

269 NORTH AVE
Weston, Massachusetts

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**Stormwater Best Management Practices
(BMP's)
Operation and Maintenance Plan**

Prepared For:

269 North Avenue, LLC
590 Main Street
Suite 500
Watertown, Ma. 02472

Prepared By:



14 Spring Street
Waltham, MA 02451

DEI #2013-0008

TABLE OF CONTENTS

1.0	Introduction
2.0	Purpose
3.0	BMP Description and Location
4.0	Inspection and Maintenance Checklist
5.0	Inspection, maintenance checklist and schedule
6.0	Snow Management
7.0	Trash Removal
8.0	General Landscape Management
9.0	Site Manager
10.0	Annual Report

INSPECTION FORMS

Form 1	Stormceptor catch basin
Form 2	Infiltration Basins

1.0 INTRODUCTION

On behalf of 269 North Avenue, LLC, Doyle Engineering, Inc., as part of the site design for the property at 269 North Ave in Weston, Massachusetts, using guidelines implemented by the Department of Environmental Protection in the Commonwealth of Massachusetts, presents this Operation and Maintenance plan.

Owner: 269 North Avenue, LLC

It shall be the responsibility of the current and future property owner to comply with the requirements of this Operation and Maintenance Plan.

This operation and Maintenance Plan shall also include the approved site plans sheets C1.00, C2.00, C3.00, C4.00 and C5.00.

2.0 PURPOSE

This Operation and Maintenance Plan (O&M Plan) is intended to provide a mechanism for the consistent inspection and maintenance of each BMP installed on the project site. Included in this O&M Plan is a description of each BMP type, the location of each individual BMP and an inspection form for each BMP. The owner of the property is the owner and operator of the stormwater system and is responsible for its upkeep and maintenance.

3.0 OPERATOR'S RESPONSIBILITIES

This Operation and Maintenance Plan includes details on stormwater management system maintenance, snow removal, trash removal, landscape maintenance, and illicit discharges. Aspects of the site that are associated with the stormwater management system are indicated on the Site Utility Plan.

The Site Operator shall:

1. ensure that the specified procedures included in this plan are followed, that the various system components are maintained in perpetuity,
2. engage as employees or as contractors, qualified personnel to conduct required inspections, periodic maintenance, and system repairs, and
3. maintain proper records as specified herein.

4.0 SYSTEM COMPONENTS

4.1 Stormceptor Catch Basins

There are deep sump catch basins fitted with Stormceptor pretreatment units located throughout the proposed development. These Stormceptor catch basins are designed to remove trash, debris, and coarse sediment from the stormwater runoff.

4.2 Infiltration Basins

Infiltration systems are located under the parking areas for the project. The infiltration systems are constructed using permeable gravel that promotes infiltration. Pretreatment is critical for effective performance of infiltration basins which is why the deep sump catch basins precede the infiltration systems. Runoff from the design storm is stored until it infiltrates through the soil of the basin floor and walls.

5.0 INSPECTION, MAINTENANCE CHECKLIST AND SCHEDULE

Immediately following completion of the project construction contract period and during at least the

next twelve (12) months thereafter, inspection of all system components shall be completed at least monthly and following every rainfall event of at least 1". A minimum of 2 monthly inspections shall be conducted during the first two growing seasons. As warranted during these inspections, maintenance in accordance with the component-specific sections listed below shall be completed and proper records kept.

Following completion of the initial monthly inspections, general system inspections shall be conducted quarterly. Inspections shall also be completed following any rainfall event of at least 3".

5.1 Stormceptor Catch Basins

Stormceptor catch basin shall be inspected two times per year to determine the depth of sediment in basin. If the amount of sediment in the bottom of the basin is over 2-feet in depth, then the basin shall be cleaned.

5.2 Infiltration Basin

Infiltration basins shall be inspected four times per year and after any storm event greater than a 2-year event (3.2 inches or greater).

At least twice a year, remove trash, debris and sediment from the basin as necessary; work shall be completed under dry conditions.

5.3 Inspections and Record Keeping

- An inspection form should be filled out each and every time maintenance work is performed
- A binder should be kept at the North Ave property (Main Condominium Association Building) that contains all of the completed inspection forms and any other related materials
- A review of all Operation & Maintenance actions should take place annually to ensure that these stormwater BMPs are being taken care of in the manner illustrated in this Operation & Maintenance Plan.
- All operation and maintenance log forms for the last three years, at a minimum, shall be kept on site.
- The inspection and maintenance schedule may be refined in the future based on the findings and results of this operation and maintenance program or policy.

Infiltration Field

Periodic inspections of infiltration field shall include opening the observation ports and making observations of the stone surface and standing water. If standing water is observed in the infiltration field the water depth shall be recorded and the inspector shall return every 24 hours to record the water level. Standing water observed in the structure above the stone level longer than 72 hours following a rainfall event may indicate failure. A follow-up inspection by a qualified site engineer should be scheduled.

Other Drainage Structures

All drainage system structural elements including the catch basins, treatment chambers, drain manholes, and pipe outfall areas shall be inspected at least quarterly. Damage to inlet grates or outlet structures and/or any other material or side slope damage shall be logged and scheduled for repair and/or replacement. Accumulated sediments and/or hydrocarbons in the catch basins shall be removed at least annually by vacuum equipment and not by "clam shell" excavation. Collected materials shall be disposed of off-site in accordance with all applicable local and state regulations.

Additionally, sediment shall be removed from the catch basins / drain inlets if a sediment depth of 24-inch or more is observed during routine inspections.

6.0 SNOW MANAGEMENT

Snow removal for the project shall be required for the sidewalks, parking lots, and access drives. Snow removed from all paved areas shall be plowed to or otherwise moved to designated stockpile areas that drain toward the on-site storm water collection systems. No snow shall be stockpiled in areas that drain directly to offsite areas.

Use of a limited quantity of non-sodium based deicing material on paved surfaces prior to snowfall reduces the amount of plowing required and deicing material needed in the days following a snowfall event. Treated sand or other sodium-based deicing compounds shall not be used.

7.0 TRASH REMOVAL

The paved areas, landscaped areas, and walkways shall be inspected for litter and trash quarterly. Any accumulated trash, litter, and discarded materials in these areas shall be removed. No disposal of materials is permitted within the landscaped or wooded areas on the project site. This prohibition applies to trash, fill material, construction debris, grass clippings, collected leaves and cut branches (exclusive of grass clippings that are mulched in place).

8.0 GENERAL LANDSCAPE MAINTENANCE

The fertilizers utilized on the site shall be slow release types of fertilizer containing low nitrogen and phosphorus. Fertilizer applications shall be limited to the spring and early fall, generally just as the vegetation begins to grow (April 15) and in the fall (September). The fertilizer shall be applied per the manufactures specifications. The ratios for Nitrogen, Phosphorus, and Potassium shall be 3-1-2 or 3-1-1, with nitrogen content not to exceed 25% (examples, 8-6-12 or 24-8-16). Furthermore, it is recommended that at least 30-50% of the total nitrogen be slow release.

Pesticides shall be limited to the minimal amount necessary to control identified outbreaks and significant infestations. The use of these materials shall be documented in the Site Maintenance Log indicating material applied, quantity and date of application.

All landscape debris including but not limited to pruning waste, collected leaves, raked mulch, or other debris should be removed from the project site. Grass clippings may be finely mulched in place, or otherwise must also be removed from the site.

9.0 SITE MANAGER

A Site Manager shall be designated by the owner, either as an employee or as a contractor. The Site Manager will be responsible for oversight and/or completion of all inspection and maintenance activities specified herein.

The Site Manager will also be responsible for maintaining an accurate Site Maintenance Log. The Site Maintenance Log shall be available for inspection municipal or state departments or their agent(s) upon request.

The Site Maintenance Log will:

1. Document the completion or and results of periodic or special inspections,
2. Identify the personnel responsible for the completion of required maintenance tasks,
3. Document the completion of planned maintenance tasks.
4. Identify any outstanding problems, malfunctions or inconsistencies identified during the course of routine maintenance.

The Site Manager will also be responsible for ensuring that all maintenance employees are familiar with the system components and their proper function, and are trained to identify improper function and/or failure.

10.0 ANNUAL REPORT

An annual report shall be prepared by a professional engineer or other equally qualified stormwater inspector and will include the following:

1. A summary of all cleaning, repair, and general maintenance activities that were completed as reported in the periodic inspection logs maintained by the facility,
2. A verification that all scheduled inspections for the year were completed and properly documented and that all maintenance prescribed in the periodic inspection logs were completed,
3. A general assessment of the condition and performance of the stormwater management system for the facility.

The Annual Report shall be made available to the Town of Weston Engineering department, or to municipal offices upon request.

