

FACILITY: INFILTRATION - INFILTRATION TRENCH (I-1)*



GENERAL MAINTENANCE CARD
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PURPOSE AND FUNCTION

An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.

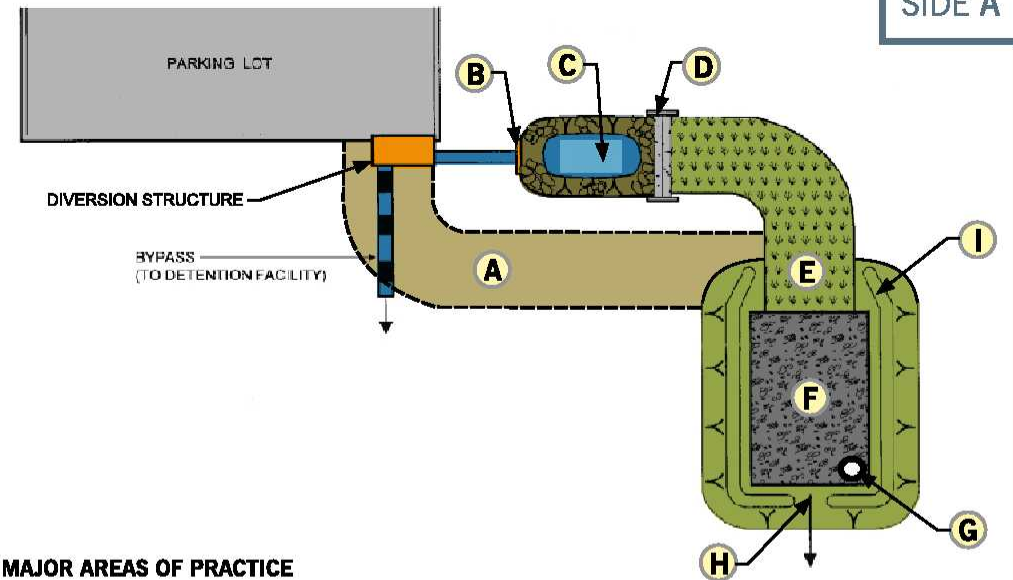
SHORT-TERM MEASURES (FREQUENCY: AT LEAST ONCE A MONTH)

Drainage Issues:

- Maintain contributing drainage area.**
 - Remove trash and debris and dispose off-site, as required.
 - Stabilize and mow area as required. Remove clippings.
 - Ensure that activities in the drainage area minimize oil/grease and sediment entry to the system.
- Inspect inlet (Location B), and outlet (Location H).**
 - Remove debris manually and dispose off-site.
 - Note any cracks in pipe and concrete pipe collar.
- Inspect pretreatment devices, such as plunge pool (Location C), concrete level spreader (Location D), and grass channel (Location E).**
 - Remove debris manually and dispose off-site.
 - Stabilize eroded areas for further maintenance.
 - Note any displaced field stone or cracks in concrete. Remove displaced stone as required.
- Inspect infiltration trench area (Location F).**
 - Remove debris manually and dispose off-site.
 - Note any surface ponding that remains more than 24-48 hours following a storm event.
 - Record water level at observation well (Location G). Note any water that remains more than 24-48 hours following a storm event. If surface ponding occurs, replace media (refer to Item 3 of Medium-Term Measures).
- Inspect overflow berm (Location I) for seepage and settlement.**
 - Stabilize as necessary for further maintenance.
- Inspect adjacent catch basin grates and manhole covers.**
 - Remove debris manually and dispose off-site.

Landscaping:

- Inspect overall condition of vegetation onsite.**
 - Remove vegetative invasives manually, ensuring root removal, to the extent possible. Refer to Appendix 1: New York State Invasive Plants for key species. Note any significant establishment for future removal/maintenance.
 - Relocate rodents and/or provide exclusion devices, as required.



MAJOR AREAS OF PRACTICE

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|---------------------------------|------------------------------------|----------------------------|
| A. Maintenance Accessway | D. Concrete Level Spreader | G. Observation Well |
| B. Inlet Structure | E. Grass Channel | H. Outlet |
| C. Plunge Pool | F. Infiltration Trench Area | I. Overflow Berm |

- Trim shrubs and cut grass along street frontages, as required. Dispose of clippings off-site.
- Remove grass clippings and leaves from surface of infiltration trench (Location F).
- Mow grassed areas as required. Mow only when surface is dry to avoid rutting. Dispose of clippings off-site.

Perimeter Treatment (perimeter boundaries not shown on figures):

- Inspect overall condition of the perimeter treatment items.**
 - Remove accumulated litter/debris by hand, dispose off-site.
 - Secure gates, guiderails, signs, and boulders, as required.

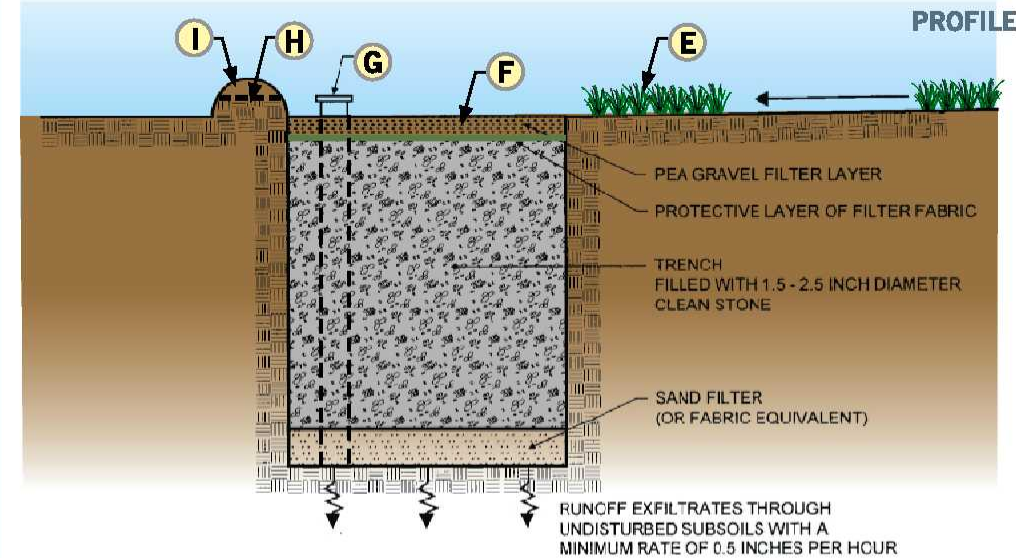
MEDIUM-TERM MEASURES (FREQUENCY: ONCE EVERY SIX MONTHS)

Drainage Issues:

- Inspect inlet (Location B) and outlet (Location H) to ensure good condition and no evidence of clogging or erosion.**
 - Repair cracks in pipe and concrete pipe collar, as required.
 - Clear structures to maintain conveyance, as required.
 - Repair undercut and eroded areas at inflow and outflow points.
- Inspect pretreatment devices, such as plunge pool (Location C), concrete level spreader (Location D), and grass channel (Location E).**
 - Measure sediment depth in plunge pool (Location C).
 - Note any unstable embankments or evidence of erosion. Repair/reinforce as required.
 - Replace displaced field stone and repair cracks in concrete, as required.

Albany County	City of Albany	Town of Bethlehem	City of Cohoes	Town of Colonie	Village of Colonie	Village of Green Island	Town of Guilderland	Village of Menands	Town of New Scotland	Village of Voorheesville	City of Watervliet	SUNY Albany
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* Facility abbreviations refer to 2003 NYSDEC Stormwater Design Manual practice labels



MAJOR AREAS OF PRACTICE

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|-----------------------------|------------------|
| E. Grass Channel | H. Outlet |
| F. Infiltration Trench Area | I. Overflow Berm |
| G. Observation Well | |

3. Inspect infiltration trench area (Location F).

- If water is ponded at the surface more than 24-48 hours following a storm event:
 - Remove pea gravel filter layer and top surface filter fabric. Dispose off-site.
 - Replace according to original specifications.
 - Seed or sod to restore ground cover

4. Inspect overflow berm (Location I) and repair as necessary.

Landscaping:

5. Inspect for plant mortality.

- Remove dead plants by hand; dispose off-site; replant as required.
- Remove trees that start to grow in the vicinity of the trench (Location F), and dispose off-site, as required.
- Note any bare areas. Cultivate soil and revegetate as required. Introduce alternative plantings, as required.

6. Inspect for herbivore damage.

- Repair burrows/damage created by rodents, as required.
- Introduce alternative plantings, as required.

Perimeter Treatment (perimeter boundaries not shown on figures):

7. Lubricate locks and hinges on gates, as required.
8. Refurbish or mow accessway, as required.
9. Inspect and repair damaged sidewalks, fencing, guiderail, and signs, as required.

LONG-TERM MEASURES (FREQUENCY: ONCE EVERY YEAR)

Drainage Issues:

1. Remove sediment from plunge pool and adjacent catch basins; "vactoring" recommended.

LONG-TERM MEASURES (FREQUENCY: ONCE EVERY TWO TO FIVE YEARS)

Drainage Issues:

1. If water remains in the observation well more than 24-48 hours following a storm event:
 - Remove all of the stone aggregate, filter fabric, and sand filter layers. Dispose off-site.
 - Till, disc, or otherwise aerate the bottom of the trench to enhance infiltration.
 - Replace according to original specifications.
 - Seed or sod to restore ground cover.

DEWATERING PROCEDURE AT PRETREATMENT DEVICE

The plunge pool or other pretreatment device must be dewatered before proceeding with "vactoring" operations.

Methodology:

1. Park the "vactor" truck along the maintenance accessway near the inlet (Location A). The boom should be extended in the direction of the plunge pool.
2. Ensure clear access for a two-person crew down the slope near the plunge pool (Location C).
3. Pump out the water from the plunge pool to the grass channel (Location E) downstream.
4. Proceed with "vactoring" operations.

"VACTORING" PROCEDURE AT PRETREATMENT DEVICE

Methodology:

1. Connect the "vactor" truck to an approved nearby source of clean water for "vactoring" purposes.

2. Unwind the water jet hose reel and place it down the slope of the plunge pool (Location C). Use hose to loosen accumulated sediment.
3. Place the flexible suction hose into the plunge pool (Location C).
4. Perform "vactoring" operations by simultaneously using the suction arm and water jet hose to remove slurry until the rip-rap base is reached.
5. Continue slurry removal until capacity of "vactor" truck is reached.
6. Stop "vactoring" work. Dispose of slurry off-site.
7. Repeat Steps 1-6 until all the sediment has been removed.
8. After "vactoring" work is complete, carefully remove the flexible suction hose and the water jet hose from plunge pool, and transport them back to the truck.
9. Inspect the accessway and adjacent area for damage, such as dislodged field stone, wood chips, etc., and refurbish as required.

Note: Secure locks on gates as necessary prior to exiting site.

Paperwork and Reporting

- 1) Refer to site specific SWPPP and regulated MS4 for reporting requirements related to maintenance
- 2) Report practice failures to owner-operator and relevant regulated MS4

Maintenance Considerations During Design

- Erosion and Sediment Control
 - Inlet/Outlet Protection
 - Sediment Removal
- Pretreatment Devices
- Landscaping
- Maintenance Access
- Cold Climate Considerations