

Terre Tree Filter Bioretention System Plan Notes

1. Each Terre Tree Filter shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation shall be at the direction of and approved by the site engineer.
2. If the Terre Tree Filter is stored before installation, the unit shall be stored so as to prevent any internal contamination from the site.
3. The Terre Tree Filter shall be placed on a compacted sub-grade with a minimum six (6) inch gravel base matching the final grade of the curb line in the area of the Terre Tree Filter. The unit is to be placed such that the unit top matches the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to ninety-five percent (95%) of maximum density at + 1-2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval. **After installation, the Owner and/or Contractor shall be responsible for Terre Tree Filter inlet protection so as to prevent entry of any material into the Terre Tree Filter.**
4. Outlet connections to the storm drain inlets shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations.
5. If the Terre Tree Filter model has separate precast concrete sections, they shall be sealed before backfilling, creating a watertight joint using a non shrink grout, butyl rubber or similar waterproof seal conforming to Federal Specification: FS-SS-S-210 Sealing Compound Preformed Plastic for Expansion Joints and Pipe Joints. Backfilling should be performed in a careful manner, bringing the appropriate fill material up in six (6) inch lifts on all sides of the Terre Tree Filter. Installation of the Terre Tree Filter shall conform to ASTM specifications: C-32 Specification for Sewer and Manhole Brick; C-270 Specification for Mortar for Unit Masonry; C-478 Specification for Precast Reinforced Concrete Manhole Sections; C-913 Standard Specification for Precast Concrete Water and Wastewater Structures, unless directed otherwise in the Contract Documents or by the site engineer.
6. Curb and Gutter construction (where present) shall be such that the flow-line of the Terre Tree Filter is at a higher elevation than the flow-line of any bypass structure or relief structure, such as a drop inlet, curb cut or similar structure. Failure to comply with this requirement may cause failure and/or damage to the Terre Tree Filter.
7. The site design must provide adequate irrigation for the vegetative matter being placed within the Terre Tree Filter during periods of dry weather. Examples of adequate design are: pipe system, gutter flow or tree grate.
8. Only Terre Hill Stormwater Systems or its authorized representative is permitted to install the growing media; stormwater filtration media and the vegetative matter in the Terre Tree Filter. Commencement of this activity cannot take place until the project site is fully stabilized, cleaned, fully landscaped, grass cover installed, final street paving and sweeping completed and the Contractor **and/or Owner has cleanout all material and debris from the installed Terre Tree Filter.**
9. All pipe openings for the Terre Tree Filter and any connected structures shall be prefabricated in compliance with approved shop drawings. Field construction modification to create openings in the Terre Tree Filter shall be approved by the site engineer. Only neatly drilled pipe openings are permitted. Other methods such as punching, hammering, chipping, etc. are not permitted. Connection of any pipes shall be with mortar or watertight rubber flexible connections. All pipe connections shall be flush with the inside face of the structure(s).
10. Where required by federal, state or local law or regulation: a licensed professional engineer, land surveyor, geologist, landscape architect or a duly authorized designee shall be present onsite and be responsible during installation and commissioning of any Post Construction Stormwater Best Management Practices such as the Terre Tree Filter device.

11. The sequence of construction, which includes the Terre Tree Filter Bioretention System is part of the Erosion & Sediment Control Plan and the Post Construction Stormwater Management Plan and corresponds to the maintenance and protection of traffic sequence for construction.
12. Construction sequence for the Terre Tree Filter is as follows:
 - a. Delivery of the Terre Tree Filter to the site
 - b. Removal of Terre Tree Filter from truck by Owner and/or Contractor
 - c. Storage of Terre Tree Filter as set forth above in # 2 above
 - d. Installation of the Terre Tree Filter when constructing the stormwater drainage system, curb and gutter, if any
 - e. Terre Tree Filter is protected from site debris and contamination as set forth above in # 3 above
 - f. Terre Tree Filter shall remain protected until the project site is fully stabilized, cleaned, fully landscaped, grass cover installed, final street paving and sweeping completed
 - g. Only Terre Hill Stormwater Systems or its authorized representative is permitted to install the growing media; stormwater filtration media and the vegetative matter in the Terre Tree Filter.
13. **Maintenance**
 - a. Terre Hill Stormwater Systems and/or its duly authorized representative are not responsible for maintenance of the Terre Tree Filter.
 - b. Terre Tree Filters require annual maintenance which consists of removal of trash and debris and:
 1. Inspection for damage to vegetative matter or the Terre Tree Filter
 2. Remove tree grate and erosion control stones, if any, to remove trash and debris
 3. Put back erosion control stones and tree grate
 4. Dispose or trash and debris as required by federal, state and local law and regulation
 5. Complete and retain maintenance record documentation including disposal documentation as required by federal, state and local law and regulation
 - c. Replacement of the stormwater filtration media is anticipated to be once every fifteen (15) years.
 - d. Replacement of growing media is anticipated once every thirty (30) years

Final Certification

I _____, do hereby certify, swear and affirm, pursuant to the penalties of 18 PA. C. S. A. § 4904, to the best of my actual knowledge, information and belief, that the accompanying record drawings accurately reflect the as-built conditions, are true and correct, and are in conformance with Chapter 102 of the rules and Regulations of the Pennsylvania Department of Environmental Protection and that the project site was constructed in accordance with the approved plan changes and accepted construction practices.