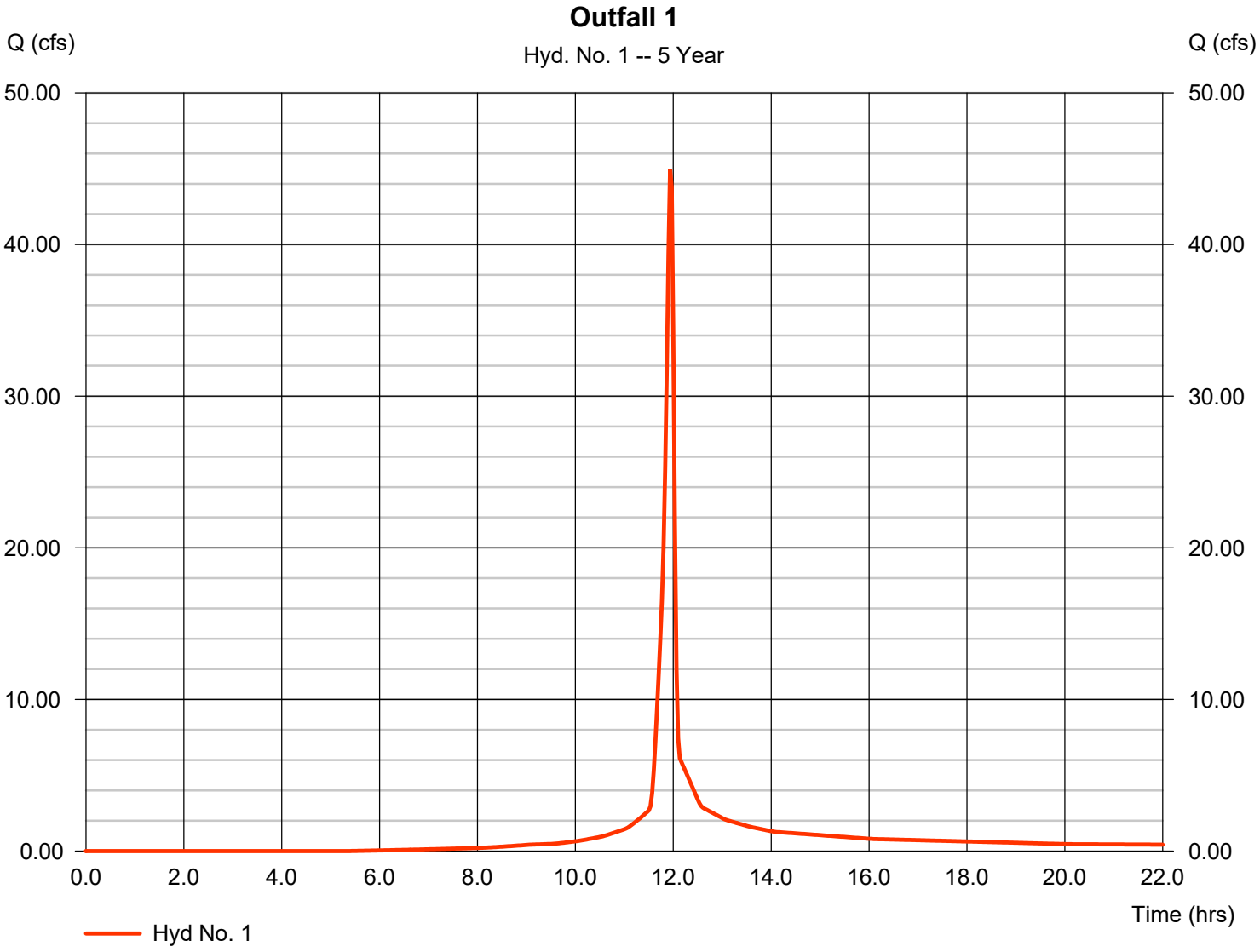
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	44.99	2	716	93,569	------	------	------	Outfall 1
2	SCS Runoff	57.27	2	716	119,128	------	------	------	Outfall 2
3	Reservoir	1.930	2	792	93,569	1	237.59	80,893	Sed. Basin 1 Routing
4	Reservoir	1.885	2	824	97,613	2	237.07	80,005	Sed. Basin 2 Routing

Hydrograph Report

Hyd. No. 1

Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	44.99 cfs
Storm frequency	=	5 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	93,569 cuft
Drainage area	=	8.310 ac	Curve number	=	86
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.83 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

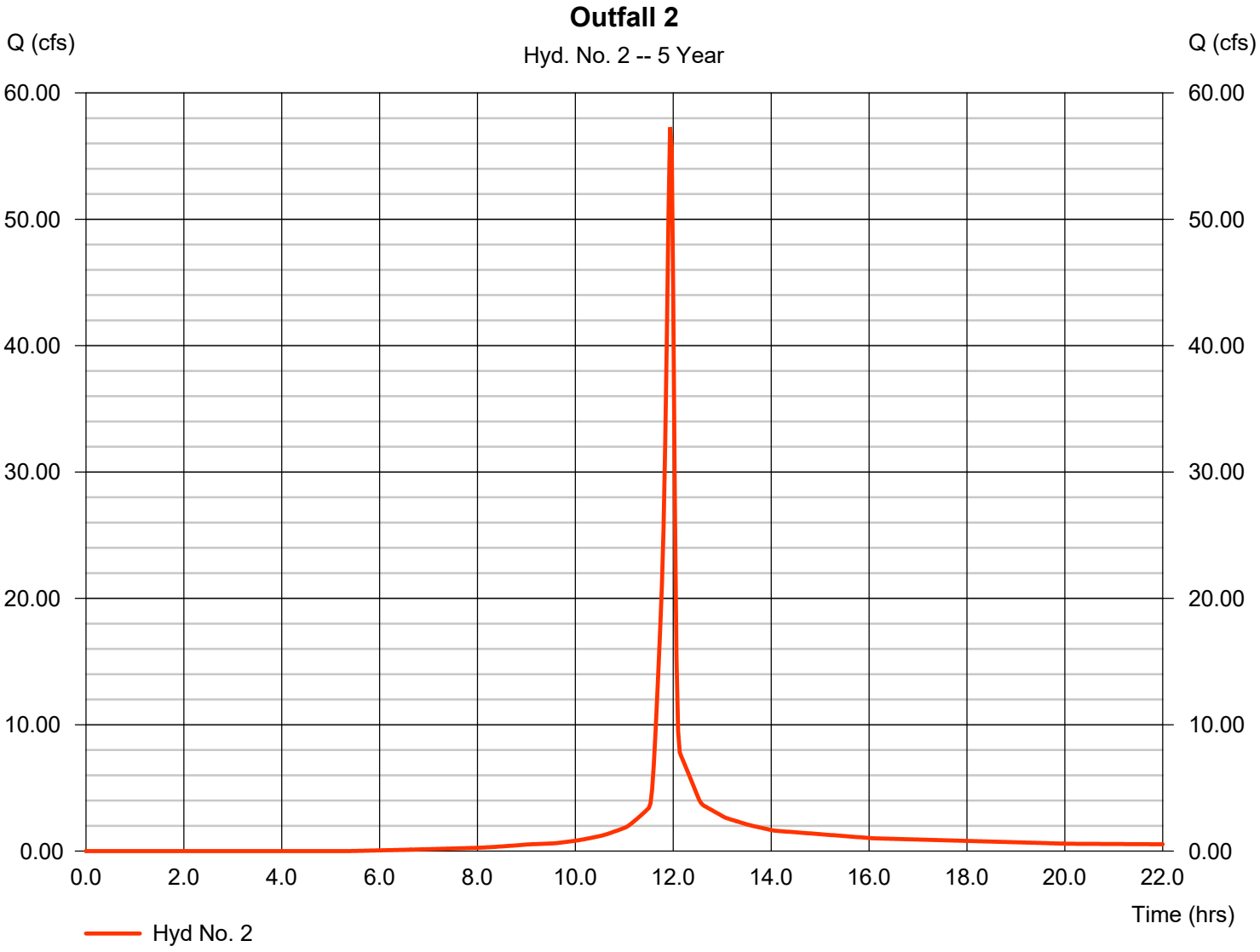


Hydrograph Report

Hyd. No. 2

Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	57.27 cfs
Storm frequency	=	5 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	119,128 cuft
Drainage area	=	10.580 ac	Curve number	=	86
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.90 min
Total precip.	=	4.83 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



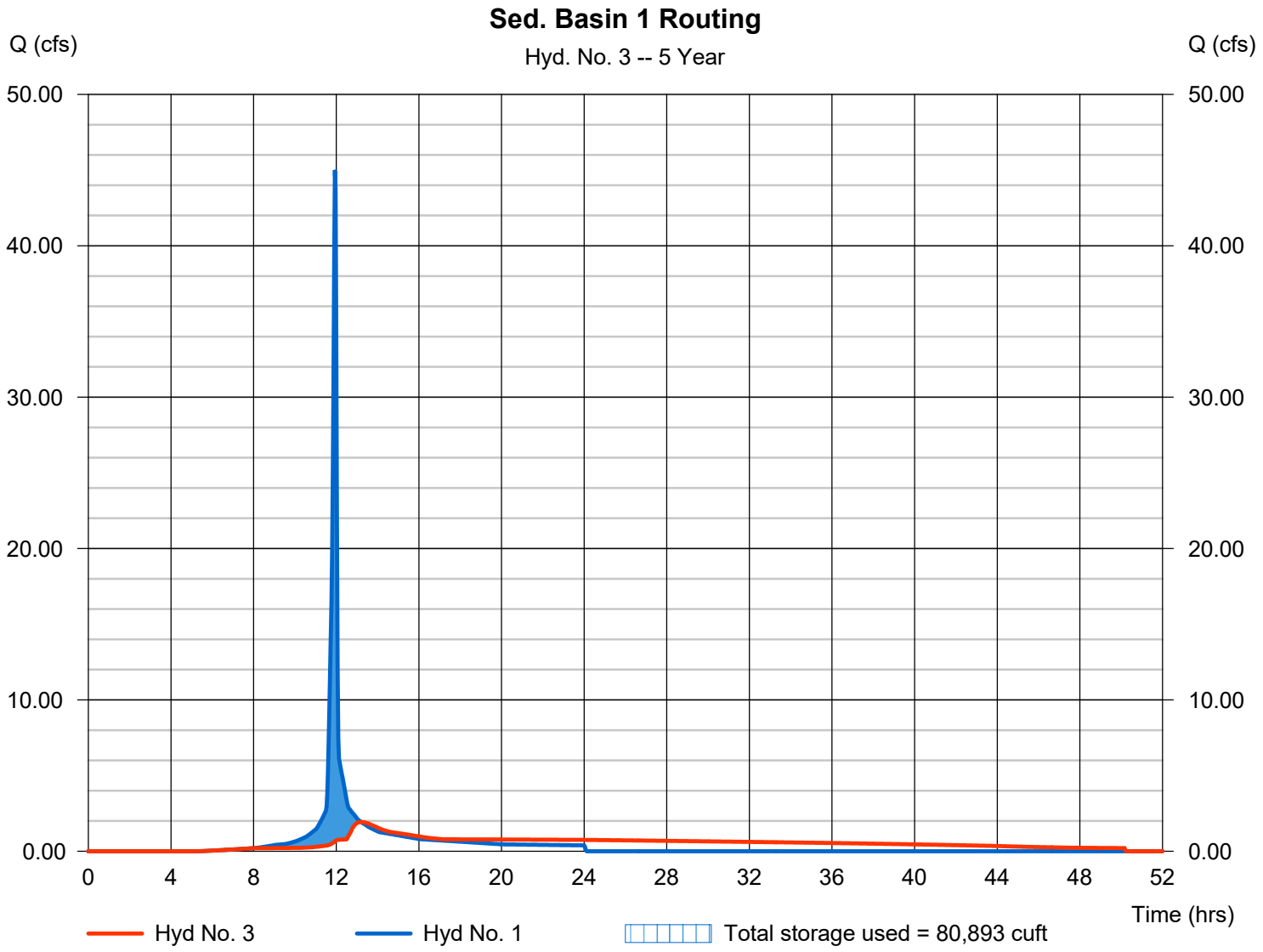
Hydrograph Report

Hyd. No. 3

Sed. Basin 1 Routing

Hydrograph type	= Reservoir	Peak discharge	= 1.930 cfs
Storm frequency	= 5 yrs	Time to peak	= 13.20 hrs
Time interval	= 2 min	Hyd. volume	= 93,569 cuft
Inflow hyd. No.	= 1 - Outfall 1	Max. Elevation	= 237.59 ft
Reservoir name	= Sed Basin 1	Max. Storage	= 80,893 cuft

Storage Indication method used. Wet pond routing start elevation = 235.00 ft.



Pond Report

Pond No. 1 - Sed Basin 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 233.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	233.00	10,440	0	0
1.00	234.00	12,432	11,420	11,420
2.00	235.00	14,496	13,449	24,870
2.00	235.00	18,724	17	24,886
3.00	236.00	20,944	19,802	44,688
4.00	237.00	23,236	22,078	66,766
4.50	237.50	24,409	11,909	78,675
5.00	238.00	25,600	12,500	91,175
5.50	238.50	26,809	13,100	104,275
6.00	239.00	27,500	13,576	117,850

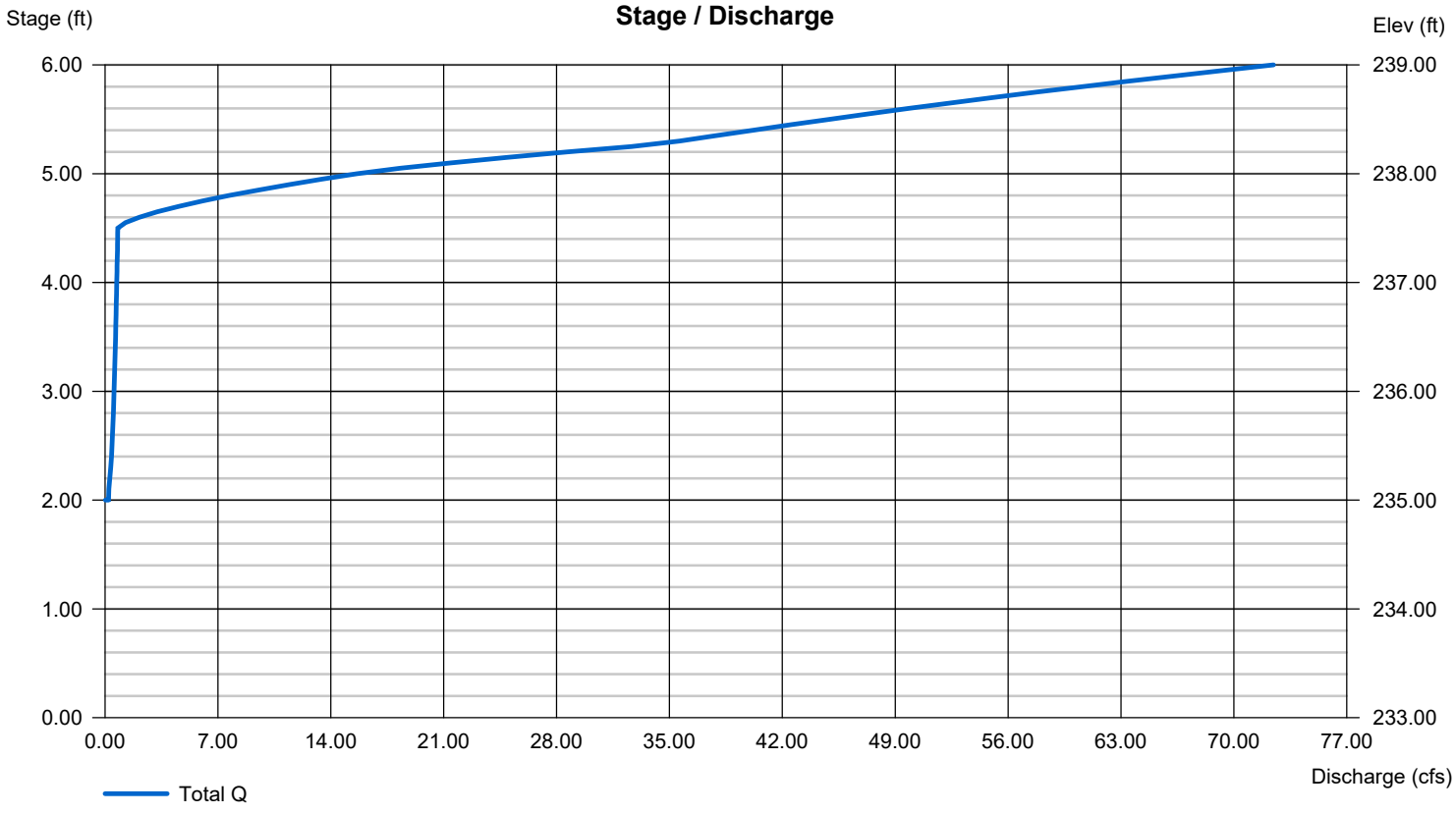
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	3.80	Inactive	Inactive
Span (in)	= 24.00	3.80	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 233.00	235.00	0.00	0.00
Length (ft)	= 44.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 12.57	15.00	Inactive	Inactive
Crest El. (ft)	= 237.50	238.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



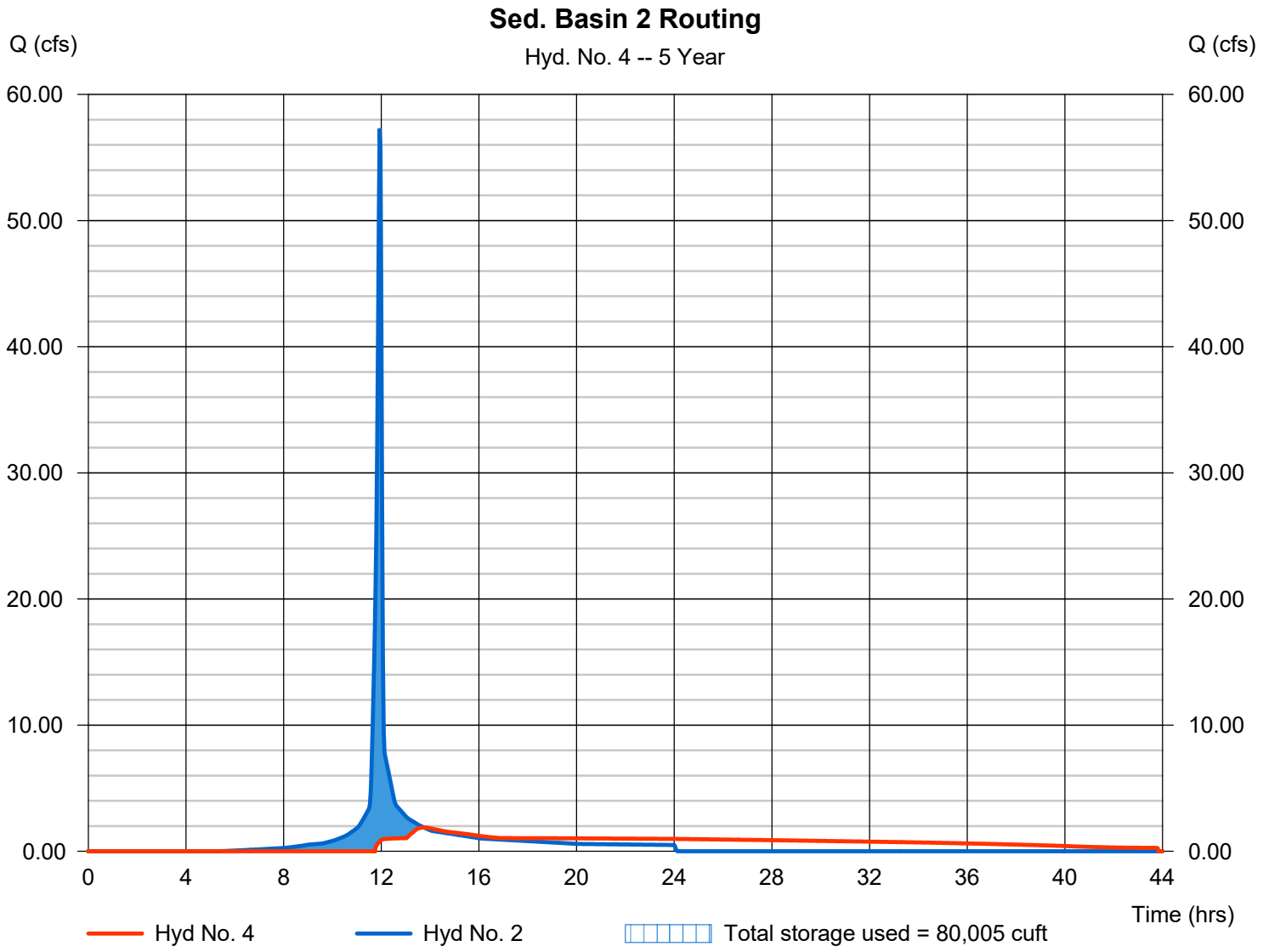
Hydrograph Report

Hyd. No. 4

Sed. Basin 2 Routing

Hydrograph type	= Reservoir	Peak discharge	= 1.885 cfs
Storm frequency	= 5 yrs	Time to peak	= 13.73 hrs
Time interval	= 2 min	Hyd. volume	= 97,613 cuft
Inflow hyd. No.	= 2 - Outfall 2	Max. Elevation	= 237.07 ft
Reservoir name	= Sed Basin 2	Max. Storage	= 80,005 cuft

Storage Indication method used.



Pond Report

Pond No. 2 - Sed Basin 2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 232.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	232.00	9,800	0	0
1.00	233.00	10,432	10,113	10,113
2.00	234.00	12,410	11,406	21,519
2.00	234.00	12,700	13	21,531
3.00	235.00	18,442	15,465	36,996
4.00	236.00	20,840	19,627	56,623
4.50	236.50	21,500	10,584	67,207
5.00	237.00	23,000	11,122	78,329
5.50	237.50	24,000	11,748	90,077
6.00	238.00	25,406	12,349	102,425
7.00	239.00	28,000	26,690	129,115

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 30.00	4.20	Inactive	Inactive
Span (in)	= 30.00	4.20	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 232.00	234.00	0.00	0.00
Length (ft)	= 50.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

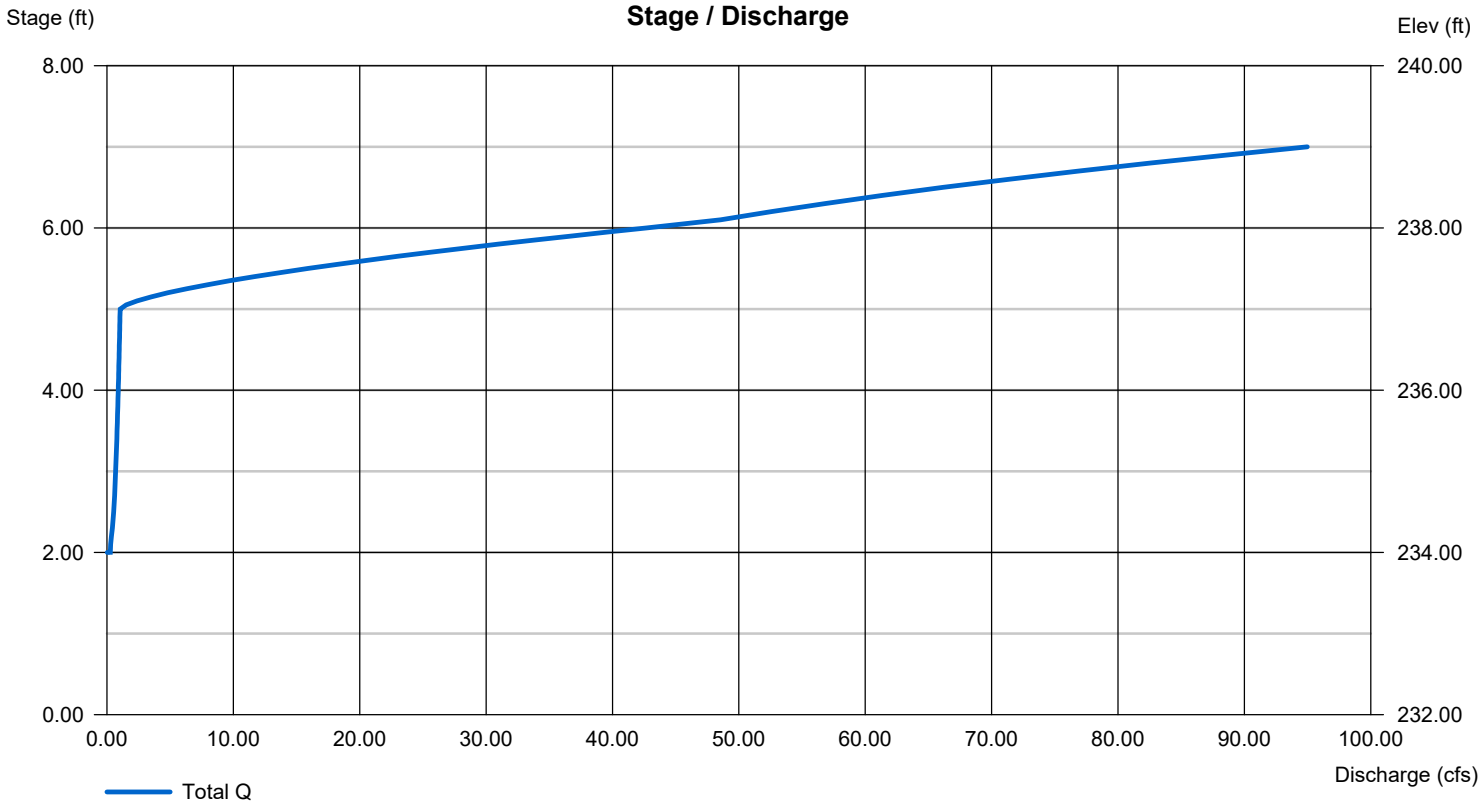
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 12.57	15.00	0.00	0.00
Crest El. (ft)	= 237.00	238.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2

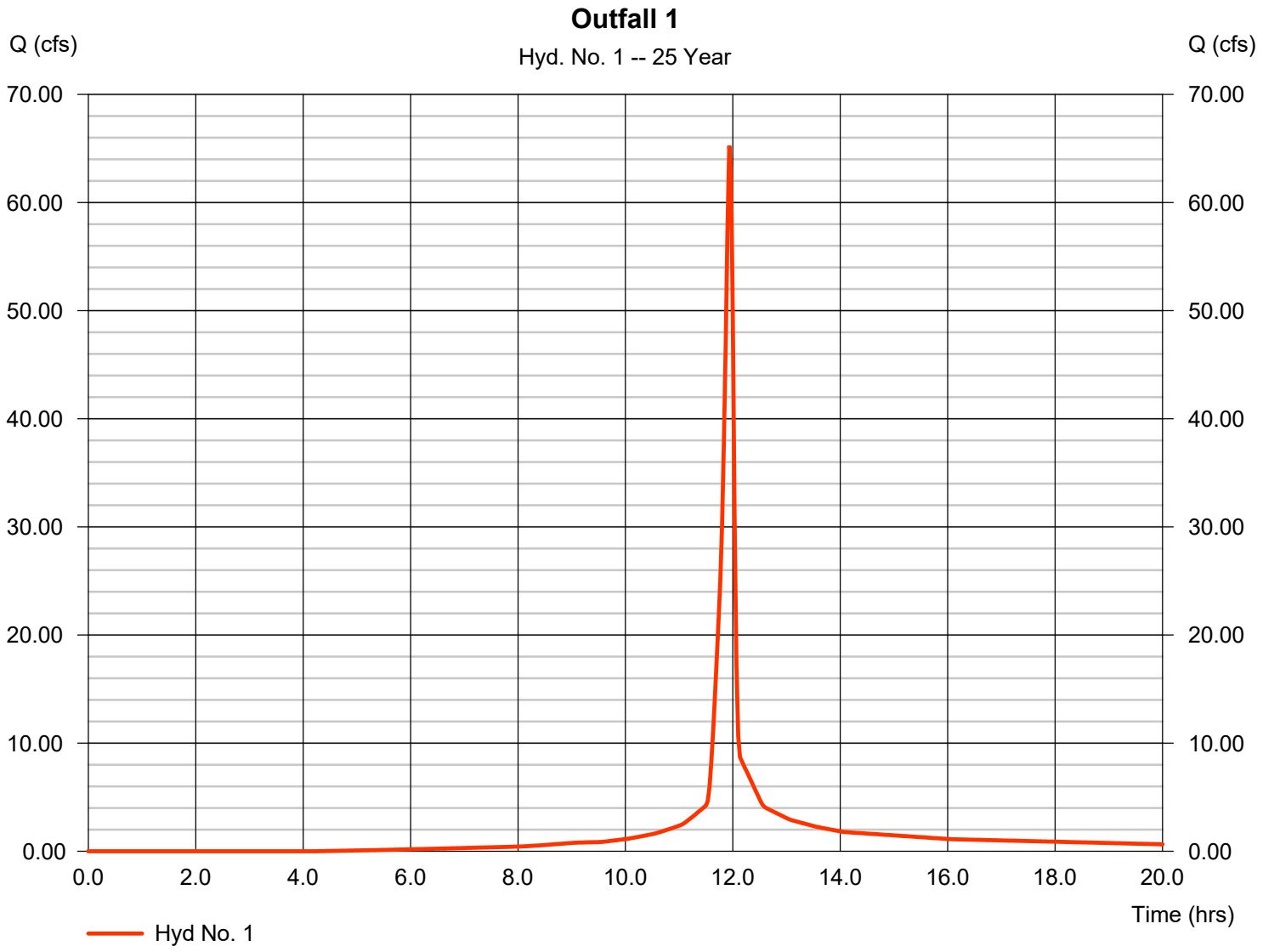
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	65.25	2	716	138,722	------	------	------	Outfall 1
2	SCS Runoff	83.07	2	716	176,616	------	------	------	Outfall 2
3	Reservoir	18.91	2	724	138,722	1	238.06	92,745	Sed. Basin 1 Routing
4	Reservoir	23.78	2	724	155,099	2	237.67	94,155	Sed. Basin 2 Routing

Hydrograph Report

Hyd. No. 1

Outfall 1

Hydrograph type	=	SCS Runoff	Peak discharge	=	65.25 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	138,722 cuft
Drainage area	=	8.310 ac	Curve number	=	86
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.52 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

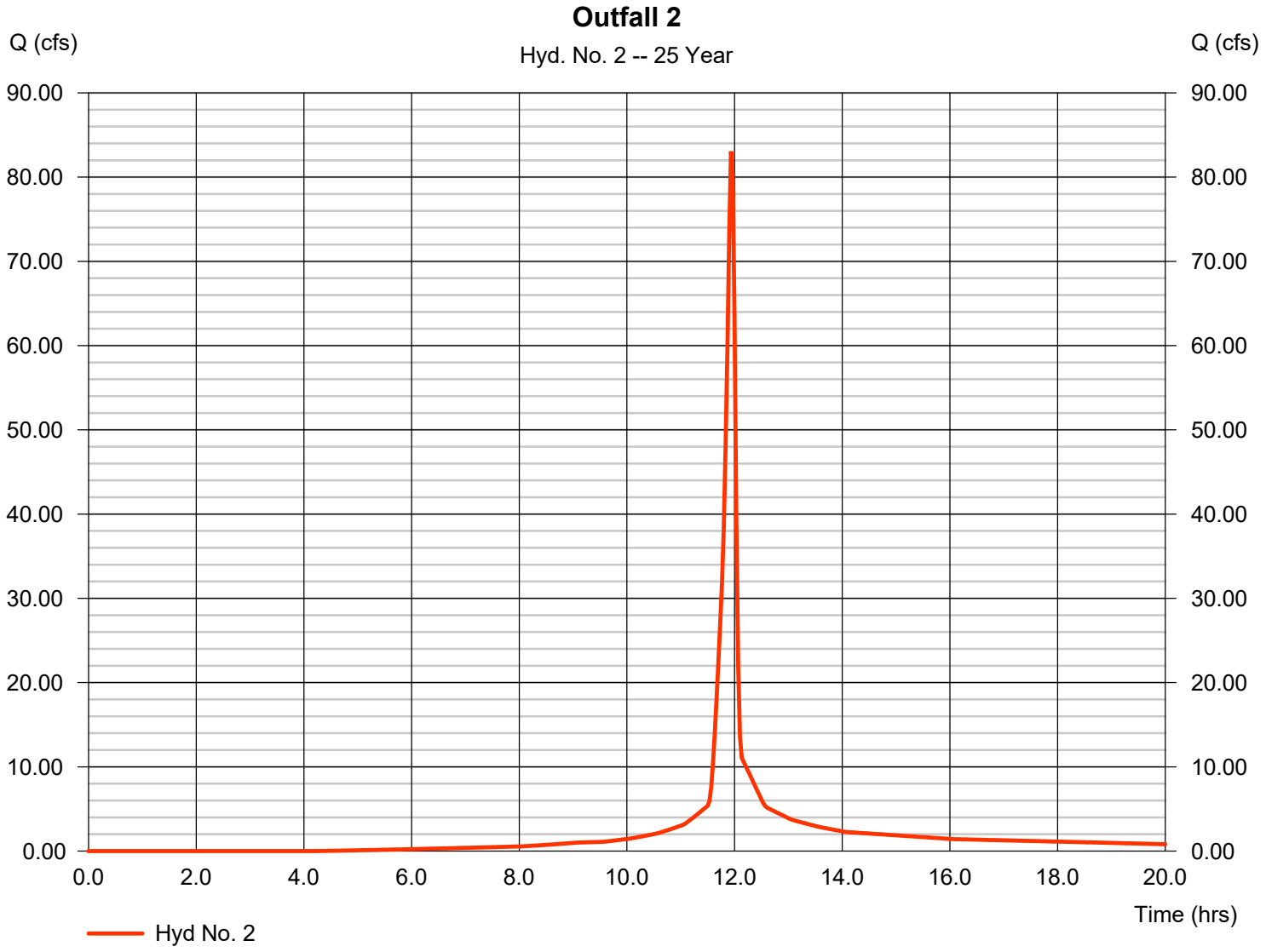


Hydrograph Report

Hyd. No. 2

Outfall 2

Hydrograph type	=	SCS Runoff	Peak discharge	=	83.07 cfs
Storm frequency	=	25 yrs	Time to peak	=	11.93 hrs
Time interval	=	2 min	Hyd. volume	=	176,616 cuft
Drainage area	=	10.580 ac	Curve number	=	86
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.90 min
Total precip.	=	6.52 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

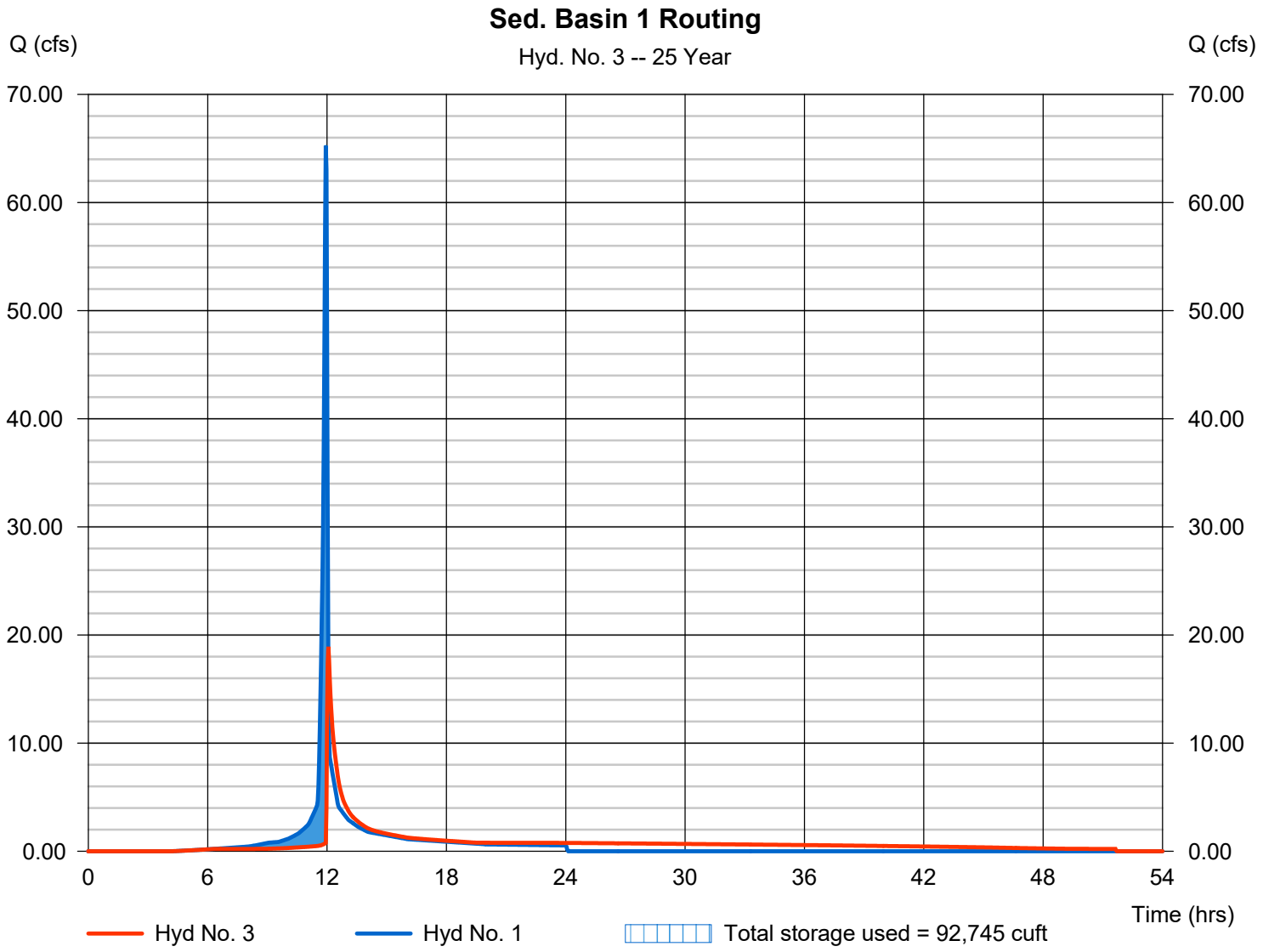
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 Tuesday, 06 / 14 / 2022

Hyd. No. 3

Sed. Basin 1 Routing

Hydrograph type	= Reservoir	Peak discharge	= 18.91 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 138,722 cuft
Inflow hyd. No.	= 1 - Outfall 1	Max. Elevation	= 238.06 ft
Reservoir name	= Sed Basin 1	Max. Storage	= 92,745 cuft

Storage Indication method used. Wet pond routing start elevation = 235.00 ft.



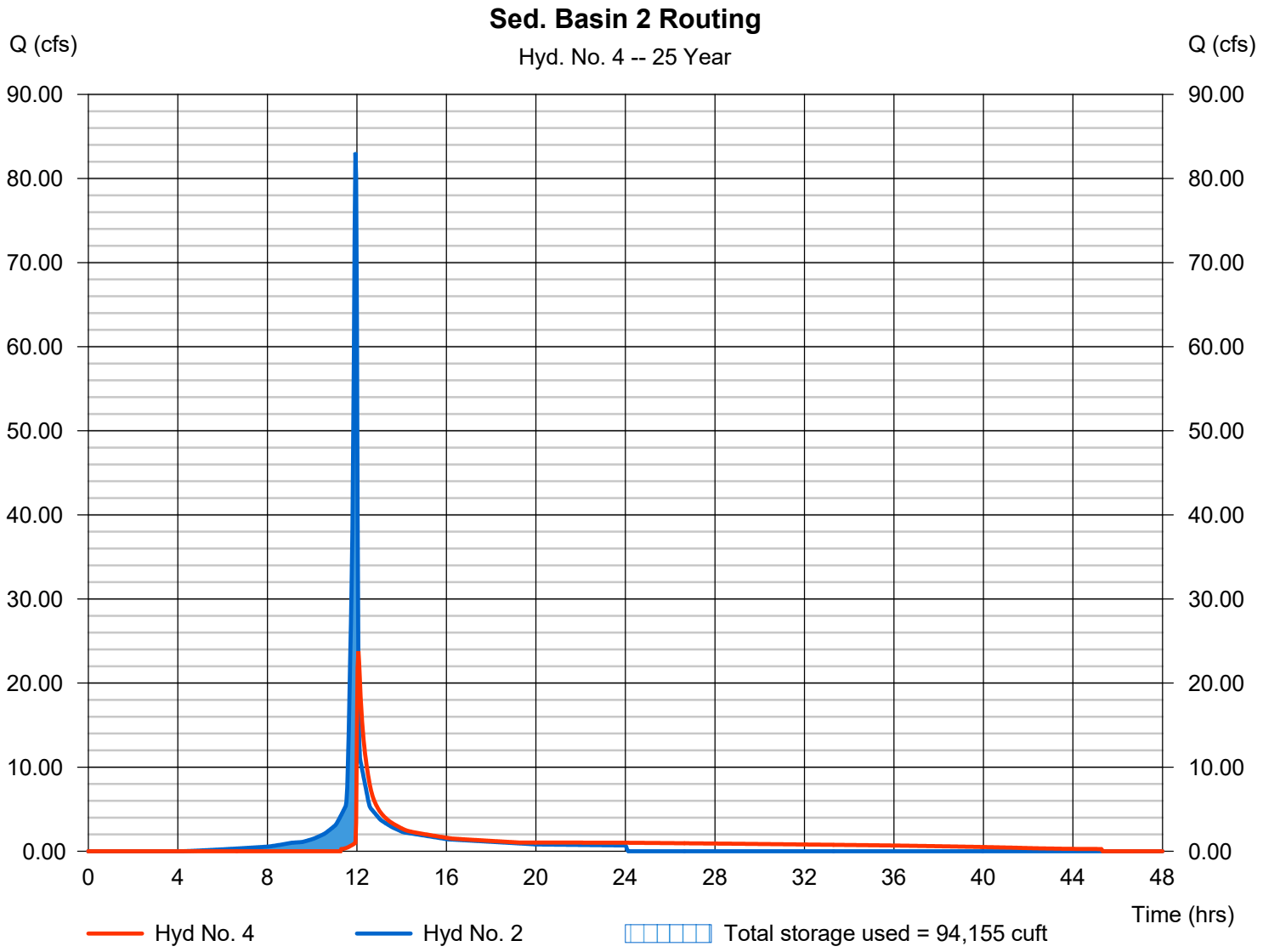
Hydrograph Report

Hyd. No. 4

Sed. Basin 2 Routing

Hydrograph type	= Reservoir	Peak discharge	= 23.78 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 155,099 cuft
Inflow hyd. No.	= 2 - Outfall 2	Max. Elevation	= 237.67 ft
Reservoir name	= Sed Basin 2	Max. Storage	= 94,155 cuft

Storage Indication method used.



Appendix E
CONSTRUCTION MONITORING FORMS

Inspect rainfall gage(s) and record daily inches of rain or “none” in measured rainfall column. Sign sheet for each day and present to designated TVA site representative when sheet has been filled and/or construction is complete. If prolonged storm event occurs, it is recommended that erosion control device checks be performed and results recorded on inspection form. Maintain a copy of this form and provide a copy to the Plant Environmental Scientist when the form is complete.

Gage Number	Date	Measured Rainfall (inches)	Inspector's Signature

Sequence of Control Measure Implementation, Maintenance, and Removal Log Form

Log to be maintained onsite and completed each time a control measure is implemented, maintained, or removed

Contractor:_____**Contract No.**:_____ Page_____ of _____

Control Measure and Location	Implementation, Maintenance, or Removal	Receiving Water (Channel #, etc.)	Foreman Initials	Date

MAJOR ACTIVITIES LOG

At a minimum the construction manager or designee shall record dates below for beginning of major grading, dates temporarily cease construction, dates re-commence construction, dates permanently cease construction and dates seeding and or stabilization begins. Include name of person recording activity. It is recommended that activity descriptions be recorded each day. Provide a copy of the form to the site Environmental Scientist when sheet is filled out or on a monthly basis.

Description of Major Activity	Date	Name

Provide to Plant Program Administrator (Environmental) monthly or as completed.

Appendix F
INSPECTION FORMS

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
DIVISION OF WATER RESOURCES
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

Construction Stormwater Inspection Certification (Inspection Form)

Site or Project Name:		**NPDES Tracking Number: TNR**
Primary Permittee Name:		Date of Inspection:
Current approximate <u>disturbed</u> acreage:	Has rainfall been checked/documented daily? ☐ Yes ☐ No	Name of Inspector:
Current weather/ground conditions:	Rainfall total since last inspection:	Inspector's TNEPSC Certification Number:
Site Assessment ☐ Yes ☐ No	Assessor's TN PE registration number:	Assessor's TNEPSC Level II/CPESC number:

Check the box if the following items are on-site:	
☐	Notice of Coverage (NOC)
☐	Stormwater Pollution Prevention Plan (SWPPP)
☐	Weekly inspection documentation
☐	Site contact information
☐	Rain Gage
Off-site Reference Rain Gage Location	

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly? If "No," describe below in Comment Section				
1.	Are all applicable EPSCs installed and maintained per the SWPPP per the current phase?		☐ Yes	☐ No
2.	Are EPSCs functioning correctly at all disturbed areas/material storage areas? (permit section 5.5.3)		☐ Yes	☐ No
3.	Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts? (permit section 5.5.3.5 and 6.3.2)		☐ Yes	☐ No
4.	Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track-out? (permit section 5.5.3.1)		☐ Yes	☐ No
5.	If applicable, have discharges from dewatering activities been managed by appropriate controls? (permit section 4.1.3) If "No," describe below the measure to be implemented to address deficiencies.	☐ N/A	☐ Yes	☐ No
6.	If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 14 days? (permit section 5.5.3.4) If "No," describe below each location and measures taken to stabilize the area(s).	☐ N/A	☐ Yes	☐ No
7.	Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from wash waters, exposure of materials and discharges from spills and leaks per section 4.1.4? If "No," describe below the measure to be implemented to address deficiencies.	☐ N/A	☐ Yes	☐ No

Site or Project Name:	**NPDES Tracking Number: TNR**
Primary Permittee Name:	Date of Inspection:

8.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," describe below the measures to be implemented to address deficiencies. (permit section 1.2.2)	☐ N/A	☐ Yes	☐ No
9.	Have all previous deficiencies been addressed? If "No," describe the remaining deficiencies in the Comments section. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐ N/A	☐ Yes	☐ No

Comment Section. If the answer is "No" for any of the above, describe the problem and summarize corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 5.5.3.11 (g) and 8.7.2 of the CGP)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Inspector Name and Title :	Signature:	Date:
Primary Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Inspection Form)

Purpose of this form / Instructions

An inspection, as described in subsection 5.5.3.9. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at the specified frequency and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

Inspections can be performed by:

a) a person with a valid certification from the "Fundamentals of Erosion Prevention and Sediment Control Level I" course,
b) a licensed professional engineer or landscape architect,
c) a Certified Professional in Erosion and Sediment Control (CPESC), or
d) a person who has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

Qualified personnel, as defined in subsection 5.5.3.10 of the Permit (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been permanently stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 5.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 5.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the Division's form and the permittee has obtained a written approval from the Division to use the alternative form. Inspection documentation will be maintained on site and made available to the Division upon request. Inspection reports must be submitted to the Division within 10 days of the request.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

Appendix G
NOTICE OF COVERAGE (NOC) AND NOTICE OF TERMINATION (NOT) FORM

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243
Toll Free Number: 1-888-891-8332 (TDEC)

NOTICE OF INTENT (NOI) FOR GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (TNR100000)

Site or Project Name:		**NPDES Tracking Number: TNR**
Street Address including city or zip code or Location:		Construction Start Date:
		Estimated End Date:
Site Description:		Latitude (dd.dddd):
		Longitude (-dd.dddd):
County(ies):	MS4 Jurisdiction (if applicable):	Acres Disturbed:
		Total Acres:
Are there any streams ☐ and/or wetlands ☐ on or adjacent to the construction site? If wetlands are located on-site and may be impacted, attach wetlands delineation report. If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number?		ARAP Number:
Receiving waters:		
Include the SWPPP with the NOI ☐ SWPPP Included		Include a site location map ☐ Map Included

Name of Site Owner or Developer (Site-Wide Permittee): (correct legal name of person, company, or entity that has operational or design control over construction plans and specifications)			
For corporate entities only, provide the Tennessee Secretary of State (SOS) Control Number:			
Site Owner or Developer Contact Name: (individual responsible for site)	Title or Position: (the party who signs the certification below):		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Optional Contact Name:	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Owner or Developer Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)		
I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Owner or Developer Name: (print or type):	Signature:	Date:

Contractor(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)		
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Primary contractor name, address, and SOS control number (if applicable): (print or type)	Signature:	Date:
Primary contractor name, address, and SOS control number (if applicable): (print or type)	Signature:	Date:
Primary contractor name, address, and SOS control number (if applicable): (print or type)	Signature:	Date:

NOTICE OF INTENT (NOI) FOR GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (TNR100000)

Purpose of this form - A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling, and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

The appropriate permit application fee must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g., equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites):

(i) Projects equal to or greater than 150 acres	$10,000
(ii) Projects equal to or greater than 50 acres and less than 150 acres	$6,000
(iii) Projects equal to or greater than 20 acres and less than 50 acres	$3,000
(iv) Projects equal to or greater than 5 acres and less than 20 acres	$1,000
(v) Projects equal to or greater than 1 acre and less than 5 acres	$250
(vi) Projects seeking subsequent coverage under an actively covered larger common plan of development or sale	$100

There is no fee for sites less than 1 acre. A separate annual maintenance fee is also required for construction activities that exceed 1 year under general permit coverage. Tennessee Rules, Chapter 0400-40-11-.02(b)(12)).

Who must submit the NOI form? Per Section 2 of the permit, all site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current landowner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee and is considered a secondary permittee.

Owners, developers, and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any separate or subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The site-wide site-specific SWPPP shall be prepared in accordance with the requirements of part 5 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage. Artificial entities (e.g., corporations or partnerships excluding entities not required to register) must submit the TN Secretary of State, Division of Business Services, control number. The Division reserves the right to deny coverage to artificial entities that are not properly registered and in good standing with the TN Secretary of State.

Notice of Coverage - The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

Complete the form - Type or print clearly, using ink and not markers or pencil. Answer each item or enter "NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project - Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads, and structures, e.g., intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The maps can be obtained at the USGS World Wide Web site: http://www.usgs.gov/; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5-minute topographic map, a city map, or a county map showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

Give name of the receiving waters - Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the water body that the unnamed tributary enters.

An ARAP may be required - If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP). If you have a question about the ARAP program, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information - Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing** or use MyTDEC Forms for electronic submittal.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Parkway, Suite 206	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
DIVISION OF WATER RESOURCES (DWR)
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243
1-888-891-TDEC (8332)

NOTICE OF TERMINATION (NOT) FOR GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been permanently stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form.

Submit this form to the local DWR Environmental Field Office (EFO) address (see table below) or using MyTDEC Forms electronic submittal process. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Site or Project Name:	**NPDES Tracking Number: TNR**
Street Address or Location:	County(ies):

Name of Permittee Requesting Termination of Coverage:			
Permittee Contact Name:	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Check the reason(s) for termination of permit coverage: (check only one)

☐	Primary permittee termination: all requirements for termination under Permit Part 9.1.1. a) through c) have been met. This includes, but is not limited to, for areas the primary permittee has control all earth-disturbing activities at the site are complete and permanent stabilization as defined in Part 10 of the CGP has been achieved. (attach photo documentation)
	When applicable, and you are a primary permittee seeking termination, list who is responsible for ongoing maintenance of stormwater controls left on the site subject for long-term use following termination of coverage:
☐	Secondary permittee termination: all requirements for termination under Permit Part 9.2.1. have been met (no longer an operator at the construction site).

Certification and Signature:

(must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the state is unlawful under the Tennessee Water Quality Control Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Tennessee Water Quality Control Act. I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type):	Signature:	Date:

EFO	Address	EFO	Street Address
Memphis	8383 Wolf Lake Drive, Bartlett, TN 38133	Cookeville	1221 South Willow Ave., TN 38506
Jackson	1625 Hollywood Drive, TN 38305	Chattanooga	1301 Riverfront Parkway, Ste. 206, TN 37402
Nashville	711 R S Gass Boulevard, TN 37243	Knoxville	3711 Middlebrook Pike, TN 37921
Columbia	1421 Hampshire Pike, TN 38401	Johnson City	2305 Silverdale Road, TN 37601

Appendix H
SWPPP CONTACT NOTICE

TVA
ALLEN FOSSIL PLANT
D4 PLANT RETIREMENT / DECOMMISSIONING & PLANT SITE RESTORATION (D4)

Description:
Construction activities associated with site include demolition work – removal of all concrete, asphalt, and plant underground features (such as pilings under a foundation) to at least 3 feet below final grade – and subsequent site restoration work, grading activities to ensure positive drainage to appropriate outfalls, and final stabilization to prevent erosion at the decommissioned site.

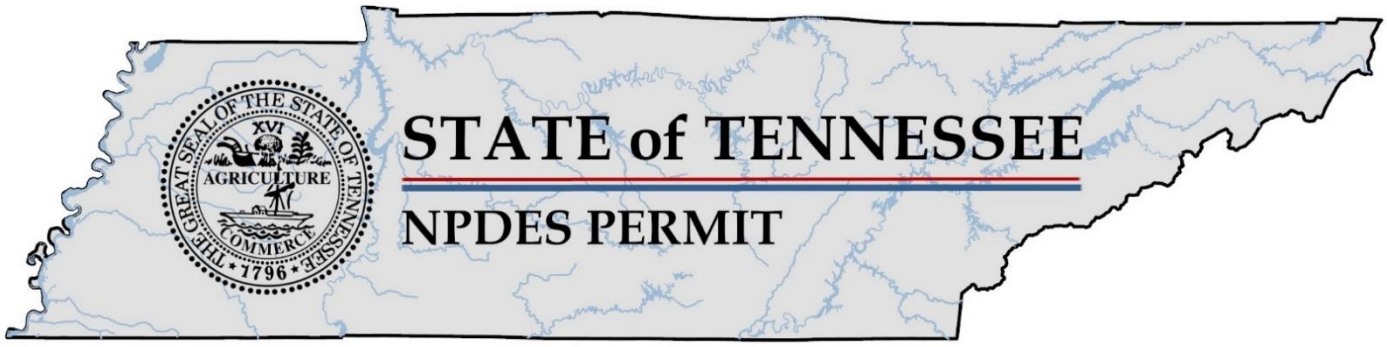
CONTACT:

For Storm Water Pollution Prevention Plan located at

Allen Fossil Plant

Deanne Hardy
2574 Plant Road
Memphis TN, 38019
PHONE: (901) 212-7135

Appendix I
TENNESSEE GENERAL NPDES PERMIT NO. TNR100000



National Pollutant Discharge Elimination System (NPDES)

General Permit for Discharges of Stormwater Associated with Construction Activities

Permit Number TNR100000

Issued by
Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the authorization by the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.) and the Water Quality Act of 1987, P.L. 100-4, including special requirements as provided in Subpart 6.4 of this general permit, operators of point source discharges of stormwater associated with construction activities into waters of the State of Tennessee, are authorized to discharge stormwater associated with construction activities in accordance with the following permit monitoring and reporting requirements, effluent limitations, and other provisions as set forth in parts 1 through 10 herein, from the subject outfalls to waters of the State of Tennessee.

This permit is issued on: **September 27, 2021**

This permit is effective on: **October 1, 2021**

This permit expires on: **September 30, 2026**

for Jennifer Dodd
Director

Tennessee General Permit No. TNR100000
Stormwater Discharges Associated with Construction Activities

Table of Contents

PART 4

PART 5

PART 6

PART 7

PART 1

1. COVERAGE UNDER THIS GENERAL PERMIT

1.1. PERMIT AREA

The construction general permit (CGP) covers all areas of the State of Tennessee.

1.2. DISCHARGES COVERED BY THIS PERMIT

1.2.1. Stormwater Discharges Associated with Construction Activities

Discharge of stormwater associated with construction activity, as used in this permit, refers to stormwater point source discharges from areas where soil disturbing activities, or associated construction support activities (see Section 1.2.2) are located. Soil disturbing activities include but are not limited to clearing, grading, grubbing, filling and excavation.

This permit authorizes stormwater point source discharges from construction activities that result in soil disturbances of one or more acres. Soil disturbances of less than one acre are required to obtain authorization under this permit if construction activities are part of a larger common plan of development or sale that comprises at least one acre of cumulative land disturbance. One or more site operators must maintain coverage under this permit for all portions of a site that have not been permanently stabilized.

Projects of less than one acre of total land disturbance require authorization under this permit if:

a) the director has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;
b) the director has determined that the stormwater discharge is, or is likely to be a significant contributor of pollutants to waters of the state[1]; or
c) changes in state or federal rules require sites of less than one acre that are not part of a larger common plan of development or sale to obtain a stormwater discharge permit.

[1] "*Significant contributor of pollutants to waters of the state*" means any discharge containing pollutants that are reasonably expected to cause or contribute to a violation of a water quality criteria or receiving stream designated uses.

1.2.2. Stormwater Discharges Associated with Construction Support Activities

This permit also authorizes stormwater discharges from support activities associated with a permitted construction activity. Support activities may include concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas and borrow areas. Support activities are authorized provided all of the following conditions are met:

a) The support activity is related to a construction activity that is covered under this general permit.
b) The operator of the support activity is the same as the operator of the construction activity.
c) The support activity is not a commercial operation serving multiple unrelated construction projects by different operators.
d) The support activity does not operate beyond the completion of the construction activity of the last construction project it supports.
e) Support activities are identified in the Notice of Intent (NOI) and the Stormwater Pollution Prevention Plan (SWPPP). The appropriate erosion prevention and sediment controls and measures applicable to the support activity shall be described in a site-wide SWPPP covering all discharges from the support activity areas.

This permit does not authorize any process (dry weather) wastewater discharges from support activities. Process (dry weather) wastewater discharges from support activities must be authorized by an individual permit or other appropriate general permit.

TDOT projects shall be addressed in the *Waste and Borrow Policy*. Stormwater discharges associated with support activities that have been issued a separate individual permit or an alternative general permit are not authorized by this general permit.

1.2.3. Non-Stormwater Discharges Authorized by this Permit

The following non-stormwater discharges from site-wide SWPPP areas of permitted construction activities are authorized by this permit provided the non-stormwater component of the discharge is in compliance with Subsection 5.5.3.12:

a) Dewatering of collected stormwater and groundwater, discharged in accordance with section 4.1.3.

b) Waters used to wash dust and soils from vehicles where detergents are not used and detention and/or filtering is provided before the water leaves site. Wash removal of process materials such as oil, asphalt or concrete is not authorized.
c) Water used to control dust in accordance with Section 5.5.3.7.
d) Potable water sources, including waterline flushings, from which chlorine has been removed to the maximum extent practicable.
e) Routine external building washdown that does not use detergents or other chemicals.
f) Uncontaminated, non-turbid groundwater or spring water.
g) Foundation or footing drains where flows are not contaminated with pollutants (e.g., lubricants and fluids from mechanized equipment, process materials such as solvents, heavy metals, etc.).
h) Discharges from emergency fire-fighting activities.
i) Fire hydrant flushings.
j) Landscape irrigation.
k) Pavement wash waters, provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used.
l) Uncontaminated air conditioning or compressor condensate.

All non-stormwater discharges authorized by this permit must be free of sediment and other solids, must not cause erosion of soils, and must not result in sediment or erosion impacts to receiving streams.

1.2.4. Other NPDES-Permitted Discharges

Discharges of stormwater or wastewater authorized by and in compliance with a different NPDES permit may be mixed with discharges authorized by this permit.

1.3. LIMITATIONS ON COVERAGE

Except for discharges from support activities, as described in Section 1.2.2 and non-stormwater discharges listed in Section 1.2.3, all discharges covered by this permit shall be composed entirely of stormwater. This permit does not authorize the following discharges:

a) Post-construction discharges - Stormwater discharges associated with permanent stormwater management structures after construction

activities have been completed, the site has undergone permanent stabilization and the coverage under this permit has been terminated.

b) Discharges mixed with non-stormwater - Discharges that are mixed with sources of non-stormwater, other than discharges which are identified in Section 1.2.4 and in compliance with Subsection 5.5.3.12 of this permit.

c) Discharges covered by another permit - Discharges associated with construction activities that have been issued an individual permit in accordance with Subpart 8.11.

d) Discharges threatening water quality - Discharges from construction sites that the director determines will cause or has the reasonable potential to cause or contribute to violations of water quality standards. Where such a determination has been made, the division will notify the discharger in writing that an individual permit application is necessary as described in Subpart 8.11. The division may authorize coverage under this permit after appropriate controls and implementation procedures have been included in the SWPPP that are designed to bring the discharge into compliance with water quality standards.

e) Discharges into waters with unavailable parameters - Discharges to waters with unavailable parameters that would cause measurable degradation of water quality for the parameter that is unavailable; or that would cause additional loadings of unavailable parameters that are bioaccumulative or that have criteria below method detection levels. Waters with unavailable parameters means any segment of surface waters that has been identified by the division as failing to support its designated classified uses. A discharge that complies with the additional requirements set forth in Subpart 6.4 is not considered to cause measurable degradation of waters with unavailable parameters, unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in Subpart 1.3(d) and the SWPPP cannot be modified to bring the site into compliance.

f) Discharges into Outstanding National Resource Waters - Discharges into waters that are designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRW) pursuant to Tennessee Rules, Chapter 0400-40-03-.06(5), except activities conducted by, or on behalf of, the National Park Service on its own lands.

g) Discharges into Exceptional Tennessee Waters - Discharges that would cause more than de minimisDE_MINIMIS degradation of water quality for any available parameter in waters designated by TDEC as Exceptional Tennessee Waters. A discharge that complies with the additional requirements set forth in Subpart 6.4 is not considered to cause more than de minimis degradation of available parameters unless the division determines upon review of the SWPPP that there is a reason to limit

coverage as set forth in Subpart 1.3(d)) and the SWPPP cannot be modified to bring the site into compliance.

h) Discharges not protective of aquatic or semi-aquatic threatened and endangered species, species deemed in need of management or special concern species - Discharges or discharge-related activities that are likely to jeopardize the continued existence of listed or proposed threatened or endangered aquatic species, or their critical habitat, under the Endangered Species Act (ESA), or other applicable state law or rule.

   Discharges or conducting discharge-related activities that will cause a prohibited "take" of federally listed aquatic species (as defined under Section 3 of the ESA and 50 CFR §17.3) unless such take is authorized under Sections 7 or 10 of the ESA.

   Discharges or conducting discharge-related activities that will cause a prohibited "take" of state listed aquatic species[2], unless such take is authorized under the provisions of T.C.A. § 70-8-106(e).

i) Discharges from a new or proposed mining operation - Discharges from new or proposed mining operations are not authorized.

j) Discharges into waters with an approved Total Maximum Daily Load - Discharges of a pollutant to waters for which there is an EPA-approved or established total maximum daily load (TMDL) for that pollutant, unless the SWPPP incorporates measures or controls consistent with the assumptions and requirements of the TMDL.

Any discharge of stormwater or other fluids to groundwater via an improved sinkhole or injection well requires a Class V Underground Injection Control authorization by rule, or an individual permit under the provisions of Tennessee Rules, Chapter 0400-45-06.

1.4. OBTAINING PERMIT COVERAGE

A complete NOI, Stormwater Pollution Prevention Plan (SWPPP) and application fee[3] are required to obtain coverage under this general permit. **Submitting for coverage under this permit means that an applicant has examined a copy of**

[2] As defined in the Tennessee Wildlife Resources Commission Proclamation, Endangered or Threatened Aquatic Species, and in the Tennessee Wildlife Resources Commission Proclamation, Wildlife in Need of Management.

[3] Any reference to an "*application*" in this permit should be considered equivalent to the phrase "*complete NOI, SWPPP and application fee*"

this permit and thereby acknowledged the applicant's claim of ability to comply with permit terms and conditions.

1.4.1. Notice of Intent (NOI)

Operators wishing to obtain coverage under this permit must submit a complete NOI in accordance with Part 3, using the NOI form provided in Appendix A of this permit. Electronic submittal is encouraged (see NPDES Electronic Reporting for more information). The division may review NOIs and SWPPPs for completeness and accuracy and, when deemed necessary, investigate the proposed project for potential impacts to the waters of the state. Absent extraordinary circumstances, NOCs should be issued within 30 days of NOI submittal, unless the division has responded to the operator within that time requesting additional information. Permittees must obtain all required local authorizations related to stormwater management (see Section 1.4.4).

1.4.2. Stormwater Pollution Prevention Plan (SWPPP)

Operators wishing to obtain coverage under this permit must submit a site-specific SWPPP with the NOI, or sign and certify an existing site-specific SWPPP. The SWPPP shall address all of the operators' construction-related activities from the date construction commences to the date of termination of permit coverage, to the maximum extent practicable. The SWPPP must address the total acreage planned to be disturbed, including any associated construction support activities (see Section 1.2.2). The SWPPP must be developed, implemented and updated according to the requirements in Part 5 and Section 6.4.1. The SWPPP must be implemented prior to commencement of construction activities.

Preparation and implementation of the SWPPP may be a cooperative effort with all operators at a site. New operators with design and operational control of their portion of the construction site are expected to adopt, modify, update and implement their portion of the SWPPP. Alternatively, permittees at the site may develop and submit a SWPPP addressing only their portion of the project, as long as the proposed Best Management Practices (BMPs) are compatible with the previously submitted SWPPPs, as updated, and complying with conditions of this general permit.

SWPPPs must be updated or addended if site activities diverge significantly from those indicated in the initial SWPPP. A copy of the most recent version of the SWPPP must be available at the site.

Site operators who are building single family residences on at-grade lots (see Section 2.1.2) and who are submitting an application for coverage under this permit, may complete and submit Form CN-1249, the Stormwater Pollution Prevention Plan (SWPPP) for Single Family Residential Homebuilding Sites. This SWPPP template is available on our website at: http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249.

Form CN-1249 is not appropriate if significant grading of the lot or lots is necessary.

1.4.3. Permit Application Fee

The permit application fee should accompany the applicant's NOI form. The fee is based on the total acreage planned to be disturbed by an entire construction project for which the applicant is requesting coverage, including any associated construction support activities (see Section 1.2.2). The applicant may present documentation of areas in the project that will not be subject to disturbance at any time during the life of the project and have these areas excluded from the fee calculation.

The application fees shall be as specified in Tennessee Rules, Chapter 0400-40-11. The application will be deemed incomplete until the appropriate application fee is paid in full. Checks for the appropriate fee should be made payable to "Treasurer, State of Tennessee." Electronic payment methods, if made available by the State of Tennessee, are acceptable and are encouraged. The following conditions apply:

a) If stormwater discharges from the site or acreage to be disturbed was previously authorized by a CGP, but coverage has been since terminated, a primary operator must submit a new application for coverage under the CGP.
b) A new primary operator seeking subsequent coverage under an actively permitted activity must submit the subsequent coverage fee to obtain coverage under an active NOC.
c) Acreage additions up to 10% of the original plan area, but not to exceed a total of 5 acres, and other minor modifications of the original plan do not require separate NOI submittal. These minor additions require submittal of a plan indicating the additional area(s) of disturbance, the total acreage to be disturbed, and the updated SWPPP. The permittee is responsible for thoroughly and accurately identifying all waterbodies (including wetlands and streams) located on the added acreage and to provide a determination of the water's status if not previously provided. An additional fee and

updated NOI are required only if the total acreage of disturbance would require a higher fee than originally paid, and then only the difference is due. New acreage disturbances cannot be added as previously disturbed acreage is stabilized, to create a 'rolling' total of disturbance. Iterative changes that would create cumulative impact exceeding 10% of the original plan area, or a total of 5 acres require submittal of updated NOI and SWPPP to the division.

d) In addition to the application fee, an annual maintenance fee applies per Tennessee Rules, Chapter 0400-40-11-.02(12)(i).

1.4.4. Submittal of Documents to Local Municipalities

Some permittees may discharge stormwater through an NPDES-permitted municipal separate storm sewer system (MS4) who are not exempted in Section 1.4.5. These permittees are encouraged to coordinate with the local MS4 authority prior to submitting an NOI to the division. Permitting status of all permittees covered, or previously covered, under this general permit as well as the most current list of all MS4 permits is available at: http://tn.gov/environment/article/tdec-dataviewers.

Permittees must obtain all necessary authorizations pursuant to provisions of any local ordinances that apply to construction activities, and permittees are expected to comply with any additional erosion prevention, sediment control, and construction stormwater management measures required by a local municipality, county or permitted MS4 program.

1.4.5. Permit Coverage Through a Qualifying Local Program (QLP)

Coverage equivalent to coverage under this general permit may be obtained from a qualifying local erosion prevention and sediment control MS4 program. A Qualifying Local Program (QLP) is a municipal stormwater program implemented for stormwater discharges associated with construction activity that has been formally approved by the division. More information about Tennessee's QLP program and MS4 participants can be found at: https://www.tn.gov/environment/permit-permits/water-permits1/npdes-permits1/npdes-stormwater-permitting-program/tennessee-qualifying-local-program.html.

If a construction site is within the jurisdiction of, and has obtained a notice of coverage from, a QLP, the operator is authorized to discharge stormwater associated with construction activity under this general permit without the submittal of an application to the division. Permitting of stormwater runoff from

construction sites from federal or state agencies (e.g., Tennessee Department of Transportation and Tennessee Valley Authority) and the local MS4 program itself will remain solely under the authority of TDEC.

The division may require any operator located within the jurisdiction of a QLP to obtain permit coverage directly from the division. The operator shall be notified in writing by the division that coverage by the QLP is no longer applicable and how to obtain coverage under this permit.

1.5. NOTICE OF COVERAGE

1.5.1. Permit Tracking Numbers

Construction activities covered under this permit will be assigned permit tracking numbers in the sequence TNR100001, TNR100002, etc. Permit tracking numbers assigned under a previous construction general permit will be retained. An operator applying for new permit coverage will be assigned a new permit tracking number. Assigning a permit tracking number by the division to a proposed discharge from a construction activity does not confirm or imply an authorization to discharge under this permit. Operators receiving new permit coverage will be listed as active on the TDEC Dataviewer.

1.5.2. Notice of Coverage (NOC)

The NOC is a notice from the division to the primary permittee informing them that the NOI, the SWPPP, and the application fee were received and accepted. The primary permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC.

For new operators seeking subsequent coverage under an existing tracking number, the division will not issue a NOC. New operators that notify the division to be added to an existing coverage are covered upon receipt of notification of permit coverage by the division. The permit record reflecting the additional operator will be published on TDEC's DataViewer in the next update.

The division reserves the right to deny coverage to artificial entities (e.g., corporations or partnerships, excluding entities not required to register with the Tennessee Secretary of State) that are not properly registered and in good standing (i.e., listed with an entity status of "active") with the Tennessee Secretary of State, Division of Business Services. The division also reserves the right to issue permit coverage in the correct legal name of the individual or entity seeking

coverage, including each general partner of a general partnership in addition to the general partnership.

Alterations to channels or waterbodies (see definition of streams) that are contained on, traverse through or are adjacent to the construction site are not authorized by this permit. Such alterations may require an Aquatic Resources Alteration Permit (ARAP):https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html.

It is the responsibility of the applicant to thoroughly and accurately identify all waterbodies (see definition of streams) located on the site and to provide a determination of the water's status.

For channels, this determination must be conducted in accordance with Tennessee's standard operating procedures for hydrologic determinations set forth at Tennessee Rules, Chapter 0400-40-03.05(9). Wetlands determinations must include the submission of a wetland delineation completed utilizing the USACOE 1987 *Wetlands Delineation Manual* and applicable *Regional Supplement*. For the purposes of permitting, the permittee may choose to provide all aquatic features located on the site the protections afforded to streams and wetlands in lieu of conducting hydrologic determinations. ARAPs are independent requirements from CGP coverage and complete applications for ARAPs shall precede NOI submittal. The division reserves the right to delay or withhold issuance of coverage under the CGP in some cases until the appropriate ARAP coverage has been obtained.

The treatment and disposal of wastewater (e.g., sanitary, commercial or industrial wastewater) generated during and after the construction must be also addressed prior to issuance of the NOC. The NOC may be delayed until adequate wastewater treatment is identified and accompanying disposal permits are issued.

PART 2

2. CONSTRUCTION SITE OPERATORS

2.1. TYPES OF OPERATORS

2.1.1. Owner/Developer

An owner or developer of a project is a primary permittee. This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person may include, but is not limited to, a developer, landowner, realtor, commercial builder, homebuilder, utility company, etc. This person may be an individual, a corporate entity, or a governmental entity. An owner's or developer's responsibility to comply with requirements of this permit extends until permit coverage is terminated in accordance with requirements of Part 9.

The site-wide permittee is the first primary permittee to apply for coverage for a construction activity. There may be other primary permittees for a project, but there is only one site-wide permittee. Where there are multiple operators associated with the same project, all operators are required to obtain permit coverage. Once covered by a permit, each operator is responsible for complying with the permit. Permittees are jointly and severally liable for a violation related to construction activities that affect the same project site, unless a permittee affirmatively demonstrates to the satisfaction of the Department that its own action, or failure to act, was not a cause of the violation.

2.1.2. Commercial Builders

A commercial builder can be a primary or secondary permittee at a construction site.

A commercial builder who purchases one or more lots from a primary permittee for the purpose of constructing and selling a structure[4] and has design or operational control over construction plans and specifications for that portion of

[4] e.g., residential house, non-residential structure, commercial building, industrial facility, etc.

the site, or is hired by an end user, such as a lot owner who may not be a permittee, must obtain coverage in one of the following ways:

a) The site-wide permittee may transfer coverage to the commercial builder, for the entire site or just the acreage/lots the builder has purchased;
b) The commercial builder may submit a new NOI for the acreage purchased, following requirements in Section 3.1.4; or
c) The commercial builder may be hired by the primary permittee or a lot owner to build a structure, and by mutual agreement build on the site under the existing coverage of the site-wide permittee. In this case, the commercial builder signs the primary permittee's NOI and SWPPP as a contractor (see Section 2.1.3) and is considered a secondary permittee.

2.1.3. Contractors

A contractor is considered a secondary permittee. This person has day-to-day operational control of the activities necessary to ensure compliance with the SWPPP or other permit conditions (e.g., the contractor is authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions). A contractor may be:

- a general contractor
- a grading contractor
- an erosion control contractor
- a sub-contractor responsible for land disturbing activities or erosion prevention and sediment control (EPSC) implementation and maintenance
- a commercial builder hired by the primary permittee.

The contractor may need to include in their contract with the party that hired them specific details for the contractor's responsibilities concerning EPSC measures. This includes the ability of the contractor to make EPSC modifications. The contractor shall sign the primary permitee's NOI and SWPPP associated with the construction project at which they will be an operator (insofar as possible), or submit a separate NOI to the division indicating their intent to be added to the existing activity coverage as an operator.

2.2. RESPONSIBILITIES OF OPERATORS

A permittee may meet one or more of the operational control components in the definition of "operator" found in Subpart 2.1. Either Section 2.2.1 or 2.2.2, or both, will apply depending on the type of operational control exerted by an individual permittee.

2.2.1. Permittees with Design Control

Permittees with operational control over construction plans and specifications at the construction site, including the ability to make modifications to those plans and specifications, must ensure that:

a) the project specifications meet the minimum requirements of Part 5 (SWPPP) and all other applicable conditions;
b) the SWPPP indicates the areas of the project where they have operational control;
c) all other permittees implementing and maintaining portions of the SWPPP impacted by any changes made to the plan are notified of such modifications in a timely manner;
d) all common BMPs (i.e., sediment treatment basin and drainage structures) necessary for the prevention of erosion or control of sediment are maintained and effective until all construction is complete and all disturbed areas in the entire project are stabilized, unless permit coverage has been obtained and responsibility has been taken over by a new primary permittee; and
e) all operators on the site have permit coverage, if required.

If parties with day-to-day operational control of the construction site have not been identified at the time the site-wide SWPPP is initially developed, the permittee with operational control shall be considered to be the responsible person until an NOI is submitted identifying the new operators (see Section 3.1.4). These new operators (e.g., general contractor, utilities contractors, sub-contractors, erosion control contractors, hired commercial builders) are considered secondary permittees. The SWPPP must be updated to reflect the addition of new operators.

2.2.2. Permittees with Day-to-Day Operational Control

Permittees with day-to-day operational control of the activities necessary to ensure compliance with the SWPPP or other permit conditions must ensure that:

a) the SWPPP for portions of the project where they are operators meets the requirements of Part 5 and identifies the parties responsible for implementing the control measures identified in the plan;
b) the SWPPP indicates areas of the project where they have operational control over day-to-day activities; and

c) measures in the SWPPP are adequate to prevent soil erosion and control any sediment that may result from their earth disturbing activity.

Permittees with operational control over only a portion of a larger construction project are responsible for compliance with all applicable terms and conditions of this permit as it relates to their activities on their portion of the construction site. This includes, but is not limited to, implementation of Best Management Practices (BMPs) and other controls required by the SWPPP. Permittees shall ensure either directly or through coordination with other permittees, that their activities do not render another person's pollution control ineffective. All permittees must implement their portions of the SWPPP.

PART 3

3. NOTICE OF INTENT (NOI) REQUIREMENTS

3.1. NOI SUBMITTAL

3.1.1. Who Must Submit an NOI?

All operators must submit an NOI form. For the purpose of this permit and in the context of stormwater associated with construction activity, an "operator" means any person associated with a construction project who meets either or both of the following two criteria:

a) The person has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is considered the primary permittee and is typically:
   - the owner or developer of the project,
   - the owner or developer of a portion of the project (e.g., subsequent builder), or
   - the person who is the current owner of the construction site.

b) The person has day-to-day operational control of the activities necessary to ensure compliance with the SWPPP or other permit conditions. This person is typically a contractor, or a commercial builder hired by the primary permittee, and is considered a secondary permittee.

3.1.2. Existing Sites

An operator presently permitted under the 2016 construction general permit shall be granted coverage under this new general permit. Coverage will be extended automatically without notification to the division or an additional fee being assessed. The existing SWPPP shall be modified according to the Section 5.3.1 of this permit.

If an operator does not wish to be continued under the new general permit, they may terminate coverage (Section 9.1). If a site with terminated coverage is unstable or if construction continues, a new NOI,SWPPP and application fee must be submitted.

3.1.3. New Sites or New Phases of Existing Sites

Except as provided in Section 3.1.4, operators must submit a complete NOI,SWPPP and an application fee in accordance with the requirements described

in Subpart 1.4. The complete application should be submitted at least 30 days prior to commencement of construction activities. The permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC or the TDEC DataViewer. The land disturbing activities shall not start until the NOC is received by the applicant according to Subpart 1.5.

3.1.4. New Operators

New operators proposing to conduct construction activities at a site with existing coverage must submit an NOI. The NOI should be submitted prior to the new operator commencing work at the site. The NOI must reference the project name and tracking number assigned to the primary permittee's NOI. The NOI may not need to be submitted immediately upon assuming operational control if the portion of the site controlled by the new operator is inactive and all the previously disturbed areas are permanently stabilized.

A new operator working as a residential home builder may submit Form CN-1249, the Stormwater Pollution Prevention Plan (SWPPP) for Single Family Residential Homebuilding Sites. This form may be found at: http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249.

If the primary permittee's company name has changed (but not the site ownership or authorized signators), an updated NOI should be submitted to the division within 30 days of the name change, along with documentation that the name change has been properly registered with the Tennessee Secretary of State, Division of Business Services. If the new operator agrees to comply with an existing site-wide SWPPP already implemented at the site, a copy of the SWPPP does not have to be submitted with the NOI.

If the transfer of ownership is due to foreclosure or a permittee filing for bankruptcy proceedings, the new owner (e.g., a lending institution) must obtain permit coverage if the construction activity is inactive but soil is not stabilized sufficiently. If the property is sufficiently stabilized permit coverage may not be necessary, unless and until construction activity at the site resumes.

3.1.5. Late NOIs

Dischargers are not prohibited from submitting NOIs after construction at their site has already begun. When a late NOI is submitted, and if the division authorizes coverage under this permit, such authorization is only for future discharges. Any prior, unpermitted, discharges or permit noncompliances are subject to penalties as described in Section 8.1.2.

3.1.6. Who Must Sign the NOI?

All construction site operators as defined in Subpart 2.1 must sign the NOI form. Signatory requirements for a NOI are described in Section 8.7.1. Signatures on electronically submitted NOIs are deemed to be equivalent to a hardcopy signature. An NOI that does not bear a valid signature will be deemed incomplete.

3.2. FORMAT AND CONTENT OF THE NOI FORM

3.2.1. NOI Form

The NOI form is provided in Appendix A of this permit. This form and its instructions set forth the required content of the NOI. The NOI form must be filled in completely. If the division notifies applicants by mail, E-mail, public notice or by making information available on the world wide web of electronic NOI forms (see NPDES Electronic Reporting), the operators may be required to use those electronic options to submit the NOI (Section 3.3.2)

Owners, developers and contractors that meet the definition of the operator in Subpart 2.1 shall apply for permit coverage on the same NOI, if possible. The division may accept separate NOI forms from different operators for construction activities on the same construction site when warranted.

After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The SWPPP shall be prepared in accordance with Part 5, and must be submitted with the NOI unless the NOI is only being submitted to add a secondary permittee to an existing coverage.

3.2.2. Construction Site Map

An excerpt (8 ½" by 11" or 11" by 17") from the appropriate 7.5 minute United States Geological Survey (USGS) topographic map (or other map showing contours) with the proposed construction site centered, must be included with the NOI. The entire proposed construction area must be clearly outlined on the map, with all acreage to be disturbed clearly identified. All outfalls[5] discharging runoff from the property, streams receiving the discharge, and storm sewer systems conveying the discharge from outfalls shall be clearly identified and marked on the map. NOIs for linear projects must specify the location of each end

[5] Phrase "point source" and term "outfall" are used interchangeably. For the purpose of this general permit, they can be considered synonyms.

of the construction area and all areas to be disturbed. Commercial builders that develop separate SWPPPs that cover only their portion of the project shall also submit a site or plat map that clearly indicates the lots for which they are applying for permit coverage, and the location of EPSCs that will be used at each lot (Section 5.5).

3.3. WHERE AND HOW TO SUBMIT AN APPLICATION

3.3.1. Traditional Submittal

The applicant shall submit the NOI,SWPPP and application fee to the appropriate Environmental Field Office (EFO) for the county where the construction activity is located and where stormwater discharges enters waters of the state. If a site straddles a county line of counties that are in different EFO service areas, the operators shall send the NOI and the application fee to the EFO that provides coverage for the majority of the proposed construction activity.

A list of counties and the corresponding EFOs is provided in Subpart 3.4. The division's Nashville Central Office will serve as a processing office for NOIs submitted by federal or state agencies (e.g., TDOT, TVA and the local MS4 programs).

3.3.2. Submittal Using Electronic Forms

The division is in the process of launching the new NPDES Electronic Reporting online customer portal for submission of permit applications and other reports. If the division notifies applicants by mail, E-mail, public notice or by making information available on the world wide web of electronic application submittal, the operators may be required to use those electronic options to submit the NOI,SWPPP and an application fee. For more information, visit https://www.tn.gov/environment/program-areas/wr-water-resources/netdmr-and-electronic-reporting.html.

3.4. TDEC ENVIRONMENTAL FIELD OFFICES (EFOS) AND CORRESPONDING COUNTIES

EFO Name	List of Counties
Chattanooga	Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Rhea, Sequatchie
Columbia	Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne
Cookeville	Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Trousdale, Van Buren, Warren, White
Jackson	Benton, Carroll, Chester, Crockett, Decatur, Dyer, Gibson, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, Madison, McNairy, Obion, Weakley
Johnson City	Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington
Knoxville	Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union
Memphis	Fayette, Hardeman, Shelby, Tipton
Nashville	Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Williamson, Wilson

TDEC may be reached by telephone at the toll-free number 1-888-891-8332 (TDEC). Local EFOs may be reached directly when calling this number from the construction site, using a land line.

PART 4

4. CONSTRUCTION AND DEVELOPMENT EFFLUENT GUIDELINES

4.1. NON-NUMERIC EFFLUENT LIMITATIONS

Any point source authorized by this general permit must achieve, at a minimum, the effluent limitations representing the degree of effluent reduction attainable by application of best practicable control technology (BPT) currently available.

4.1.1. Erosion prevention and sediment controls

Design, install and maintain effective erosion and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

1.) Control stormwater volume and velocity to minimize soil erosion in order to minimize pollutant discharges;
2.) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;
3.) Minimize the amount of soil exposed during construction activity;
4.) Minimize the disturbance of steep slopes;
5.) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
6.) Provide and maintain natural buffers as described in Section 4.1.2, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible;
7.) Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and
8.) Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

4.1.2. Water Quality Riparian Buffer Zone Requirements

The water quality riparian buffer zone requirements in this section apply to all streams with available parameters adjacent to construction sites (for waters with

unavailable parameters or Exceptional Tennessee Waters, see Section 6.4.2). A 30-foot natural water quality riparian buffer shall be preserved between such waterbodies and the disturbed areas, to the maximum extent practicable, during construction activities. The water quality riparian buffer is required to protect waters of the state that are not wet weather conveyances as identified using Tennessee's standard operating procedures for hydrologic determinations set forth in Tennessee Rules, Chapter 0400-40-03-.05(9).[6] Because of the potential heavy sediment loading associated with construction site runoff, water quality riparian buffers are not primary sediment control measures and shall not be relied on as such; the primary purpose of water quality riparian buffers is additional pollutant removal. Stormwater discharges must enter the water quality riparian buffer zone as sheet flow, not as concentrated flow, where site conditions allow. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, to improve its effectiveness in protecting waters of the state.

The water quality riparian buffer zone should be preserved between the top of stream bank and the disturbed construction area. The 30-foot criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 15 feet at any measured location. If the construction site encompasses both sides of a stream, buffer averaging can be applied to both sides, but each side must average the 30-foot criterion independently.

Construction activities within the water quality riparian buffer zone shall be avoided and existing forested buffer areas shall be preserved whenever possible. Where it is not practicable to maintain a full water quality riparian buffer, BMPs providing equivalent protection to a receiving stream as a natural water quality riparian buffer must be used. A justification for use and a design of equivalent BMPs shall be included in the SWPPP. Such equivalent BMPs are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects may include sewer line construction, roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure.

[6] If obtaining permit coverage for the first time following the effective date of this permit, 15-foot buffers are also required for any wet weather conveyance identified as waters of the United States by the U.S. Army Corps of Engineers or the Environmental Protection Agency.

This requirement does not apply to any valid Aquatic Resources Alteration Permit (ARAP), or equivalent permits issued by federal authorities. Additional buffer zone requirements may be established by the local MS4 program.

4.1.2.1. Water quality riparian buffer zone exemption based on existing uses

Water quality riparian buffer zones as described in Section 4.1.2 shall not be required in portions of the buffer where certain land uses exist and are to remain in place according to the following:

a) A use shall be considered existing if it was present within the buffer zone as of the date of the Notice of Intent for coverage under the construction general permit. Existing uses may include buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the buffer zone that contains the footprint of the existing land use is exempt from buffer zones. Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the buffer zone.
b) If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed, buffer zone requirements shall apply.

4.1.2.2. Pre-approved sites

Construction activity at sites that were pre-approved prior to February 1, 2010, is exempt from the buffer requirements of Section 4.1.2. Evidence of pre-approval for highway projects shall be a final right-of-way plan; and, for other construction projects, the final design drawings with attached written and dated approval by the local, state or federal agency with authority to approve such design drawings for construction.

4.1.3. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Appropriate controls may include weir tanks, dewatering tanks, gravity bag filters, sand media particulate filters, pressurized bag filters, cartridge filters or other control units providing the level of treatment necessary to comply with permit requirements.

4.1.4. Pollution Prevention Measures

The permittee must design, install, implement and maintain effective pollution prevention measures to minimize the discharge of sediment and other pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water and other wash waters not containing soaps or solvents. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
b) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
c) Minimize the discharge of pollutants from spills and leaks, and implement chemical spill and leak prevention and response procedures.

4.1.5. Prohibited Discharges

The following discharges are prohibited:

a) Wastewater from washout of concrete, unless managed by an appropriate control.
b) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.
c) Fuels, oils or other potential pollutants used in vehicle and equipment operation and maintenance.
d) Soaps or solvents used in vehicle and equipment washing.

PART 5

5. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

5.1. THE GENERAL PURPOSE OF THE SWPPP

A SWPPP must be prepared and submitted along with the NOI as required in Section 1.4.2. The primary permittee must implement the SWPPP and maintain effective Best Management Practices (BMPs) from commencement of construction activity until permanent stabilization is complete, or until the permittee does not have design or operational control of any portion of the construction site. If a SWPPP submittal contains contradictory or ambiguous information, the division will hold the permittee to the most stringent interpretation of the information submitted. Requirements for termination of site coverage are provided in Part 9.

A site-specific SWPPP must be developed for each construction project or activity covered by this permit. The design, inspection and maintenance of BMPs described in the SWPPP must be prepared in accordance with good engineering practices. At a minimum, BMPs shall be consistent with the recommendations contained in the current edition of the Tennessee Erosion and Sediment Control Handbook (the handbook).

Once a definable area has been permanently stabilized as described in Subsection 5.5.3.4, the permittee may identify this area on the SWPPP. No further SWPPP or inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is permanently stabilized, one mile of a roadway or pipeline project is done and permanently stabilized, etc.).

For more effective implementation of BMPs, a cooperative effort by the different operators at a site to prepare and participate in a site-wide SWPPP is expected. Primary permittees at a site may develop separate SWPPPs that cover only their portion of the project. In instances where there is more than one SWPPP for a site, the permittees must ensure the stormwater discharge controls and other measures are compatible with one another and do not prevent another operator from complying with permit conditions. The site-wide SWPPP developed and submitted by the primary permittee must assign responsibilities to secondary permittees and coordinate all BMPs at the construction site. Assignment and coordination can be done by name or by job title.

5.2. QUALIFICATION REQUIREMENTS

For sites greater than five acres of disturbance, the narrative portion of the SWPPP shall be prepared by an individual who has a working knowledge of erosion prevention and sediment controls, such as (but not limited to):

- a registered engineer or landscape architect,
- a Certified Professional in Erosion and Sediment Control (CPESC) or
- a person that successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

For sites less than or equal to five acres of disturbance, these qualification requirements do not apply, and the division provides the following optional templates:

- Form CN-1249, the Stormwater Pollution Prevention Plan (SWPPP) for Single Family Residential Homebuilding Sites. This SWPPP template is available at: http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249. Form CN-1249 is not appropriate if significant grading of the lot or lots is necessary.
- SWPPP Template for Sites Not Requiring Engineer Design from the DWR – NR – G – 02 - Construction Stormwater – 05172019 Guidance regarding construction stormwater general permit coverage involving sites with Non-Engineer Design SWPPPs: https://www.tn.gov/content/dam/tn/environment/water/policy-and-guidance/dwr-nr-g-02-cgp-non-engineering-swppp-final-051719.pdf Attachment A (template): https://www.tn.gov/content/dam/tn/environment/water/policy-and-guidance/dwr-nr-g-02-cgp-non-engineering-swppp-final-051719-template.docx.

Plans and specifications for any building or structure, changes in topography and drainage, including the design or modification of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a professional engineer or landscape architect registered in Tennessee and signed and sealed in accordance with the Tennessee Code Annotated, Title 62, Chapter 2 and the rules of the Tennessee Board of Architectural and Engineering Examiners. Engineering design of sediment basins or equivalent sediment controls must be provided for construction sites involving

drainage to an outfall totaling 10 or more acres (Subsection 5.5.3.5) or 5 or more acres if draining to waters with unavailable parameters or Exceptional Tennessee Waters (Section 6.4.1).

5.3. SWPPP PREPARATION AND COMPLIANCE

5.3.1. Existing Sites

Operators of an existing site, presently permitted under the division's 2016 construction general permit, shall maintain full compliance with the existing SWPPP. The existing SWPPP shall be modified, if necessary, to meet requirements of this new general permit, and the SWPPP changes implemented as soon as practicable but no later than 12 months following the new permit effective date. The permittee shall make the updated SWPPP available for the division's review upon request.

5.3.2. New Sites or New Phases of Existing Sites

For construction stormwater discharges not authorized under an NPDES permit as of the effective date of this permit, a SWPPP that meets the requirements of Part 5 of this permit shall be prepared and submitted along with the NOI and an appropriate fee for coverage under this permit.

5.3.3. Signature Requirements

The SWPPP shall be signed by the operators in accordance with Subpart 8.7, and if applicable, certified according to requirements in Section 5.2. Signatures on electronically submitted documents are deemed equivalent to original signatures. A SWPPP that does not bear a valid signature will be deemed incomplete.

5.3.4. SWPPP Availability

A copy of the existing version of the SWPPP shall be retained on-site at the location which generates the stormwater discharge in accordance with Part 7 of this permit. If the site is inactive or does not have an onsite location adequate to store the SWPPP, the location of the SWPPP, along with a contact phone number, shall be posted on-site. If the SWPPP is located off-site, reasonable local access to the plan during normal working hours must be provided.

The permittee shall make the existing SWPPP and inspection reports available upon request to the director; the local agency approving erosion prevention and sediment control plans, grading plans, land disturbance plans or stormwater management plans; or the operator of an MS4.

5.4. KEEPING SWPPP CURRENT

5.4.1. SWPPP Modifications

The permittee must modify, update and recertify the SWPPP if any of the following conditions apply:

a) Whenever there is a change in the scope of the project that would be expected to have a significant effect on the discharge of pollutants to the waters of the state and which has not otherwise been addressed in the SWPPP.
b) Whenever there is a change in chemical treatment methods, including the use of different treatment chemical, different dosage or application rate or different area of application.
c) Whenever inspections or investigations by site operators or local, state or federal officials indicate the SWPPP is proving ineffective in eliminating or significantly minimizing pollutants from sources identified under Section 5.5.2, or is otherwise not achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity. Where local, state or federal officials determine that the SWPPP is ineffective in eliminating or significantly minimizing pollutant sources, a copy of any correspondence to that effect must be retained in the SWPPP.
d) Whenever any new operator (typically a secondary permittee) who will implement a measure of the SWPPP must be identified (see Subpart 3.1.1 for further description of which operators must be identified).
e) Whenever it is necessary to include water quality protection measures as required by the applicable wildlife management agency intended to prevent a negative impact to legally protected state or federally listed fauna or flora (or species proposed for such protection – Subpart 1.3). Amendments to the SWPPP may be reviewed by the division, a local MS4, the EPA, or an authorized regulatory agency.
f) Whenever a Total Maximum Daily Load (TMDL) is developed for the receiving waters for a pollutant of concern (e.g., siltation). A list of Tennessee's TMDLs can be found at: https://www.tn.gov/environment/program-areas/wr-water-resources/watershed-stewardship/tennessee-s-total-maximum-daily-load--tmdl--program.html.

5.5. COMPONENTS OF THE SWPPP

The SWPPP must:

a) identify all potential sources of pollutants likely to affect the quality of stormwater discharges from the construction site;
b) describe practices to be used to reduce pollutants in stormwater discharges from the construction site; and
c) assure compliance with the terms and conditions of this permit.

The SWPPP shall include the items described in Sections 5.5.1, 5.5.2 and 5.5.3.

5.5.1. SWPPP Narrative

Each SWPPP shall provide a description of pollutant sources and other information as indicated below:

a) A description of all construction activities at the site, including the intended sequence of activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation).
b) Estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, filling or other construction activities.
c) A description of the topography of the site, including an estimation of percent slope and delineation of drainage area (acres) serving each outfall. Drainage area estimates shall include off-site drainage, if applicable.
d) Hydric soils must be clearly identified.
e) A description of how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream.
f) An erosion prevention and sediment control (EPSC) plan with the proposed construction area clearly outlined. The plan shall indicate the boundaries of the permitted area, drainage patterns, approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the SWPPP, the location of areas where stabilization practices are expected to occur, streams and sinkholes, and identification on the erosion control plan of outfall points intended for coverage. The erosion control plan must meet requirements stated in Section 5.5.3.
g) A description of any discharge associated with industrial activity other than construction stormwater that originates on site and the location of that activity and its permit number.

h) Identification of any streams on or adjacent to the project, a description of any anticipated alteration of these waters and the permit number or the tracking number of the Aquatic Resources Alteration Permit (ARAP) or Section 401 Certification issued for the alteration.
i) The name of the receiving waters (this does not include wet weather conveyances connecting the site discharge to the receiving stream).
j) Identification if those receiving waters have unavailable parameters for siltation.[7]
k) Identification if those receiving waters are Exceptional Tennessee Waters.[8]
l) If applicable, clearly identify and outline the buffer zones established to protect waters of the state located within the boundaries of the project.
m) A description of the construction phasing for projects of more than 50 acres (Subsection 5.5.3.2).
n) The timing of the planting of the vegetation cover must be discussed in the SWPPP if permanent or temporary vegetation is to be used as a control measure. Planting cover vegetation during winter months or dry months should be avoided.

5.5.2. SWPPP and EPSC plans

The SWPPP must include EPSC plans (Section 5.5.3) showing the approximate location of each control measure and a description of when the measure will be implemented during the construction process (e.g., prior to the start of earth disturbance, as the slopes are altered and after major grading is finished). The different stages of construction and the EPSC measures that will be utilized during each stage shall be depicted on multiple plan sheets as described below.

Three separate EPSC plan sheets should be developed for most sites, with the exception of single-lot homes, commercial lots, or linear infrastructure projects of less than or equal to 5 acres, for which a single plan sheet may be sufficient:

a. The first plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during the initial land disturbance (grading) stage.

[7] DWR Construction Stormwater Permitting Map Viewer can be found at: https://tdeconline.tn.gov/dwrcgp/
[8] List of Exceptional Waters and ORNWs in Tennessee can be found at: https://tdec.tn.gov:8090/pls/enf_reports/f?p=9034:34304; corresponding map viewer is under development

b. A second plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during any interim grading and construction stages.
c. The third plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during the final grading stage while permanent site stabilization is being achieved.

The description and implementation of controls shall address the following minimum components, as described in Sections 5.5.3, 5.5.3.6 and 5.5.3.7. Additional controls may be necessary to comply with Section 6.3.2.

5.5.3. Erosion Prevention and Sediment Controls (EPSC)

5.5.3.1. General criteria and requirements

a) The erosion prevention controls shall be designed to eliminate to the maximum extent practicable the dislodging and suspension of soil in water. Sediment controls shall be designed to retain mobilized sediment on site to the maximum extent practicable.
b) All control measures must be properly selected, installed and maintained in accordance with the manufacturer's specifications and/or good engineering practices. If periodic inspections or other information indicate a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control.
c) If sediment escapes the permitted area, off-site accumulations that have not reached a stream must be removed at a frequency sufficient to minimize off-site impacts (e.g., sediment that has escaped a construction site and collected in a street must be removed so that it does not subsequently wash into storm sewers and streams during the next rain or so that it does not pose a safety hazard to users of public streets). Permittees shall not initiate remediation or restoration of a stream without receiving prior authorization from the division. This permit does not authorize access to private property. Arrangements concerning the removal of sediment on adjoining property must be settled by the permittee and the adjoining landowner.
d) Sediment must be removed from sediment traps, silt fences, sediment basins and other sediment controls when design capacity has been reduced by 50%.
e) Erodible material storage areas (e.g., overburden and stockpiles of soil) and borrow pits that are used primarily for the permitted project are considered a part of the site and shall be identified on the NOI, addressed in the SWPPP and included in the fee calculation. TDOT projects shall be addressed in the Waste and Borrow Manual per the Statewide Stormwater Management Plan (SSWMP).

f) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 14 days prior to commencement of grading or earth moving activities unless the area is subsequently temporarily or permanently stabilized.
g) Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site shall be preserved to the maximum extent practicable. The limits of soil disturbance shall be clearly outlined in the SWPPP and the areas to remain undisturbed clearly indicated on the site, with the methods to be used to mark these areas described in the SWPPP.
h) Construction must be sequenced to minimize the exposure time of graded or denuded areas.
i) EPSC measures must be in place and functional before earth moving operations begin and must be constructed and maintained throughout the construction period stages as appropriate. Temporary measures may be removed at the beginning of the workday but must be replaced at the end of the workday.
j) Off-site vehicle tracking of sediment and the generation of dust shall be minimized. A stabilized construction access shall be described and implemented to reduce the tracking of mud and dirt onto public roads by construction vehicles.

5.5.3.2. Construction phasing

Construction phasing is recommended on all projects regardless of size as an effective practice for minimizing erosion and limiting sedimentation. It is recommended that construction be phased to keep the total disturbed area less than 50 acres at any one time. This includes off-site borrow or disposal areas that meet the conditions of Section 1.2.2. Areas where construction is completed must be stabilized within 14 days (Subsection 5.5.3.4).

5.5.3.3. Projects Exceeding 50 acres of Disturbance

On projects where the permittee chooses to disturb more than 50 acres at one time, the following additional requirements shall apply:

a) The permittee shall notify the division immediately if more than 50 acres of disturbance at one time is planned.
b) Site assessments, as described in Subsection 5.5.3.8, shall be conducted on a quarterly basis.
c) Operator inspections as described in Subsection 5.5.3.9 shall be conducted twice per week and following any rainfall event of more than 0.5 inches in

24 hours. Inspections following rainfall events can be counted as one of the twice-weekly inspections.

d) Data describing the erodibility of soils on site, how the soil type erodibility will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site shall be provided. The data may be referenced or summarized. Hydric soils must be clearly identified.

e) A geospatial file shall be submitted to the division which identifies the project area boundaries as a polygon feature. This polygon feature can be submitted in any common data format (e.g., .kml file, shapefile, feature layer, etc.) that is compatible with common geographic systems software (e.g., Google Earth, ESRI, QGIS, etc.). The file name should reflect the same site name provided on the permit application, or a permit tracking number, if available.

f) Stormwater runoff monitoring shall be conducted at each outfall draining 10 or more acres (Section 5.5.3.5) or 5 or more acres if draining to waters with unavailable parameters or Exceptional Tennessee Waters (Section 6.4.1).

Code	Parameter	Qualifier	Unit	Sample Type	Monitoring Frequency	Statistical Base
00070	Turbidity	Report	NTU	Grab	Monthly	Daily Maximum
00070	Turbidity	Report	NTU	Grab	Monthly	Monthly Average
00530	Total Suspended Solids (TSS)	Report	mg/L	Grab	Monthly	Daily Maximum
00530	Total Suspended Solids (TSS)	Report	mg/L	Grab	Monthly	Monthly Average
45613	Floating solids or visible foam-visual	Report	Y=1;N=0	Visual	Monthly	Value
50050	Flow	Report	MGD	Estimate	Monthly	Daily Maximum
50050	Flow	Report	MGD	Estimate	Monthly	Monthly Average

The permittee shall maintain a log of rainfall events including date, estimated duration (in hours), and total estimated rainfall per calendar day. For sampling events, the permittee shall provide an estimate of the total volume of the discharge per sampled outfall and the interval between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

The permittee shall report the estimated total drainage area and estimated acreage of land disturbance in the drainage area for each outfall for each sampling event. Record of the estimated drainage area and amount of land disturbance for a given sample event shall be reported in the notes section of the Discharge Monitoring Report.

5.5.3.4. Stabilization practices

The SWPPP shall include a description of temporary and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved when possible. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees and the preservation of mature vegetation. When seasonal or climate conditions would prevent timely establishment of vegetation other stabilization practices must be utilized. Use of impervious surfaces for permanent stabilization in lieu of a permanent vegetative cover should be avoided where practicable. No stabilization control measures or EPSC measures are to be installed in a stream without obtaining a Section 404 permit and an Aquatic Resources Alteration Permit (ARAP).

Stabilization measures shall be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site must be completed within 2 weeks after the construction activity in that portion of the site has temporarily or permanently ceased. In the following situations, temporary stabilization measures are not required:

a) Where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy ground conditions, stabilization measures shall be initiated as soon as practicable.
b) Where construction activity on a portion of the site is temporarily ceased, but soil disturbing activities is planned to resume within 2weeks.
c) In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures such as properly anchored mulch, soil binders or matting must be employed.

Steep slopes shall be stabilized within one week after construction activity on the slope has temporarily or permanently ceased.

Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable. Unpacked gravel containing fines (silt and clay sized particles) or crusher runs will not be considered a non-eroding surface. On sites where disturbed acreage will be returned to its prior agricultural use (i/e. row crops, pasture) normal agricultural practices can be substituted.

5.5.3.5. Structural practices

The SWPPP shall include a description of structural practices utilized to divert flows from exposed soils, store flows or otherwise limit runoff and discharge of pollutants from exposed areas of the site. Such practices may include, but are not limited to silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions and temporary or permanent sediment basins. Structural controls shall not be placed in streams except as authorized by a section 404 permit and/or Aquatic Resources Alteration Permit (ARAP).

EPSC measures shall be designed to minimize erosion and maximize sediment removal resulting from a 2-year, 24-hour storm (the design storm). The design of erosion prevention and sediment controls must adhere to good engineering practices. The drainage area recommendations and treatment design specifications are provided in the Tennessee Erosion and Sediment Control Handbook. Chemical treatment of the stormwater runoff may be necessary to minimize the amount of sediment being discharged when clay and other fine particle soils or highly erodible soils are present at the construction site. However, the use of cationic polymers for treatment is prohibited.

For an outfall that receives drainage from 10 or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a 2-year, 24-hour storm and runoff from each acre drained, or equivalent control measures as specified in the Tennessee Erosion and Sediment Control Handbook, shall be provided until permanent stabilization of the site. A drainage area of 10 or more acres includes disturbed and undisturbed portions of the site and areas adjacent to the site, all draining through the common outfall. Where an equivalent control measure is substituted for a sediment basin, the equivalency (with respect to sediment removal) must be justified to the division. Runoff from any undisturbed acreage should be diverted around the disturbed area and the sediment basin. Diverted runoff can be omitted from the volume calculation.

Sediment storage expected from the disturbed areas must be included. Discharges from basins and impoundments shall utilize outlet structures that only withdraw water from near the surface of the basin or impoundment, unless infeasible.

All calculations related to drainage areas, runoff coefficients,basin volumes and equivalent control measures must be provided in the SWPPP. The discharge structure from a sediment basin must be designed to retain sediment during the lower flows in accordance with the most current version of the Tennessee Erosion and Sediment Control Handbook. Muddy water to be pumped from excavation and work areas must be held in settling basins, filtered or chemically treated prior to its discharge into surface waters. Water must be discharged through a pipe, grassed or lined channel or other equivalent means so that the discharge does not cause erosion and sedimentation. Discharged water must not cause an objectionable color contrast with the receiving stream.

Sediment structures treating drainage areas in excess of 25 acres require a site-specific design that accurately defines the site hydrology, site-specific sediment loading, hydraulics of the site, and adheres to all Tennessee Erosion and Sediment Control Handbook design recommendations for sediment basins.

Velocity dissipation structures shall be installed if needed to provide for non-erosive discharge velocities to wet weather conveyances or streams.

5.5.3.6. Stormwater management

The following factors must be accounted for in the design of all stormwater controls:

a) The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. Stormwater controls must be designed to control stormwater volume, velocity, and peak flow rates to minimize discharges of pollutants in stormwater, as well as minimizing channel and streambank erosion at discharge points.
b) The soil type and range of soil particle sizes expected to be present on the site.
c) Description of any measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed, including a brief

description of applicable State or local erosion and sediment control requirements.

5.5.3.7. Other items needing control

a) No solid materials, including building materials, shall be placed in waters of the state, except as authorized by a section 404 permit and/or Aquatic Resources Alteration Permit (ARAP). Litter, construction debris and construction chemicals exposed to stormwater shall be picked up prior to storm events or before being carried off the site by wind so that they do not become a pollutant source for stormwater discharges. EPSC materials shall be prevented from becoming a pollutant source for stormwater discharges.
b) The SWPPP shall identify and provide the necessary EPSC measures for the installation of any waste disposal system, sanitary sewer or septic system. Permittees must also comply with applicable state and local waste disposal, sanitary sewer or septic system regulations as necessary.
c) The SWPPP shall include a description of construction and waste materials expected to be stored on-site. The SWPPP shall also include a description of controls used to reduce pollution from materials stored on site. Controls may include storage practices to minimize exposure of the materials to stormwater or spill prevention and response.

5.5.3.8. Site Assessments

Site assessment shall be conducted at each outfall draining 10 or more acres (Section 5.5.3.5) or 5 or more acres if draining to waters with unavailable parameters or Exceptional Tennessee Waters (Section 6.4.1). The site assessment is a documented site inspection conducted by a qualified individual to verify the installation, functionality and performance of the EPSC measures described in the SWPPP. Site assessments shall cover the entire disturbed area and occur within 30 days of construction commencing at each portion of the site that drains the qualifying acreage. The site assessment shall be performed by individuals with one or more of the following qualifications:

1. A licensed professional engineer or landscape architect;
2. A Certified Professional in Erosion and Sediment Control (CPESC); or
3. A person who has successfully completed the “Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites”

At a minimum, site assessments should be performed to verify the installation, functionality and performance of the EPSC measures described in the SWPPP. If structural BMPs (or equivalent EPSC measures) are not constructed or construction is in progress at the time of the site assessment, a follow-up monthly assessment(s) are required until the BMPs are constructed per the SWPPP. The site assessment should be performed with the inspector and should include a review and update (if applicable) of the SWPPP. Modifications of plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and stamped and certified in accordance with the Tennessee Code Annotated, Title 62, Chapter 2 and the rules of the Tennessee Board of Architectural and Engineering Examiners.

5.5.3.9. Inspections

Operators shall ensure proper installation, maintenance, and overall effectiveness of erosion prevention and sediment controls (EPSCs) by performing twice weekly site inspections. Inspections must verify and document the functionality and performance of the EPSC measures described in the SWPPP. Initial inspections shall also indicate if all EPSCs have been installed as designed in the submitted SWPPP and EPSC plans; and, if not, measures that need to be taken so those EPSCs meet the design specifications in the field SWPPP and EPSC plans.

5.5.3.10. Inspector qualifications

Twice weekly inspections can be performed by:

a) a person with a valid certification from the “Level I - Fundamentals of Erosion Prevention and Sediment Control” course,
b) a licensed professional engineer or landscape architect,
c) a Certified Professional in Erosion and Sediment Control (CPESC), or
d) a person who has successfully completed the “Level II - Design Principles for Erosion Prevention and Sediment Control for Construction Sites” course.

An inspector performs and documents the required inspections, paying particular attention to time-sensitive permit requirements, such as stabilization and maintenance activities.

5.5.3.11. Schedule of inspections

a) Inspections described in paragraphs b, c and d below, shall be performed at least twice weekly. Inspections shall be performed at least 72 hours apart. Where sites or portions of construction sites have been temporarily stabilized, inspections only have to be conducted once per month until construction activity resumes. Inspection requirements do not apply to definable areas that have been permanently stabilized. Changes to the inspection frequency and the justification for such request must be included in the records kept on site. For projects by the Tennessee Department of Transportation (TDOT) and the Tennessee Valley Authority (TVA), such request must be submitted to the division's Nashville Central Office. The division reserves the right to require more frequent inspections if deemed necessary to ensure compliance at a site.

b) Qualified personnel, as defined in Subsection 5.5.3.10 (provided by the permittee or cooperatively by multiple permittees), shall inspect disturbed areas of the construction site that have not been permanently stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site and each outfall.

c) Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. EPSC measures shall be observed to ensure that they are operating correctly.

d) Outfall points shall be inspected to determine whether EPSC measures are effectively preventing sediment discharges off-site or impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

e) Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced, modified or repaired as necessary, before the next rain event; but in no case more than seven days after the need is identified.

f) Based on the results of the inspection, the site description identified in the SWPPP in accordance with Section 5.5.1 and pollution prevention measures identified in the SWPPP in accordance with Section 5.5.3 shall be revised as appropriate. Such revisions shall be made no later than seven days following the inspection. In addition, any modifications to pollution prevention measures shall be implemented as soon as practicable but no later than 14 days following the inspection.

g) All inspections shall be documented on the *Construction Stormwater Inspection Certification Form* provided in Appendix C of this permit. An alternative inspection form may be used as long as the form contents and the inspection certification language are equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. The form must contain the printed name and signature of the inspector and the certification must be executed by a person who meets the signatory requirements of Section 8.7.2. Inspection reports must be submitted to the division within 10 days of the request.

h) Inspectors shall accurately document site conditions in their inspection reports. Falsifying inspection records, or other documentation; or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

i) The initial primary permittee (such as a developer) is no longer required to inspect portions of the site that are covered by a subsequent primary permittee (such as a home builder). Subsequent primary permittees who have obtained coverage under this permit shall conduct twice weekly inspections as per the requirements in Subsection 5.5.3.9.

5.5.3.12. Pollution prevention measures for non-stormwater discharges

The SWPPP must identify source(s) of all non-stormwater discharge(s) listed in Section 1.2.3 if it is to be combined with stormwater discharges associated with construction activity. The SWPPP shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater components of the discharge. Any non-stormwater must be discharged through stable discharge structures. Estimated volume of the non-stormwater components of the discharge must be included in the design of all impacted control measures.

PART 6

6. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

6.1. RELEASES IN EXCESS OF REPORTABLE QUANTITIES

The discharge of hazardous substances or oil in the stormwater discharges from a facility shall be prevented or minimized in accordance with the applicable SWPPP for the facility. This permit does not relieve the permittee of the reporting requirements of 40 CFR 117 and 40 CFR 302.

6.2. SPILLS

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

6.3. DISCHARGE COMPLIANCE WITH STATE WATER QUALITY STANDARDS

6.3.1. Violation of water quality standards

This permit does not authorize stormwater or other discharges that would cause or contribute to a violation of a state water quality standard (Tennessee State Rules, Chapters 0400-40-03, 0400-40-04). Such discharges constitute a violation of this permit.

Where a discharge is already authorized under this permit and the division determines the discharge to cause or contribute to the violation of applicable state water quality standards, the division will notify the operator of such violations. The permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and shall document these actions in the SWPPP.

6.3.2. Discharge quality

a) The construction activity shall be carried out in such a manner that will prevent violations of water quality criteria as stated in the Tennessee Rules, Chapter 0400-40-03-.03. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits or turbidity impair the usefulness of waters of the state for any of the uses designated for that water body by Tennessee Rules, Chapter 0400-40-04. Construction activity carried out in the manner required by

this permit shall be considered in compliance with the Tennessee Rules, Chapter 0400-40-03-.03.

b) There shall be no distinctly visible solids, scum, foam, oily slick, or the formation of slimes, bottom deposits, or sludge banks of such size or character as may be detrimental to fish and aquatic life.

c) The stormwater discharge must not contain total suspended solids, turbidity, or color in such amounts or character that will result in any objectionable appearance compared to the turbidity or color of the receiving water, considering the nature and location of the water.

d) The stormwater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream. This provision includes species covered under Subpart 1.3.

e) Solids or other materials removed by any sediment control treatment devices must be disposed of in a manner that prevents its entrance into or pollution of any surface or subsurface waters.

6.4. DISCHARGES INTO WATERS WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS

6.4.1. SWPPP/BMP Requirements

a) Discharges that would cause measurable degradation of waters with unavailable parameters or that would cause more than de minimis degradation of Exceptional Tennessee Waters are not authorized by this permit (Subpart 1.3). To be eligible to obtain and maintain coverage under this permit, the operator must satisfy, at a minimum, the following additional requirements for discharges into waters with unavailable parameters for siltation and for discharges to Exceptional Tennessee Waters[9]. All other provisions of this general permit that apply to receiving waters with available parameters shall also apply.

b) The SWPPP must certify that EPSC measures used at the site are designed to control stormwater runoff generated by a 5-year, 24-hour storm event (the design storm), at a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.

[9] or discharges upstream of such waters and because of the proximity to the segment and the nature of the discharge is likely to cause more than de minimis degradation in the unavailable or exceptional segment.

c) The permittee shall perform inspections described in Section 5.5.3.9 at least twice every calendar week. Inspections shall be performed at least 72 hours apart.

d) If the division finds that an operator is contributing to the impairment of a receiving stream despite complying with the SWPPP, the operator will be notified by the division in writing that the discharge is no longer eligible for coverage under the general permit. The operator may update the SWPPP and implement the necessary changes designed to eliminate further impairment of the receiving stream. If the permittee does not implement the SWPPP changes within seven days of receipt of notification, the permittee will be notified in writing that continued discharges must be covered by an individual permit (Subpart 8.11). To obtain the individual permit, the operator must file an individual permit application and submit an updated SWPPP. The project must be stabilized immediately and remain stable until the SWPPP is updated and the individual permit is issued. Only discharges from earth disturbing activities necessary for stabilization are authorized to continue until the individual permit is issued.

e) For an on-site outfall in a drainage area totaling five or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a 5-year, 24-hour storm and runoff from each acre drained; or equivalent control measures as specified in the Tennessee Erosion and Sediment Control Handbook, shall be provided until permanent stabilization of the site.

f) For an on-site outfall in a drainage area totaling 3.5 - 4.9 acres, a minimum sediment trap volume or engineering equivalent that will provide treatment for a calculated volume of runoff from a 5-year, 24-hour storm and runoff from each acre drained, is required until permanent stabilization of the site. A drainage area of 3.5 - 4.9 acres includes both disturbed and undisturbed portions of the site or areas adjacent to the site, all draining through the common outfall.

6.4.2. Water Quality Riparian Buffer Zone Requirements

Sites that contain, or are adjacent to, receiving waters with unavailable parameters for siltation or designated as Exceptional Tennessee Waters shall preserve a 60-foot natural water quality riparian buffer zone adjacent to the receiving stream. All other buffer zone requirements as stated in Section 4.1.2 will apply.

The natural water quality riparian buffer zone shall be preserved between the top of stream bank and the disturbed construction area. The 60-foot criterion for the width of the buffer can be established on an average width basis at a project, as long as the minimum width of the buffer is more than 30 feet at any measured location. If the construction site encompasses both sides of a stream, buffer averaging can be applied to both sides, but each side must average the 60-foot criterion independently.

This requirement does not apply to an area that is being altered under the authorization of a valid Aquatic Resources Alteration Permit (ARAP), or equivalent permits issued by federal authorities. Additional natural buffer zone requirements may be established by the local MS4 program.

PART 7

7. RETENTION, ACCESSIBILITY AND SUBMISSION OF RECORDS

7.1. DOCUMENTS

The primary permittee shall retain copies of SWPPPs, reports required by this permit, records of all data used to complete the NOI and the NOT for a period of at least three years from the date the NOT is submitted. This period may be extended by written request of the director.

7.2. ACCESSIBILITY AND RETENTION OF RECORDS

The permittee shall retain a copy of the SWPPP and a copy of the permit at the construction site (or other location accessible to the division) from the date construction commences to the date of termination of permit coverage. Permittees with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location onsite for the use of all operators and those identified as having responsibilities under the plan whenever they are on the construction site.

7.2.1. Posting Information at the Construction Site

A notice shall be posted near the main entrance of the construction site visible to the public with the following information:

a) a copy of the NOC with the NPDES permit tracking number for the construction project;
b) a name or company name; E-mail address (if available); telephone number and address of the project site owner/operator or a local contact person; and
c) the location of the SWPPP (Subpart 7.2).

The notice must be maintained in a legible condition. The notice shall be posted in a local public building if posting this information near a main entrance is infeasible due to safety concerns or if the site is not accessible to the public. If the construction project is a linear construction project (e.g., pipeline or highway), the notice must be placed in a publicly accessible location near where construction is actively underway and moved as necessary. This permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site. This permit does not require permittees to allow members of the public access to a construction site.

The permittee shall also retain the following items in an appropriate location on-site (or other location accessible to the division):

a) A rain gauge (or use a reference site for a record of daily precipitation) and accurate rainfall records;
b) A copy of all required inspection reports; and
c) Records of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated.

7.3. ELECTRONIC SUBMISSION OF DOCUMENTS

This permit requires the submission of forms developed by the director in order for a person to comply with certain requirements, including, but not limited to, making reports, submitting inspection findings, applying for permit coverage and requesting for termination of permit coverage. The director may make these forms available electronically and, if submitted electronically, then that electronic submission shall comply with the requirements of Chapter 0400-01-40. Electronic submission may be required when available, unless waived by the Commissioner in accordance with 40 C.F.R. § 127.15.

If the division notifies applicants by mail, E-mail, public notice or by making information available on the world wide web of electronic forms (see NPDES Electronic Reporting), the operators may be required to use those electronic options to submit the NOI (Section 3.3.2)

In the event of large-scale emergencies and/or prolonged electronic reporting system outages, an episodic electronic reporting waiver may be granted by the Commissioner in accordance with 40 CFR § 127.15. A request for a deadline extension or episodic electronic reporting waiver should be submitted to DWRWater.Compliance@tn.gov, in compliance with the Federal NPDES Electronic Reporting Rule.

In the event that NPDES Electronic Reporting is not functioning, the permittee shall comply with reporting conditions by mailing reports with wet-ink original signatures shall to the following address:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
COMPLIANCE & ENFORCEMENT UNIT
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

For purposes of determining compliance with this permit, data provided to the division electronically is legally equivalent to data submitted on signed and certified forms. A copy must be retained for the permittee's files.

7.3.1. Monitoring Results

Monitoring results (if applicable, for projects exceeding 50 acres of disturbance at one time, see Subsection 5.5.3.3) shall be recorded monthly and submitted monthly using NetDMR. Submittals shall be no later than 15 days after the completion of the reporting period. If NetDMR is not functioning, a completed DMR with an original signature shall be submitted to the address for Compliance and Enforcement Unit as listed in the Subpart 7.3 above. The first DMR is due on the 15th of the month following permit effectiveness.

DMRs must be signed and certified by a responsible corporate officer as defined in Tennessee Rule 0400-40-05-.05(6), a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

PART 8

8. STANDARD PERMIT CONDITIONS

8.1. DUTY TO COMPLY

8.1.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Tennessee Water Quality Control Act (TWQCA) and is grounds for an enforcement action, permit termination, revocation and reissuance, modification; or for denial of a permit renewal application.

8.1.2. Penalties

Pursuant to T.C.A. § 69-3-115 of The Tennessee Water Quality Control Act of 1977, as amended:

a) Any person who violates an effluent standard or limitation or a water quality standard established under this part (T.C.A. § 69-3-101, et. seq.); violates the terms or conditions of this permit; fails to complete a filing requirement; fails to allow or perform an entry, inspection, monitoring or reporting requirement; violates a final determination or order of the board, panel or commissioner; or violates any other provision of this part or any rule or regulation promulgated by the board, is subject to a civil penalty of up to ten thousand dollars ($10,000) per day for each day during which the act or omission continues or occurs.

b) Any person unlawfully polluting the waters of the state or violating or failing, neglecting, or refusing to comply with any of the provisions of this part (T.C.A. § 69-3-101, et. seq.) commits a Class C misdemeanor. Each day upon which such violation occurs constitutes a separate offense.

c) Any person who willfully and knowingly falsifies any records, information, plans, specifications, or other data required by the board or the commissioner, or who willfully and knowingly pollutes the waters of the state, or willfully fails, neglects or refuses to comply with any of the provisions of this part (T.C.A. § 69-3-101, et. seq.) commits a Class E felony and shall be punished by a fine of not more than twenty-five thousand dollars ($25,000) or incarceration, or both.

8.1.3. Civil and criminal liability

Nothing in this permit shall be construed to relieve the discharger from civil or criminal penalties for noncompliance. Notwithstanding this permit, the discharger shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the discharger to conduct stormwater discharge activities in a manner such that public or private nuisances or health hazards will not be created. Furthermore, nothing in this permit shall be construed to preclude the State of Tennessee from any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act.

8.1.4. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable local, state or federal law.

8.2. CONTINUATION OF THE EXPIRED GENERAL PERMIT

Permittees shall maintain coverage under this general permit until a new general permit is issued.

Operator(s) of an existing site permitted under the division's 2016 construction general permit shall maintain full compliance with the existing SWPPP. The existing SWPPP shall be modifiedaccording to the Section 5.3.1 of this permit.

8.3. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

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

8.4. DUTY TO MITIGATE

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

8.5. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the division or an authorized representative of the division, within a time specified by the division, any information that the division may request to determine compliance with this permit or other information relevant to the protection of the waters of the state. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit.

8.6. OTHER INFORMATION

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the director, he or she shall promptly submit such facts or information.

8.7. SIGNATORY REQUIREMENTS

All NOIs, SWPPPs, NOTs, Construction Stormwater Inspection Certifications, Construction Stormwater Monitoring Report forms, reports, certifications or information either submitted to the director or the operator of a large or medium Municipal Separate Storm Sewer System (MS4) shall be signed as described in Sections 8.7.1 and 8.7.2 and dated.

8.7.1. Signatory Requirements for an NOI[10]

The NOI shall be signed as follows:

a) For a corporation, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

   i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
   ii. the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated site including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive

[10] As specified in 40 CFR 122.22(a)(1)-(3) [48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39619, Sept. 1, 1983; 49 FR 38047, Sept. 29, 1984; 50 FR 6941, Feb. 19, 1985; 55 FR 48063, Nov. 16, 1990; 65 FR 30907, May 15, 2000]

measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b) For a general partnership, by each general partner in the general partnership,
c) For a sole proprietorship, by the proprietor,
d) For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
   i. the chief executive officer of the agency, or
   ii. a senior executive officer having responsibility for the overall operations of a principle geographic unit of the agency (e.g., Regional Administrators of EPA).

NOTE: The division does not require specific assignments or delegations of authority to responsible corporate or municipal, state, federal, or other public agency officers. The division will presume that these officers have the requisite authority to sign permit applications unless the entity has notified the director to the contrary. Procedures governing authority to sign permit applications may provide for assignment or delegation to applicable positions rather than to specific individuals.

8.7.2. Signatory Requirements for SWPPPs, Reports and Other Items

SWPPPs, Construction Stormwater Inspection Certification forms, reports, certifications or other information submittals required by the permit and other information requested by the division, including but not limited to Notice of Violation responses, shall be signed by a person described in Section 8.7.1, or by a duly authorized representative of that person.

8.7.3. Duly Authorized Representative

For a purpose of satisfying signatory requirements for reports (Section 8.7.2), a person is a duly authorized representative only if:

a) the authorization is made in writing by a person described in Section 8.7.1;
b) the authorization specifies an individual having responsibility for the overall operation of the regulated site or activity such as the position of

plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; a duly authorized representative may thus be either a named individual or any individual occupying a named position; and

c) the written authorization is submitted to the director or an appropriate EFO. The written authorization shall be a written document including the name of the newly authorized person or any individual occupying a named position as described in paragraph b) above, and the corresponding contact information (title, mailing address, phone number and E-mail address) for the authorized person or position. The written authorization shall be signed by the newly authorized person accepting responsibility and by the person described in Section 8.7.1 delegating the authority.

8.7.4. Changes to Authorization

If an authorization under Sections 8.7.1 or 8.7.3 is no longer accurate because a different individual or position has responsibility as the primary or secondary permittee, but the company name (permittee name) remains the same, a new NOI and SWPPP certification shall be submitted and signed by the new party who meets signatory authority satisfying the requirements of Sections 8.7.1 or 8.7.3 . The NOI shall include the new individual's information (title, mailing address, phone number and E-mail address), the existing tracking number and the project name.

8.7.5. Signatory Requirements for Primary Permittees

Primary permittees required to sign an NOI and SWPPP because they meet the definition of an operator (Subpart 2.1) shall sign the following certification statement on the NOI and on the SWPPP:

> "*I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.*"

8.7.6. Signatory Requirements for Secondary Permittees

Secondary permittees required to sign an NOI and SWPPP because they meet the definition of an operator but who are not primarily responsible for preparing an NOI and SWPPP, shall sign the following certification statement on the NOI and on the SWPPP:

> *"I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."*

8.8. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to Section 311 of the Clean Water Act or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

8.9. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges; nor does it authorize any injury to private property, any invasion of personal rights or any infringement of federal, state or local laws or regulations. The issuance of this permit does not authorize trespassing or discharges of stormwater or non-stormwater across private property.

8.10. SEVERABILITY

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

8.11. INDIVIDUAL PERMITS

8.11.1. Required Individual Permit Coverage

The director may require any person covered by this permit to apply for and obtain an individual NPDES permit to ensure adequate protection of designated uses of a receiving stream. Any interested person may petition the director in writing to take action under this paragraph but must include in their petition the justification for such an action. Where the director requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the director shall notify the discharger in writing that an individual permit application is required. This notification will include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application and a statement that coverage under this general permit shall terminate upon the effective date of an individual NPDES permit; or denial of coverage under an individual permit. An individual NPDES permit is required only when additional permit terms or conditions beyond those set forth herein are necessary to protect water quality. Criteria for the division to require an individual NPDES permit may include, but are not limited to:

a) Due to unique site conditions the discharge may result in greater than de minimis degradation, or a threat to threatened or endangered aquatic or semi-aquatic species.
b) The total acreage to be disturbed and/or total drainage area to an outfall may exceed the capability of standard EPSCs and other BMPs to prevent pollution to waters.
c) Steep grades or erosive soil conditions warrant site-specific controls that exceed the conditions of the CGP.
d) Other site-specific conditions, such as contaminated soils or public lands.

The notification may require stabilization of the site and suspend coverage under this general permit until the individual permit is issued. Individual permit applications and updated SWPPP shall be submitted to the appropriate Environmental Field Office of the division as indicated in Subpart 3.4. The director may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the director under this paragraph, then the applicability of this permit to the discharger will be terminated at the end of the day specified by the director for application submittal.

If the decision to require an individual NPDES permit precedes the issuance of coverage under this general permit, earth disturbing activities cannot begin until the individual permit is issued.

8.11.2. Permittee-Requested Individual Permit Coverage

Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. Any discharger that knowingly cannot abide by the terms and conditions of this permit must apply for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, and a SWPPP to the appropriate division's Environmental Field Office. The request may be granted by issuance of an individual permit, or alternative general permit, if the reasons cited by the permittee are adequate to support the request.

8.11.3. General Permit Termination

When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the discharger is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is terminated on the date of such denial, unless otherwise specified by the director. Coverage under the Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity (TMSP) will not be considered as an alternative general permit under this section without being specified by the director.

8.12. OTHER, NON-STORMWATER, PROGRAM REQUIREMENTS

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

8.13. PROPER OPERATION AND MAINTENANCE

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWPPPs.

Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee, when determined by the permittee or the division to be necessary to achieve compliance with the conditions of the permit.

8.14. INSPECTION AND ENTRY

The permittee shall allow authorized representatives of the Environmental Protection Agency, the director or an authorized representative of the commissioner of TDEC, or, in the case of a construction site which discharges through a municipal separate storm sewer, an authorized representative of the MS4 receiving the discharge, upon the presentation of credentials and other documents as may be required by law:

a) to enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
b) to have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
c) to inspect any facilities or equipment, including monitoring and control equipment.

8.15. PERMIT ACTIONS

This permit may be issued, modified, revoked, reissued or terminated for cause in accordance with this permit and the applicable requirements of T.C.A. § 69-3-108. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

PART 9

9. REQUIREMENTS FOR TERMINATION OF COVERAGE

9.1. TERMINATION OF DEVELOPER AND BUILDER COVERAGE

9.1.1. Termination Process for Primary Permittees

Primary permittees wishing to terminate coverage under this permit must submit a completed Notice of Termination (NOT) form provided in Appendix B of this permit (representative photo or video documentation of site stabilization is recommended). Electronic submittal is encouraged (see NPDES Electronic Reporting for more information). Primary permittees who abandon a site and fail to submit the NOT will be in violation of this permit. If the NOT was not submitted five years following the "estimated end date" (as identified on the NOI), the division can terminate the CGP coverage, unless the permittee specifically requests to maintain coverage. Signs notifying the public of the construction activity shall be in place until the NOT form has been submitted. Primary permittees may terminate permit coverage only if the conditions described below occur at the site:

a) For areas where the primary permittee has control, all earth-disturbing activities and, if applicable, construction support activities permitted under Section 1.2.2 at the site are complete and the following requirements are met:

   i. For any areas that were disturbed during construction, are not covered by permanent structures and over which the permittee had control during the construction activities; the requirements for permanent vegetation or non-vegetative stabilization described in Subsection 5.5.3.4 are met;
   ii. The permittee has removed and properly disposed of all construction materials, as well as waste and waste handling devices. The permittee has removed all equipment and vehicles that were used during construction, unless they are intended for long-term use following termination of permit coverage;
   iii. The permittee has removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following termination of permit coverage;
   iv. The permittee has identified in the SWPPP who is responsible for ongoing maintenance of any stormwater controls left on the site for long-term use following termination of permit coverage, and
   v. The groundcover achieves permanent stabilization.

b) The permittee has transferred control of all areas of the site for which he is responsible (including, but not limited to, infrastructure, common areas, stormwater drainage structures, sediment control basin) under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit.
c) The permittee obtains coverage under an individual or alternative general NPDES permit.

9.1.2. NOT Review

The division may review NOTs for completeness and accuracy and, when necessary, investigate the proposed site for which the NOT was submitted. Coverage under the permit is terminated when the permit record is published on TDEC's DataViewer as "Inactive." Operators may be liable for discharges that occur from the site after termination.

The division retains the right to deny termination of coverage under this general permit upon receipt of the NOT. If the local Environmental Field Office has information indicating that the permit coverage is not eligible for termination, written notification will be provided within 30 days of receipt that permit coverage has not been terminated. The notification will include a summary of existing deficiencies. When the site meets the termination criteria, the NOT should be re-submitted.

If any permittee files for bankruptcy or the site is foreclosed on by the lender, the permittee shall notify the division of the situation so that the division may assess the site to determine if permit coverage should be obtained by any other person or whether other action is needed.

9.2. TERMINATION OF BUILDER AND CONTRACTOR COVERAGE

9.2.1. Termination Process for Secondary Permittees

Secondary permittees must request termination of coverage under this permit by submitting a NOT when they are no longer an operator at the construction site. Electronic submittal is encouraged (see NPDES Electronic Reporting for more information). Secondary permittees receive coverage under this permit but are not normally mailed a NOC. Consequently, the division may, but is not required to, notify secondary permittees that their notice of termination has been received. If the division has reason to believe that the secondary permittee's NOT should

not have been submitted, the division will deny the secondary permittee's NOT in writing, with specific reasons as to why the NOT should not have been submitted.

9.3. NOT CERTIFICATION

The NOT and the following certification must be signed in accordance with Subpart 8.7 of this permit:

> *"I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."*

9.4. WHERE TO SUBMIT A NOT?

Electronic submittal is encouraged (see NPDES Electronic Reporting for more information). Otherwise, the NOT shall be submitted to the Environmental Field Office (EFO) which issued the NOC to the primary permittee. A list of counties and the corresponding EFOs is provided in Subpart 3.4. The appropriate permit tracking number must be clearly printed on the form.

PART 10

10. DEFINITIONS, ACRONYMS AND RESOURCES

10.1. DEFINITIONS

2-year 24-hour 5-year 24-hour	**2-year and 5-year design storm depths and intensities** The estimated design rainfall amounts, for any return period interval (i.e., 2-yr, 5-yr, 25-yr, etc.,) in terms of either 24-hour depths or intensities for any duration, can be found by accessing the data available at https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html. Other data sources may be acceptable with prior written approval by TDEC Division of Water Resources.
ARAP	**Aquatic Resource Alteration Permit** Persons who wish to make an alteration to a stream, river, lake or wetland must first obtain a water quality permit. Physical alterations to properties of waters of the state require an ARAP or a §401 Water Quality Certification (§401 certification). Examples of stream alterations that require a permit from the division include: • Dredging, excavation, channel widening, or straightening • Bank sloping; stabilization • Channel relocation • Water diversions or withdrawals • Dams, weirs, dikes, levees or other similar structures • Flooding, excavating, draining and/or filling a wetland • Road and utility crossings • Structural fill General ARAPs are developed and maintained by the division to provide a streamlined, expedited means of authorizing projects that singularly or cumulatively propose minor impacts to water resources.
BMP	**Best Management Practices** ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures; and practices to control plant site runoff,

	spillage, leaks, sludge or waste disposal, or drainage from raw material storage. BMPs include source control practices (non-structural BMPs) and engineered structures designed to treat runoff. Structural BMPs are facilities that help prevent pollutants in stormwater runoff from leaving the site. Non-structural BMPs are techniques, activities and processes that reduce pollutants at the source.
borrow pit	**Borrow Pit** is an excavation from which erodible material (typically soil) is removed to be fill for another site. There is no processing or separation of erodible material conducted at the site. Given the nature of activity and pollutants present at such excavation, a borrow pit is considered a construction activity for the purpose of this permit.
buffer zone	**Buffer Zone** or **Water Quality Riparian Buffer** is a permanent strip of natural perennial vegetation, adjacent to a stream, river, wetland, pond, or lake that contains dense vegetation made up of grass, shrubs, and/or trees. The purpose of a water quality riparian buffer is to maintain existing water quality by minimizing risk of any potential sediments, nutrients or other pollutants reaching adjacent surface waters and to further prevent negative water quality impacts by providing canopy over adjacent waters
clearing	**Clearing** refers to removal of vegetation and disturbance of soil prior to grading or excavation in anticipation of construction activities. Clearing may also refer to wide area land disturbance in anticipation of non-construction activities. Clearing, grading and excavation do not refer to clearing of vegetation along existing or new roadways, highways, dams or power lines for sight distance or other maintenance and/or safety concerns, or cold planning, milling, and/or removal of concrete and/or bituminous asphalt roadway pavement surfaces. The clearing of land for agricultural purposes is exempt from federal stormwater NPDES permitting in accordance with Section 401(1)(1) of the 1987 Water Quality Act and state stormwater NPDES permitting in accordance with the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.).

commencement	**Commencement of construction:** the initial disturbance of soils associated with clearing, grading, excavating or other construction activities.
common plan	**Common plan of development or sale** is broadly defined as any announcement or documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design) or physical demarcation (including boundary signs, lot stakes, surveyor markings) indicating construction activities may occur on a specific plot. A common plan of development or sale identifies a situation in which multiple areas of disturbance are occurring on contiguous areas. This applies because the activities may take place at different times, on different schedules, by different operators.
control measure	**Control measure** refers to any Best Management Practice (BMP) or other method used to prevent or reduce the discharge of pollutants to waters of the state.
CWA	**CWA** means the Clean Water Act of 1977 or the Federal Water Pollution Control Act (33 U.S.C. 1251, et seq.)
director	**Director** means the director, or authorized representative, of the Division of Water Resources of the State of Tennessee, Department of Environment and Conservation.
degradation	**Degradation** means the alteration of the properties of waters by the addition of pollutants, withdrawal of water, or removal of habitat, except those alterations of a short duration.
de minimis	**De Minimis** is degradation of a small magnitude, as provided in this paragraph: (a) Discharges and withdrawals: 1. Subject to the limitation in part 3 of this subparagraph, a single discharge other than those from new domestic wastewater sources will be considered de minimis if it uses less than five percent of the available assimilative capacity for the substance being discharged. 2. Subject to the limitation in part 3 of this subparagraph, a single water withdrawal will be considered de minimis if it removes less than five percent of the 7Q10 flow of the stream.

	3. If more than one activity described in part 1 or 2 of this subparagraph has been authorized in a segment and the total of the authorized and proposed impacts uses no more than 10% of the assimilative capacity, or 7Q10 low flow, they are presumed to be de minimis. Where the total of the authorized and proposed impacts uses 10% of the assimilative capacity, or 7Q10 low flow, additional degradation may only be treated as de minimis if the Division finds on a scientific basis that the additional degradation has an insignificant effect on the resource. (b) Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the Division finds that the impacts, individually and cumulatively, are offset by impact minimization and/or in-system mitigation, provided however, in Outstanding National Resource Waters (ONRWs) the mitigation must occur within the ONRW.
discharge of a pollutant	**Discharge** or **discharge of a pollutant** refers to the addition of pollutants to waters from a source.
disturbed area	**Disturbed area** means the total area presented as part of the development (and/or of a larger common plan of development) subject to being cleared, graded, grubbed, filled or excavated during the life of the development. The area cannot be limited to only the portion of the total area that the site-wide owner/developer initially disturbs through the process of various land clearing activities or in the construction of roadways, sewers, drainfields, and water utilities, stormwater drainage structures, etc., to make the property marketable.
division	**Division** means the Division of Water Resources of the State of Tennessee, Department of Environment and Conservation
exceptional waters	**Exceptional Tennessee Waters** are surface waters designated by the division as having the characteristics set forth at Tennessee Rules, Chapter 0400-40-03-.06(4). Characteristics include waters within parks or refuges; scenic rivers; waters with threatened or endangered species; waters that provide specialized recreational opportunities; waters within areas designated as lands

	unsuitable for mining; waters with naturally reproducing trout; waters with exceptional biological diversity and other waters with outstanding ecological or recreational value.
permanent stabilization	**Permanent Stabilization** means that all soil disturbing activities at the site have been completed and one of the three following criteria is met: (1) A perennial, preferably native, vegetative cover with a uniform (i.e., evenly distributed, without large bare areas) density of at least 70 percent has been established on all unpaved areas and areas not covered by permanent structures, and all slopes and channels have been permanently stabilized against erosion. (2) Equivalent permanent stabilization measures such as the use of riprap; permanent geotextiles; hardened surface materials including concrete, asphalt, gabion baskets or Reno mattresses have been employed. (3) For construction projects on land used for agricultural or silvicultural purposes, permanent stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural or silvicultural use.
improved sinkhole	**Improved sinkhole** is a natural surface depression that has been altered in order to direct fluids into the hole opening. Improved sinkhole is a type of injection well regulated under the Underground Injection Control (UIC) program. Underground injection constitutes an intentional disposal of waste waters in natural depressions, open fractures and crevices, such as those commonly associated with weathering of limestone.
Level 1	**Level 1 - Fundamentals of Erosion Prevention and Sediment Control** training and certification program administered by University of Tennessee Water Resources Research Center (https://tnepsc.org/index.asp). The Fundamentals course is a foundation-building course intended for individuals involved in land-disturbing activities covered by the Construction General Permit. The course aims to build a working knowledge of erosion and sedimentation processes and practices and is intended for: site inspectors, inspection and enforcement personnel from all levels of government, plan preparers and reviewers, and designers and engineers. Topics include:

	Construction General Permit and related SWPPP requirements; function, installation, limitations, inspection and maintenance of Best Management Practices; roles of local officials and state government agencies involved in the permitting process; and basic hydrologic and erosion processes. Upon successful completion of a Course Certification Exam, the participant receives a Level 1 TNEPSC certificate. The Level 1 certificate is valid for three full years following the year that the certificate was issued. To meet the requirement for Level 1 certified staff, TDOT may develop and administer an approved equivalent Level1 training and certification program as provided in the TDOT individual MS4 Permit. The equivalent TDOT Level 1 certification is valid only for TDOT staff and for projects where TDOT is the primary site operator.
Level 2	**Level 2 - Design Principles for Erosion Prevention and Sediment Control for Construction Sites** training and certification program administered by University of Tennessee Water Resources Research Center (https://tnepsc.org/index.asp). It is an advanced 2-day workshop designed for engineers and other professionals who have completed the prerequisite Level 1 course. The Level 2 Design workshop provides the general tools needed for developing an acceptable, working SWPPP. Topics discussed in the course include: hydrologic methods for determining peak flows; principles of soil erosion, scouring and sediment transport processes, including practice examples for preventing erosion; and open channel principles and practices for designing a stable channel, including use and examples of riprap, blankets and matting, and vegetation; stormwater control requirements and design; sedimentation principles; and temporary sediment basin design requirements, and detailed examples. The Level 2 Design workshop provides a Certificate of Completion after attending both days and successfully completing the take-home exam.
linear project	**Linear Project** is a land disturbing activity as conducted by an underground/overhead utility or highway department, including, but not limited to, any cable line or wire for the transmission of electrical energy; any conveyance pipeline for transportation of gaseous or liquid substance; any

	cable line or wire for communications; or any other energy resource transmission ROW or utility infrastructure, e.g., roads and highways. Activities include the construction and installation of these utilities within a corridor. Linear project activities also include the construction of access roads, staging areas and borrow/spoil sites associated with the linear project. Land disturbance specific to the development of residential and commercial subdivisions or high-rise structures is not considered a linear project.
measurable degradation	**Measurable Degradation**, as used in the context of discharges or withdrawals, means changes in parameters of waters that are of sufficient magnitude to be detectable by the best available instrumentation or laboratory analyses.
month	**Month** or **Monthly** refers to calendar months.
MS4	"**Municipal Separate Storm Sewer System**" or "**MS4**" is defined in 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (e.g., roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) that are: a) owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; b) designed or used for collecting or conveying stormwater; c) not a combined sewer; and d) not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR §122.2.
operator	**Operator** for the purpose of this permit and in the context of stormwater associated with construction activity, means any person (typically considered the primary permittee)

	associated with a construction project that meets either of the following two criteria: a) This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g., subsequent builder) or the person who is the current owner of the construction site. b) This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee and is considered a secondary permittee. It is anticipated that at different phases of a construction project, different types of parties may satisfy the definition of "operator" (see Part 2 of this permit).
point source (or outfall)	**Point source** means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include introduction of pollutants from non-point source agricultural and silvicultural activities, including stormwater runoff from orchards, cultivated crops, pastures, range lands, forest lands or return flows from irrigated agriculture or agricultural stormwater runoff. In short, outfall is a point where runoff leaves the site as a concentrated flow in a discrete conveyance. Phrase "point source" and term "outfall" are used interchangeably in this general permit, and can be considered synonyms.
pollutant	**Pollutant** means sewage, industrial wastes, or other wastes.
QLP	**Qualifying State, Tribal, or local erosion and sediment control program** is one that includes, as defined in 40 CFR 122.44(s):

	a) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices. b) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. c) Requirements for construction site operators to develop and implement a stormwater pollution prevention plan. A stormwater pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures and identification of non-stormwater discharges. d) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.
rainfall	A **rainfall event** is defined as any occurrence of rain preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.
registered engineer	**Registered Engineer** and **Registered Landscape Architect** An engineer or landscape architect certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Section 62-202, Tennessee Code Annotated, to practice in Tennessee.
runoff coefficient	**Runoff coefficient** means the fraction of total rainfall that will appear at the conveyance as runoff. Runoff coefficient is also defined as the ratio of the amount of water that is not absorbed by the surface to the total amount of water that falls during a rainstorm.
sediment	**Sediment** means solid material, both inorganic (mineral) and organic, that is in suspension, is being transported; or has been moved from the site of origin by wind, water, gravity or ice as a product of erosion.
sediment basin	**Sediment basin** A temporary basin consisting of an embankment constructed across a wet weather

	conveyance, an excavation that creates a basin or by a combination of both. A sediment basin typically consists of a forebay cell, dam, impoundment, permanent pool, primary spillway, secondary or emergency spillway and surface dewatering device. The size and shape of the basin depends on the location, size of drainage area, incoming runoff volume and peak flow, soil type and particle size, land cover, and receiving stream classification (i.e., waters with unavailable parameters, Exceptional TN Waters, or waters with available parameters).
sedimentation	**Sedimentation** means the action or process of forming or depositing sediment.
soil	**Soil** or **Topsoil** means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of plants.
steep slope	**Steep Slope** or **Steep Grade** means a natural or created slope of 35% grade or greater. Designers of sites with steep slopes must pay attention to stormwater management in the SWPPP to engineer runoff around or over a steep slope so as not to erode the slope. In addition, site managers should focus on erosion prevention on the slopes and stabilize the slopes as soon as practicable to prevent slope failure or sediment discharges from the project.
stormwater	**Stormwater** means rainfall runoff, snow melt runoff, and surface runoff and drainage.
stream	A **Stream** is a surface water that is not a wet weather conveyance. Therefore, as used in this permit, "stream" includes lakes, wetlands and other non-linear surface waters.
construction stormwater	**Stormwater associated with industrial activity** is defined in 40 CFR 122.26(b)(14) and incorporated here by reference. Most relevant to this permit is 40 CFR 122.26(b)(14)(x), which relates to construction activity including clearing, grading, filling and excavation activities, including borrow pits containing erodible material. Disturbance of soil for the purpose of crop production is exempt from permit requirements, but stormwater discharges from agriculture-related activities that involve construction of structures (e.g., barn construction, road construction, pond construction) are considered associated with industrial

	activity. Maintenance to the original line and grade, hydraulic capacity; or to the original purpose of the facility (e.g., re-clearing, minor excavation performed around an existing structure necessary for maintenance or repair and repaving of an existing road) is not considered a construction activity for the purpose of this permit.
discharge-related activities	**Stormwater discharge-related activities** means activities that cause, contribute to or result in point source stormwater pollutant discharges. These activities may include excavation, site development, grading and other surface disturbance activities; and activities to control stormwater including the siting, construction and operation of best management practices (BMPs).
SWPPP	**Stormwater Pollution Prevention Plan** is a written site-specific plan required by this permit that includes a narrative pollution prevention plan and graphical erosion and sediment control plan. In its basic form, the plan contains a site map, a description of construction activities that could introduce pollutants to stormwater runoff, a description of measures or practices to control these pollutants, and erosion and sediment control plans and specifications. It must be prepared and submitted before construction begins. In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMPs) must be designed, installed and maintained during land disturbing activities. The SWPPP should be prepared in accordance with the Tennessee Erosion and Sediment Control Handbook.
take	**Take** of an endangered species means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct.
the handbook	**Tennessee Erosion and Sediment Control Handbook** is a guidance issued by the Division of Water Resources for the purpose of developing Stormwater Pollution Prevention Plans and Erosion and Sediment Control Plans required by the TNCGP. The handbook is designed to provide information to planners, developers, engineers and contractors on the proper selection, installation and maintenance of BMPs. The handbook is intended for use during the design and

	construction of projects that require erosion and sediment controls to protect waters of the state.
temporary stabilization	**Temporary stabilization** is achieved when vegetation or non-erodible surface has been established on the area of disturbance and construction activity has temporarily ceased. Under certain conditions, temporary stabilization is required when construction activities temporarily cease. However, if future construction activity is planned, permit coverage continues.
TMDL	**Total maximum daily load (TMDL)** means the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background (40 CFR 130.2(I)). TMDL is a study that quantifies the amount of a pollutant in a stream, identifies the sources of the pollutant and recommends regulatory or other actions that may need to be taken in order for the stream to cease being polluted. TMDLs can also be described by the following equation: TMDL = sum of nonpoint sources (LA)+ sum of point sources (WLA)+ margin of safety A list of completed TMDLs that have been approved by EPA can be found at our web site: https://www.tn.gov/environment/program-areas/wr-water-resources/watershed-stewardship/tennessee-s-total-maximum-daily-load--tmdl--program.html
treatment chemicals	**Treatment chemicals** are polymers, flocculants or other chemicals used to reduce turbidity in stormwater discharges by chemically bonding to suspended silts and other soil materials and causing them to bind together and settle out. Common examples of anionic treatment chemicals are chitosan and anionic PAM.
turbidity	**Turbidity** is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air.
waste site	**Waste site** is an area where material from a construction site is disposed of. When the material is erodible, such as soil, the site must be treated as a construction site.

waters or waters of the state	**Waters** (or waters of the state) means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof, except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.
unavailable parameters	**Waters with unavailable parameters** means any segment of surface waters that has been identified by the division as failing to support one or more classified uses. For the purpose of this permit, pollutant of concern is siltation. Based on the most recent assessment information available to staff, the division will notify applicants and permittees if their discharge is into, or is affecting, waters with unavailable parameters. Resources to be used in making this determination include biennial compilations of impaired waters, databases of assessment information, updated GIS coverages (https://tdeconline.tn.gov/dwr/), and the results of recent field surveys. GIS coverages of the streams and lakes not meeting water quality standards, plus the biennial list of waters with unavailable parameters, can be found at https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html.
week	A **one-week period** is a synonym of a **calendar-week**; typically, a period from Sunday through Saturday.
wet weather conveyance	**Wet weather conveyances** are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that meet the following: a) The conveyance carries flow only in direct response to precipitation runoff in its immediate locality. b) The conveyance's channels are at all times above the ground water table. c) The flow carried by the conveyance is not suitable for drinking water supplies. d) Hydrological and biological analyses indicate that, due to naturally occurring ephemeral or low flow under normal weather conditions, there is not sufficient water

	to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months. (Tennessee Rules, Chapter 0400-40-3-.04(3)).

10.2. ACRONYMS AND ABBREVIATIONS

7Q10	7-day minimum, 10-year recurrence interval
ARAP	Aquatic Resource Alteration Permit
BMP	Best Management Practice
BPT	Best Practicable Control Technology Currently Available
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit (this NPDES permit)
CWA	Clean Water Act
EFO	Environmental Field Office (see Subpart 3.4)
EPA	(U.S.) Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Coverage (see Subpart 1.5)
NOI	Notice of Intent (to be covered by this permit – see Section 1.4.1)
NOT	Notice of Termination (see Part 9)
NPDES	National Pollutant Discharge Elimination System
ONRW	Outstanding National Resource Waters
QLP	Qualifying Local Program (see Section 1.4.5)
SWPPP	Stormwater Pollution Prevention Plan
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TMDL	Total Maximum Daily Load
TMSP	Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity
TVA	Tennessee Valley Authority
TWQCA	Tennessee Water Quality Control Act
UIC	Underground Injection Control
USGS	United States Geological Survey

10.3. RESOURCES, HYPERLINKS, AND WEB PAGES

Electronic Code of Federal Regulations (eCFR), Title 40 (40 CFR § 1 through § 1099)
https://www.ecfr.gov/cgi-bin/text-idx?SID=75202eb5d09974cab585afeea981220b&mc=true&tpl=/ecfrbrowse/Title40/40chapterI.tpl

Electronic Reporting (NetDMR) Waiver Request
https://www.tn.gov/content/dam/tn/environment/water/documents/wr_ereporting_waiver.pdf

Online Forms
NPDES Electronic Reporting

NPDES Compliance Inspection Manual (EPA)
https://www.epa.gov/sites/production/files/2017-01/documents/npdesinspect.pdf

NPDES Electronic Reporting Rule
https://www.federalregister.gov/documents/2015/10/22/2015-24954/national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule

Rules of the TN Department of Environment and Conservation, Chapter 0400-40
https://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm

TDEC Water Quality Rules, Reports, and Publications
https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html

Technical Support Document for Water Quality-based Toxics Control (EPA)
https://www3.epa.gov/npdes/pubs/owm0264.pdf

Tennessee Water Resources Data and Map Viewers
https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-resources-data-map-viewers.html

USGS StreamStats
https://www.usgs.gov/mission-areas/water-resources/science/streamstats-streamflow-statistics-and-spatial-analysis-tools?qt-science_center_objects=0#qt-science_center_objects

USGS SWToolbox
https://www.usgs.gov/software/swtoolbox-software-information

(End of body of permit; appendices follow.)

APPENDIX A – NOTICE OF INTENT FORM (NOI)

(See Next Page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243
Toll Free Number: 1-888-891-8332 (TDEC)

NOTICE OF INTENT (NOI) FOR GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (TNR100000)

Site or Project Name:		**NPDES Tracking Number: TNR**
Street Address including city or zip code or Location:		Construction Start Date:
		Estimated End Date:
Site Description:		Latitude (dd.dddd):
		Longitude (-dd.dddd):
County(ies):	MS4 Jurisdiction (if applicable):	Acres Disturbed:
		Total Acres:
Are there any streams ☐ and/or wetlands ☐ on or adjacent to the construction site? If wetlands are located on-site and may be impacted, attach wetlands delineation report. If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number?		ARAP Number:
Receiving waters:		
Include the SWPPP with the NOI ☐ SWPPP Included		Include a site location map ☐ Map Included

Name of Site Owner or Developer (Site-Wide Permittee): (correct legal name of person, company, or entity that has operational or design control over construction plans and specifications)			
For corporate entities only, provide the Tennessee Secretary of State (SOS) Control Number:			
Site Owner or Developer Contact Name: (individual responsible for site)	Title or Position: (the party who signs the certification below):		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Optional Contact Name:	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Owner or Developer Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)		
I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Owner or Developer Name: (print or type):	Signature:	Date:

Contractor(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)		
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Primary contractor name, address, and SOS control number (if applicable): (print or type)	Signature:	Date:
Primary contractor name, address, and SOS control number (if applicable): (print or type)	Signature:	Date:
Primary contractor name, address, and SOS control number (if applicable): (print or type)	Signature:	Date:

NOTICE OF INTENT (NOI) FOR GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (TNR100000)

Purpose of this form - A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling, and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

The appropriate permit application fee must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g., equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites):

(i) Projects equal to or greater than 150 acres	$10,000
(ii) Projects equal to or greater than 50 acres and less than 150 acres	$6,000
(iii) Projects equal to or greater than 20 acres and less than 50 acres	$3,000
(iv) Projects equal to or greater than 5 acres and less than 20 acres	$1,000
(v) Projects equal to or greater than 1 acre and less than 5 acres	$250
(vi) Projects seeking subsequent coverage under an actively covered larger common plan of development or sale	$100

There is no fee for sites less than 1 acre. A separate annual maintenance fee is also required for construction activities that exceed 1 year under general permit coverage. Tennessee Rules, Chapter 0400-40-11-.02(b)(12)).

Who must submit the NOI form? Per Section 2 of the permit, all site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current landowner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee and is considered a secondary permittee.

Owners, developers, and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any separate or subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The site-wide site-specific SWPPP shall be prepared in accordance with the requirements of part 5 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage. Artificial entities (e.g., corporations or partnerships excluding entities not required to register) must submit the TN Secretary of State, Division of Business Services, control number. The Division reserves the right to deny coverage to artificial entities that are not properly registered and in good standing with the TN Secretary of State.

Notice of Coverage - The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

Complete the form - Type or print clearly, using ink and not markers or pencil. Answer each item or enter "NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project - Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads, and structures, e.g., intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The maps can be obtained at the USGS World Wide Web site: http://www.usgs.gov/; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5-minute topographic map, a city map, or a county map showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

Give name of the receiving waters - Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the water body that the unnamed tributary enters.

An ARAP may be required - If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP). If you have a question about the ARAP program, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information - Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing** or use MyTDEC Forms for electronic submittal.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Parkway, Suite 206	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

APPENDIX B – NOTICE OF TERMINATION FORM (NOT)

(See Next Page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
DIVISION OF WATER RESOURCES (DWR)
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243
1-888-891-TDEC (8332)

NOTICE OF TERMINATION (NOT) FOR GENERAL NPDES PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been permanently stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form.

Submit this form to the local DWR Environmental Field Office (EFO) address (see table below) or using MyTDEC Forms electronic submittal process. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Site or Project Name:	**NPDES Tracking Number: TNR**
Street Address or Location:	County(ies):

Name of Permittee Requesting Termination of Coverage:			
Permittee Contact Name:	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Check the reason(s) for termination of permit coverage: (check only one)

☐	Primary permittee termination: all requirements for termination under Permit Part 9.1.1. a) through c) have been met. This includes, but is not limited to, for areas the primary permittee has control all earth-disturbing activities at the site are complete and permanent stabilization as defined in Part 10 of the CGP has been achieved. (attach photo documentation)
	When applicable, and you are a primary permittee seeking termination, list who is responsible for ongoing maintenance of stormwater controls left on the site subject for long-term use following termination of coverage:
☐	Secondary permittee termination: all requirements for termination under Permit Part 9.2.1. have been met (no longer an operator at the construction site).

Certification and Signature:

(must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the state is unlawful under the Tennessee Water Quality Control Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Tennessee Water Quality Control Act. I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type):	Signature:	Date:

EFO	Address	EFO	Street Address
Memphis	8383 Wolf Lake Drive, Bartlett, TN 38133	Cookeville	1221 South Willow Ave., TN 38506
Jackson	1625 Hollywood Drive, TN 38305	Chattanooga	1301 Riverfront Parkway, Ste. 206, TN 37402
Nashville	711 R S Gass Boulevard, TN 37243	Knoxville	3711 Middlebrook Pike, TN 37921
Columbia	1421 Hampshire Pike, TN 38401	Johnson City	2305 Silverdale Road, TN 37601

APPENDIX C – INSPECTION REPORT FORM

(See Next Page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
DIVISION OF WATER RESOURCES
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

Construction Stormwater Inspection Certification (Inspection Form)

Site or Project Name:		**NPDES Tracking Number: TNR**
Primary Permittee Name:		Date of Inspection:
Current approximate <u>disturbed</u> acreage:	Has rainfall been checked/documented daily? ☐ Yes ☐ No	Name of Inspector:
Current weather/ground conditions:	Rainfall total since last inspection:	Inspector's TNEPSC Certification Number:
Site Assessment ☐ Yes ☐ No	Assessor's TN PE registration number:	Assessor's TNEPSC Level II/CPESC number:

Check the box if the following items are on-site:	
☐	Notice of Coverage (NOC)
☐	Stormwater Pollution Prevention Plan (SWPPP)
☐	Weekly inspection documentation
☐	Site contact information
☐	Rain Gage
Off-site Reference Rain Gage Location	

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly? If "No," describe below in Comment Section				
1.	Are all applicable EPSCs installed and maintained per the SWPPP per the current phase?		☐ Yes	☐ No
2.	Are EPSCs functioning correctly at all disturbed areas/material storage areas? (permit section 5.5.3)		☐ Yes	☐ No
3.	Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts? (permit section 5.5.3.5 and 6.3.2)		☐ Yes	☐ No
4.	Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track-out? (permit section 5.5.3.1)		☐ Yes	☐ No
5.	If applicable, have discharges from dewatering activities been managed by appropriate controls? (permit section 4.1.3) If "No," describe below the measure to be implemented to address deficiencies.	☐ N/A	☐ Yes	☐ No
6.	If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 14 days? (permit section 5.5.3.4) If "No," describe below each location and measures taken to stabilize the area(s).	☐ N/A	☐ Yes	☐ No
7.	Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from wash waters, exposure of materials and discharges from spills and leaks per section 4.1.4? If "No," describe below the measure to be implemented to address deficiencies.	☐ N/A	☐ Yes	☐ No

Site or Project Name:	**NPDES Tracking Number: TNR**
Primary Permittee Name:	Date of Inspection:

8.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," describe below the measures to be implemented to address deficiencies. (permit section 1.2.2)	☐ N/A	☐ Yes	☐ No
9.	Have all previous deficiencies been addressed? If "No," describe the remaining deficiencies in the Comments section. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐ N/A	☐ Yes	☐ No

Comment Section. If the answer is "No" for any of the above, describe the problem and summarize corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 5.5.3.11 (g) and 8.7.2 of the CGP)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information 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. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Inspector Name and Title :	Signature:	Date:
Primary Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Inspection Form)

Purpose of this form / Instructions

An inspection, as described in subsection 5.5.3.9. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at the specified frequency and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

Inspections can be performed by:

a) a person with a valid certification from the "Fundamentals of Erosion Prevention and Sediment Control Level I" course,
b) a licensed professional engineer or landscape architect,
c) a Certified Professional in Erosion and Sediment Control (CPESC), or
d) a person who has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

Qualified personnel, as defined in subsection 5.5.3.10 of the Permit (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been permanently stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

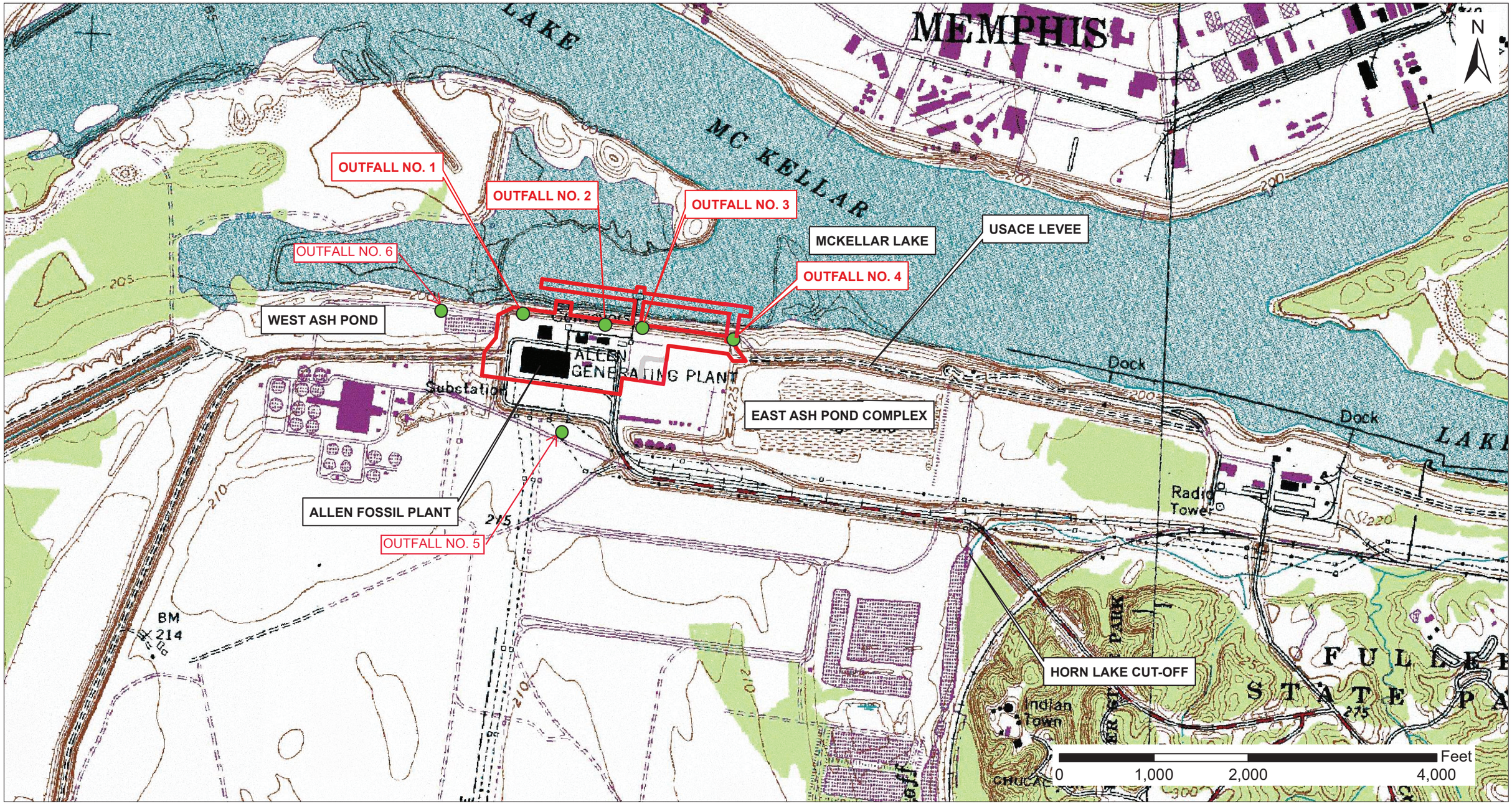
Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 5.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 5.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the Division's form and the permittee has obtained a written approval from the Division to use the alternative form. Inspection documentation will be maintained on site and made available to the Division upon request. Inspection reports must be submitted to the Division within 10 days of the request.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.



V:\1755\active\175578052\gis\mxds\TVA Allen Fossil Plant - D4.mxd
Revised: 2021-05-12 By: npresmyk

May 2021
Project No. 172676009

Stantec

Notes

1. Coordinate System: NAD 1983 NSRS2007 StatePlane Tennessee FIPS 4100 Ft US

2. Topographic data: USGS (24K)

Legend

- Outfall Points
- Limits of Construction

TVA

Client/Project
Tennessee Valley Authority
Allen Fossil Plant
Shelby County, Tennessee

Figure No.
01

Title
TVA Allen Fossil Plant
D4 Plant Decommissioning / Site Restoration SWPPP