

Inspection & Maintenance Plan

West End Yards

Cate Street/Route 1
Portsmouth, NH 03801

APPLICANT & OWNER

Cate Street Development, LLC

11 Elkins Street
Suite 420
Boston, MA 02127

July 24, 2019



FUSS & O'NEILL

5 Fletcher Street, Suite 1
Kennebunk, ME 04043

Project No. 20180317.A10

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Long-Term Inspection & Maintenance Plan
 Cate Street Development, LLC
 Belmont, NH 03220

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1 Introduction

This report outlines the long-term inspection and maintenance for West End Yards, owned by Cate Street Development, LLC, located at 428 US Route 1 Bypass & Cate Street in Portsmouth, New Hampshire. Site development includes two residential buildings, one commercial building, 23 townhomes, and new section of roadway. The stormwater management system consists of 2 bioretention basins, 3 subsurface infiltration basins, 2 subsurface detention basins, 2 water quality units, deep sump hooded catch basins in an off line configuration, and rip rap energy dissipaters, together with conveyance systems that open grass channels. These best management practices (BMPs) will provide groundwater recharge and peak flow mitigation of stormwater runoff.

The purpose of this this Long-Term Inspection and Maintenance Plan is to identify specific inspection and maintenance activities that are necessary to ensure the success and minimize the deterioration of the stormwater system over time. The Contractor is responsible for implementing Inspection and Maintenance through the completion of construction and during the warranty period. The Inspection shall be responsible implementing this Long-Term Inspection and Maintenance Plan thereafter.

Maintenance operations shall be funded by the Operator. In the event the facility becomes owned by different entities, this Long-Term Inspection and Maintenance Plan shall be transferred to the future owners/operators.

2 Inspection and Maintenance Requirements

The following inspection and maintenance activities shall be conducted to ensure the success and minimize the deterioration of the stormwater system over time. All BMPs shall be inspected after every storm event larger than one-inch (over a 24-hour period) in the first six-months following construction. Afterwards, BMPs shall be inspected after major storm events greater than 2.8 inches (over a 48-hour period), and at a minimum twice per year in late spring (May/June) and early fall (September/October). Checklists to assist with the inspection and maintenance activities are provided in Appendix A. A map depicting the location of the components of the stormwater management system is provided in Appendix B.

2.1 Bioretention Basins

Bioretention basin inspections shall include inspecting the isolator rows for accumulated sediment. Inlets and outlets should be inspected for erosion and damage. If inspection of the isolator row indicates the need for maintenance, the sediment shall be removed using the JetVac process. Once sediment is removed from the isolator row, catch basins and manholes upstream of the basin shall be inspected and cleaned.

2.2 Drainage Channel

Channels shall be inspected for sediment accumulation, erosion, and condition of the surface lining material. Vegetative channels shall be inspected to determine if high flows have caused erosion of the vegetative surface lining. Any areas subject to erosion shall be replenished with the original design material and re-vegetated according to design drawings. Materials deposited on the surface of the channels (e.g., trash, litter, sediment, debris) must be removed manually. Vegetation within the channel shall be mowed a minimum of once per year to eliminate woody vegetation. It is recommended to cut grass no shorter than four inches to maintain establishment of hearty stand of grass.

2.3 Drainage Structures

Immediately prior to the end of construction or acceptance by the Owner/Operator, the Contractor shall clean all drainage structures. Once construction is complete and has been accepted by the Owner/Operator, all drainage structures shall be inspected annually. Inspections shall include checking for debris, sediment, and hydrocarbons, and structural integrity or damage. Deficiencies must be corrected immediately. Grates shall not be welded to the frame so the structures can be easily inspected and maintained.

2.4 Energy Dissipator and Level Spreader

Energy dissipator shall be inspected to determine if high flows have caused scour or dislodged any of the stone. If repairs are needed, they should be accomplished immediately. Materials deposited on the surface of the dissipator/spreader (e.g., trash, litter, sediment, debris) must be removed.

3 Pollution Prevention

The following pollution prevention activities shall be conducted to minimize potential impacts on stormwater runoff quality. The Contractor is responsible for all activities during construction. The Owner/Operator is responsible thereafter.

3.1 Spill Procedures

Any discharge of waste oil or other pollutant shall be reported immediately to the New Hampshire Department of Environmental Services (NHDES). The operator will be responsible for any incident of groundwater contamination resulting from the improper discharge of pollutants to the stormwater system, and may be required by NHDES to remediate incidents that may impact groundwater quality. Should property ownership be transferred, the subsequent owner/operator will be informed of the legal responsibilities associated with operation of the stormwater system, as indicated above.

3.2 Sanitary Facilities

Sanitary facilities shall be provided during all phases of construction. There are no bathroom facilities on site long term.

3.3 Material Storage

No on site trash facility is provided. The customers are required to remove trash from the site. Hazardous material storage is prohibited.

3.4 Material Disposal

All waste material, trash, sediment, and debris shall be removed from the site and disposed of in accordance with applicable local, state, and federal guidelines and regulations. Removed sediments shall be dewatered (if necessary) prior to disposal.

4 Contacts

Owner

Cate Street Development, LLC
11 Elkins Street
Suite 420
Boston, MA 02127

Operator

TBD

Maintenance Contact

TBD

I&M Plan Contact

Fuss & O'Neill, Inc.
Richard Lundborn, PE
5 Fletcher Street, Suite 1
Kenebunk, ME 04043
207.363.0669
RLundborn@fando.com

Appendix A

Operation, Maintenance, and Management Inspection Checklist

Inspection & Maintenance
Manual Checklist

BMP/System	Minimum Inspection Frequency	Minimum Inspection requirements	Maintenance / Cleanout Threshold
Closed Drainage (Structures & Pipes)	Twice Annually	Check for sediment accumulation, clogging, and debris.	Clean catch basin sump when half full. Remove all floating debris. Clean pipe runs with 2" or more of sediment.
Catch Basin Hood Inserts	Twice Annually	Check for blocked hoods and floating debris in associated catch basins	Unclog any debris from hoods, remove floatables and hydrocarbons. Check insertion to outlet pipe. Replace if damaged.
Infiltration Basin	Routinely during 1st year, twice annually after	Check for sediment accumulation, clogging, and debris. Monitor growth of vegetation	Inspect vegetation as necessary, remove debris from structures, and remove sediment accumulation from forebay and basin bottom. Mow, cut back, and control woody growth on the side slopes and inside the infiltration basin. Check slopes and spillways for structural integrity.
Bioretention Basin	Twice Annually	System should be inspected for drawdown time, sediment removed, and vegetation	Remove any trash or debris from structures or drains, vegetation maintained in healthy condition and bioretention basin drain time inspected for filtration function.
Invasive Plant Control	Routinely	Inspect for any invasive plants that destroy the natural communities or obstruct drainage structures	Pull deadhead, mow, cut, use controlled burning use a herbicide, girdle, frill or use a foliar spray with glyphosate to control or remove invasive plants.
Litter / Trash Removal	Routinely	Inspect parking areas, driveways, storm water systems, and around buildings.	Site will be free of trash / litter

Inspection & Maintenance Manual Log Form

West End Yards
 Cate Street / Route 1
 Portsmouth, New Hampshire 03801

BMP / System	Date Inspected	Inspector	Cleaning or Repair	Repair Date	Repair Performed By

Appendix B

BMP Location Map