

# HANCOCK ASSOCIATES

Surveyors | Engineers | Scientists

## Operation and Maintenance Manual

37 Popes Lane

The information provided herein is intended to provide the base information for operation and maintenance of the site in perpetuity subject to updates and revisions as required at a future date. As such all future property owners must be notified in writing of the this plan and be provided with a copy of this plan, a complete set of the design drawings and/or a completed as-built plan showing all the drainage features as they were constructed, which are considered part of this document. Please see the attached Operations and Maintenance Log.

### Illicit Discharge - Practices to Minimize Storm Water Contamination

- All waste materials will be collected and stored in a securely lidded metal dumpster.
- All trash and debris from the site will be deposited in the dumpster. The dumpster will be emptied on a regular schedule prior to being over full.
- All personnel will be instructed regarding the correct procedure for waste disposal.
- Good housekeeping and spill control practices will be followed to minimize storm water contamination from petroleum products, paints, and cleaning products.
- All site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- Spill kits will be provided with any activity that could provide contamination.
- All paint containers and curing compounds will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewers, but will be properly disposed according to the manufacturer's instructions.
- All spills will be cleaned up immediately upon discovery. Spills large enough to reach the storm sewers will be reported to the Massachusetts Department of Environmental Protection Northeast Regional Office at 1-888-304-1133.

### Deep Sump Hooded Catch Basin and Trench Drain

Inspect deep sump catch basins and trench drains four times per year including the end of the foliage and snow removal seasons. Sediments must also be removed four times per year or when the depth of deposits is greater than or equal to one half the depth of the sump or trench drain. Vacuum trucks are to be used to remove trapped sediment and supernatant.

Although catch basin and trench drain debris often contains concentrations of oil and hazardous materials such as petroleum hydrocarbons and metals, MassDEP classifies them as solid waste. Any contaminated materials must be evaluated in accordance with the Hazardous Waste Regulations, 310 CMR 30.00, and handled as hazardous waste. MassDEP regulations prohibit landfills from accepting materials that contain free draining liquids.

### Infiltration BMP

The infiltration BMP (subsurface chamber system) shall be inspected after every major storm for the first few months to ensure it is stabilized and functioning properly. If necessary, corrective action shall be taken until the system functions properly. Inspectors should note how long water remains standing in the inspection port after a storm; standing water within the basin 48 to 72 hours after a storm indicates that the infiltration capacity may have been overestimated. If the ponding is due to clogging, immediately address the reasons for the clogging. Thereafter, inspect the infiltration BMP at least twice per year.

### Roof Drain Leaders

Routine roof inspections shall be performed two times per year. The roof shall be kept clean and free of debris, and the roof drainage systems shall be kept clear. Gutters and downspouts shall be cleaned at least twice per year, or more frequently as necessary.

### Vegetated Areas Maintenance

Although not a structural component of the drainage system, the maintenance of vegetated areas may affect the functioning of stormwater management practices. This includes the health/density of vegetative cover and activities such as the application and disposal of lawn and garden care products, disposal of leaves and yard trimmings.

#### *Initial Post-Construction Inspection*

During the initial period of vegetation establishment pruning and weeding are required twice in first year by contractor or owner. Any dead vegetation/plantings found after the first year will be replaced. Proper mulching is mandatory and regular watering may be required initially to ensure proper establishment of new vegetation.

#### *Long-Term Maintenance*

The planted areas shall be inspected on a semi-annual basis and any litter removed. Weeds and invasive plant species shall be removed by hand. Maintain planted areas adjacent to pavement to prevent soil washout. Immediately clean any soil deposits on pavement. Leaf litter and other detritus shall be removed twice per year. If needed to maintain aesthetic appearance, perennial plantings may be trimmed at the end of the growing season.

Trees and shrubs shall be inspected twice per year to evaluate health and attended to as necessary. Seeded ground cover or grass areas shall not receive mulching. Re-seed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming. Plant alternative mixtures of grass species in the event of unsuccessful establishment. The grass vegetation should not be cut to a height less than four inches.

#### *Pesticide/Herbicide Usage*

No pesticides are to be used unless a single spot treatment is required for a specific control application.

### Snow Storage Area

Snow from the site that exceeds the storage areas on-site shall be removed by a private contractor. Snow storage areas on site shall be inspected on a semi-annual basis and any debris shall be removed.

### Parking Areas

Parking areas shall be inspected on a semi-annual basis, any debris removed and swept as needed.

# 37 Popes Lane

## Operation and Maintenance Log

Inspections for Year: \_\_\_\_\_

| <b>Structural Best Management Practice</b>   | <b>Action</b>  | <b>Date Completed</b> | <b>Completed By</b> | <b>Comments</b> |
|--|----------------|-----------------------|---------------------|-----------------|
| <b>Deep Sump Hooded Catch Basin– Inspect/clean four times per year. Clean when sump is 50% full.</b> | Inspect/ Clean |                       |                     |                 |
|  | Inspect/ Clean |                       |                     |                 |
|  | Inspect/ Clean |                       |                     |                 |
|  | Inspect/ Clean |                       |                     |                 |
| <b>Trench Drain– Inspect/clean four times per year. Clean when trench drain is 50% full.</b>         | Inspect/ Clean |                       |                     |                 |
|  | Inspect/ Clean |                       |                     |                 |
|  | Inspect/ Clean |                       |                     |                 |
|  | Inspect/ Clean |                       |                     |                 |
| <b>Infiltration BMP – Inspect twice per year. Clean as required</b>                                  | Inspect        |                       |                     |                 |
|  | Inspect        |                       |                     |                 |
| <b>Rain Garden – Inspect/clean twice per year.</b>   | Inspect/Clean  |                       |                     |                 |
|  | Inspect/Clean  |                       |                     |                 |
| <b>Roof Drain Leaders – Inspect/clean twice per year.</b>  | Inspect/Clean  |                       |                     |                 |
|  | Inspect/Clean  |                       |                     |                 |
| <b>Vegetated Areas Maintenance – Inspect twice per year. Maintain as required.</b>                   | Inspect        |                       |                     |                 |
|  | Inspect        |                       |                     |                 |
| <b>Snow Storage Areas – Inspect twice per year. Maintain as required.</b>                            | Inspect        |                       |                     |                 |
|  | Inspect        |                       |                     |                 |
| <b>Parking Areas – Inspect twice per year. Maintain as required.</b>                                 | Inspect        |                       |                     |                 |
|  | Inspect        |                       |                     |                 |

NOTE: See Operations and Maintenance Plan for details of inspection requirements.