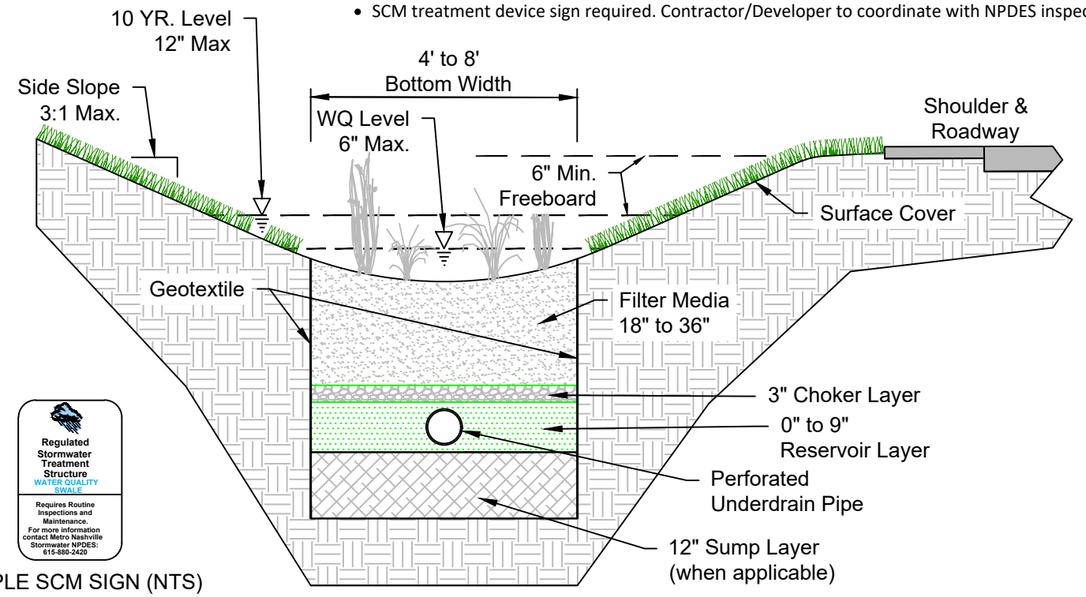
PLAN VIEW

LANDSCAPE PLAN

GIP - 05A
WATER QUALITY SWALE WITH UNDERDRAIN

DETAIL NOTE:

- Contractor, Engineer, or Owners Representative shall notify MWS NPDES Staff at least 48 hours prior to the installation of the planting soil filter bed. At the completion of installation, the above referenced person will collect one sample per water quality swale for analysis and confirmation of the filter media as defined by GIP-05.
- Vehicular and equipment traffic shall be prohibited in the infiltration trench area to prevent compaction and sediment deposition.
- Minimum 2 ft separation between subgrade and water table/bedrock required.
- SCM treatment device sign required. Contractor/Developer to coordinate with NPDES inspector.



Regulated Stormwater Treatment Structure
WATER QUALITY SWALE
Requires Routine Inspections and Maintenance.
For more information contact Metro Nashville Stormwater NPDES: 615-880-2420

SAMPLE SCM SIGN (NTS)

LANDSCAPE CERTIFICATION:

- I hereby certify that this water quality swale landscape plan is in keeping with the requirements listed in GIP-05 Section 5.7. Only native species and/or non-invasive species of plants were used in the design of this water quality swale landscape plan. This plan will achieve at least 75% surface area coverage within the first two years.

SIGN DESCRIPTION:

- 12" x 18" white 0.063 aluminum
- Single sided
- Sign to be mounted to post at top and bottom with stainless steel hardware

POST DESCRIPTION:

- 6' galvanized U-channel or 4" x 4" pressure treated lumber post
  - 2' below grade
  - 4' above grade

Water Quality Swale Number :		
	Design	As-Built
Treatment Volume (Tv), CF		
Surface Area, SF		
Top of Bank Elevation		
Channel Slope		
GIP Surface Elevation (Upstream)		
Check Dam Height, FT		
Channel Drop, FT		
GIP Surface Elevation (Downstream)		
Depth of Media, FT		
Depth of Stone, FT		
All elevations shall be NAVD88		

Water Quality Swale With Underdrain Material Specifications

Material	Specifications	Notes
Surface Cover	• River stone • Coir or jute matting • Erosion control matting [1] • Turf	Surface cover can be optional depending on the densities of the plantings provided. [1] Where velocities dictate, use woven biodegradable erosion control matting durable enough to last at least two growing seasons.
Filter Media Composition	Filter Media to contain (by volume): • 70% - 85% sand; • 10%-30% silt + clay, with clay ≤ 10%; and • 5% to 10% organic matter	The volume of filter media based on 110% of the plan volume, to account for settling or compaction. Contact staff for testing procedures.
Geotextile	Use a non-woven geotextile fabric with a flow rate of > 110 gal./min./ft^2 (e.g., Geotex 351 or equivalent)	Apply only to the sides, above the underdrain (2'-4' wide strip) and beneath the check dams. AASHTO M288-06, ASTM D4491 & D4751
Choker Layer	#8 or #89 clean washed stone	Meet TDOT Construction Specifications.
Reservoir Layer	#57 clean washed stone	Meet TDOT Construction Specifications.
Underdrain	6-inch dual wall HDPE or SDR 35 PVC pipe with 3/8-inch perforations at 6 inches on center.	AASHTO M 252 Place perforated pipe at base of reservoir layer.
Cleanout	6-inch SDR 35 PVC pipe with vented cap	Provide cleanouts at the upper end of the underdrain.
Observation Well	6-inch SDR 35 PVC pipe with vented cap and anchor plate	Number of wells equals the number of test pits required for infiltration testing (see Appendix 5-A)
Sump Layer	#57 clean washed stone	Meet TDOT Construction Specifications.
Check Dams	• Wood [1] • Gabions • Rock [2] • Concrete	All check dams shall include weep holes. [1] Wood used for check dams shall consist of pressure treated timers or water-resistant tree species. [2] See TDOT Standard Drawing EC-STR-6.