

LONG-TERM OPERATION & MAINTENANCE PLAN

**Center & Main
1440 Main Street
Concord, Massachusetts**

October 30, 2020

**Applicant
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W&S Project Data

CONC-0020

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1 | Long Term Operation & Maintenance Plan

This Operation & Maintenance Plan is prepared to comply with provisions set forth in the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards.

Structural Best Management Practices (BMPs) require periodic maintenance to ensure proper function and efficiency in pollutant removal from stormwater discharges that would otherwise reach wetland resource areas untreated. Maintenance schedules found below are as recommended in MassDEP's Massachusetts Stormwater Handbook and as recommended in the manufacturer's specifications.

The stormwater management system owner and the party responsible for maintenance of the stormwater management system shall be Symes Development & Permitting, LLC and its designated employees during construction.

1.1 The following BMPs provide pollutant removal and groundwater recharge

- 1) (CB1 thru CB 9) - Deep Sump Catch Basin with Hood/Trap
- 2) Sediment Forebay #1 & #2
- 3) Underground Infiltration Chambers
- 4) Roof Drywells

Deep-Sump Catch Basin with Hood/Trap - (CB1 thru CB9)

Inspect and/or clean at least four times per year with special consideration given to the end of foliage and snow removal seasons. This shall also be applicable to all drop inlet catch basins located outside of pavement areas within low areas associated with landscaping features.

Sediments must also be removed once per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the sump or one half the depth of the invert of the outlet pipe.

Clamshell buckets and/or vacuum trucks are typically used to remove sediment in Massachusetts.

Cleanings may be taken to a landfill or other facility permitted by MassDEP to accept solid waste without any prior approval by MassDEP. However, some landfills require catch basin cleanings to be tested before they are accepted. For information on all of the MassDEP requirements pertaining to the disposal of catch basin cleanings go to

<http://www.mass.gov/eea/agencies/massdep/recycle/regulations/management-of-catch-basin-cleanings.html>

Sediment Forebays - (1 & 2)

Regular maintenance is essential. Frequently removing accumulated sediments will make it less likely that sediments will be resuspended. At a minimum, inspect sediment forebays monthly and clean them out at least four times per year. Stabilize the floor and sidewalls of the sediment

forebay before making it operational, otherwise the practice will discharge excess amounts of suspended sediments. When mowing grasses, keep the grass height no greater than 6 inches. Check for signs of rilling and gulying and repair as needed. After removing the sediment, replace any vegetation damaged during the clean-out by either reseeding or resodding. When reseeding, incorporate practices such as hydroseeding with a tackifier, blanket, or similar practice to ensure that no scour occurs in the forebay, while the seeds germinate and develop roots.

Inspection Ports - Underground Infiltration Chambers - (UIS-1 & 2)

Each Stormtech detention system is also provided with inspection ports for use during scheduled maintenance. Locations are provided on the AsBuilt Plan.

Inspection and Maintenance Form

Refer to Sections above for frequency of inspection

Inspector: _____ Date: _____

Inspector Title: _____

Days since last rainfall: _____ Amount of last rainfall: _____

Structural Controls: Catch Basins / Grates and Drop Inlet Structures

Structure Identification	Location	Catch basin at grade	Hood/trap installed	Sediment buildup (in.)	Overall condition
CB1	Road A STA=2+25	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
CB2	Road A STA=2+25	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
CB3	Road A STA=4+19	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
CB4	Road A STA=4+19	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
CB5	Road A STA=5+93.70	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
CB6	Lot 8	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>

Maintenance required

To be performed by: _____ On or before: _____

Inspection and Maintenance Form

Refer to Sections above for frequency of inspection

Inspector: _____ Date: _____

Inspector Title: _____

Days since last rainfall: _____ Amount of last rainfall: _____

Structural Controls: Drain Manhole

Structure Identification	Location	Sediment buildup inlet (in.)	Sediment buildup outlet (in.)	Overall condition
MH1	Road A STA=2+40			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH2	Road A STA=3+55			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH3	Road A STA=4+23			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH4	Road A STA=5+33			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH5	Road A STA=5+33			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH6	Road A STA=6+03			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH6A	Road A STA=6+73			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH7	Lot 6			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH8	Road B STA=1+86			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH9	Road B STA=2+85			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
MH10	Road B STA=3+56			Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>

Inspection and Maintenance Form

Refer to Sections above for frequency of inspection

Inspector:

Date:

Inspector Title:

Days since last rainfall:

Amount of last rainfall:

Structural Controls: Underground Infiltration Chambers

Structure Identification	Location	Overall condition
UIS-1	Road A cul-de-sac	Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>
UIS-2	Road B cul-de-sac	Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/>

Maintenance required

To be performed by:

On or before:

1.2 The following BMPs are recommended to minimize impacts to wetland resource areas

Street Sweeping

Street sweeping is recommended to be conducted. Recommended schedule to follow current town standards.

2 | Long Term Pollution Prevention Plan

This Long Term Pollution Prevention Plan is prepared to comply with the provisions set forth in the Massachusetts Department of Environmental Protection (DEP) Stormwater Management Standards. Structural Best Management Practices (BMPs) require periodic maintenance to ensure proper function and efficiency in pollutant removal from stormwater discharges that would otherwise reach wetland resource areas untreated.

Maintenance schedules found below are as recommended in Department of Environmental Protection's Massachusetts Stormwater Handbook and as recommended in manufacturer's specifications.

2.1 Pavement Sweeping

Annual sweeping of sediment from each street is recommended with special attention given to spring (March/April) and late fall (November/December).

2.2 Trash and Litter Cleanup

In addition to pavement sweeping, the monitoring and removal of trash and litter cleanup will follow standard protocol. Trash and litter shall be properly disposed of off-site.

2.3 Ownership and Maintenance Responsibilities

After completion, either the town or the homeowner's association will assume full responsibility of continuing the operation and maintenance of the stormwater management system as well as the long-term pollution prevention plan outlined below. The exception would be if a legal agreement is made with another party to perform such duties for the owner(s).

Requirements for storage and use of fertilizers, herbicides and pesticides

The homeowner's association will likely contract with a professional company relative to lawn care and maintenance of common areas. All materials shall be stored offsite. Materials utilized shall be minimized and be free of phosphorus.

Fertilizers: Fertilizers are to be applied at the minimum amounts recommended by the manufacturer and once applied any residual shall be swept from the pavement to limit the possibility of entering the storm drains. Storage procedures are to be followed as previously stated and the contents of any partially used bags should be transferred to a sealable container, either bag or bin to avoid spilling.

Herbicides and Pesticides: Storage of these materials are to be as outlined previously and especially out of the reach of pets and children, away from damp areas where their containers may succumb to moisture or rust and should not be stored near food. These materials must not be placed in the trash or washed down the drain. Handle using rubber gloves and use an appropriate mask when using these products for extensive periods of time.

Provisions for maintenance of lawns, gardens, and other landscaped areas

These activities are to be the responsibility of the homeowner's association to schedule and perform.

Pet waste management provisions

These activities are left to the homeowner's association to schedule and perform.

Operation and Management of septic system

The homeowner's association is one Owner, per Title 5, whom shall be responsible for the inspection, maintenance, and upgrade of the one system serving the one Facility (dwelling units). The system shall be inspected at least once every three years per 310 CMR 15.301 System Inspection; the State Environmental Code, Title 5.

Snow disposal and plowing plans relative to Wetland Resource Areas

Snow disposal/removal shall be in compliance with MassDEP's Bureau of Water Resources guidelines, effective December 21, 2015 per requirements outlined on the Snow Removal Plan.

Winter Road Salt and/or Sand Use and Storage restrictions

Road Salt use must be in compliance with the Guidelines on Deicing Chemical (Road Salt) Storage effective date December 19, 1997, Guideline No. DWSG97-1 found in the BRP's Drinking Water Program. Sand Use: Encourage the use of environmentally friendly alternatives such as calcium chloride and/or sand instead of road salt for melting ice whenever possible.

Pavement Sweeping schedules

Pavement sweeping shall be performed by the homeowner's association. Pavement sweeping is recommended to occur once a year in the spring and fall in order to minimize the amount of Total Suspended Solids load on the deep-sump catch basins and the other Best Management Practices tributary thereto.

Provisions for prevention of illicit discharges to the stormwater management systems

According to Standard 10 in the Massachusetts Stormwater Handbook, Illicit discharges to the stormwater management system are discharges that are not entirely comprised of stormwater. Notwithstanding the foregoing, an illicit discharge does not include discharges from the following activities or facilities: firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing and water used to clean residential buildings without detergents.

Training for staff or personnel involved with implementing LTPPP

This responsibility lies with the homeowner's association unless a legally-binding agreement is made with another party to perform such duties for the owner(s).

List of Emergency contacts for implementing Long-Term Pollution Prevention Plan

This responsibility lies with the owner(s) unless a legally-binding agreement is made with another party to perform such duties for the owner(s).

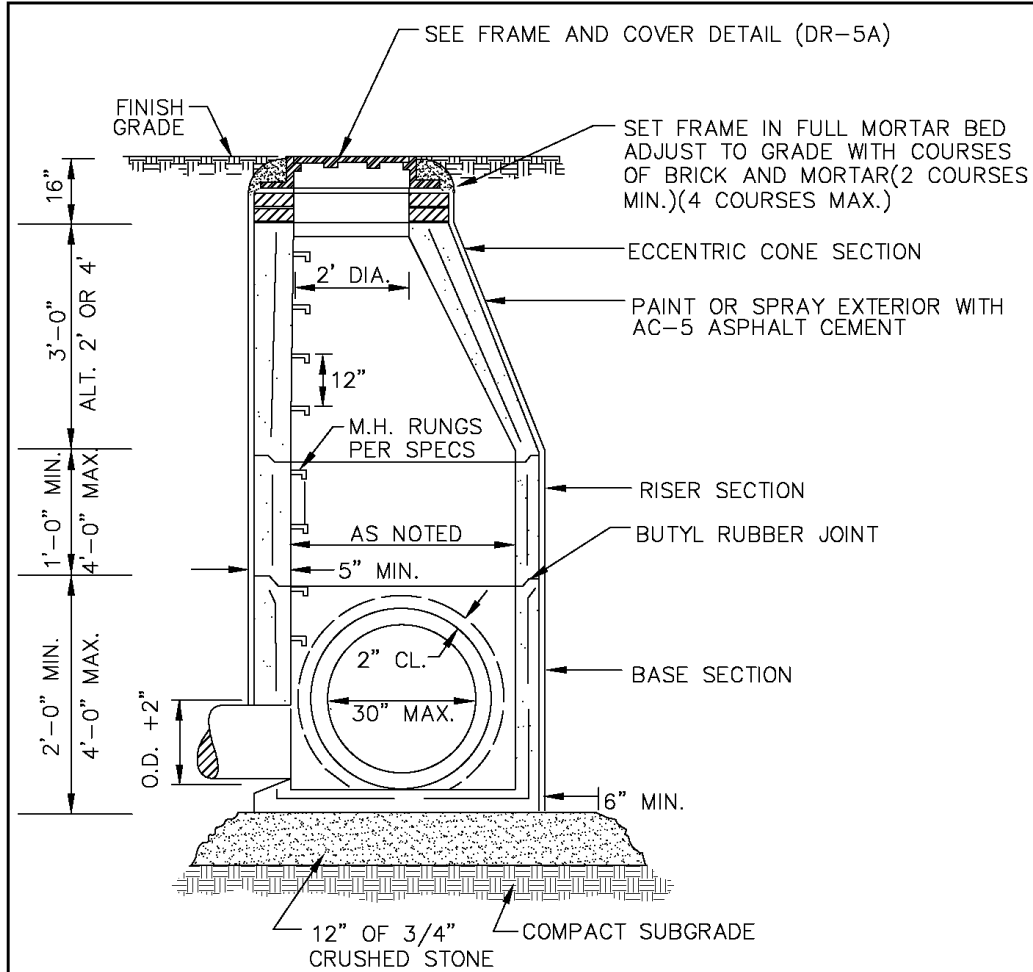
Center & Main

1440 Main Street | Concord, MA

Long-Term Operation & Maintenance Plan

Operation & Maintenance Plan

Construction Details



NOTE:

PRECAST REINFORCED CONCRETE MANHOLE TO BE CAPABLE OF SUPPORTING H-20 LOADING

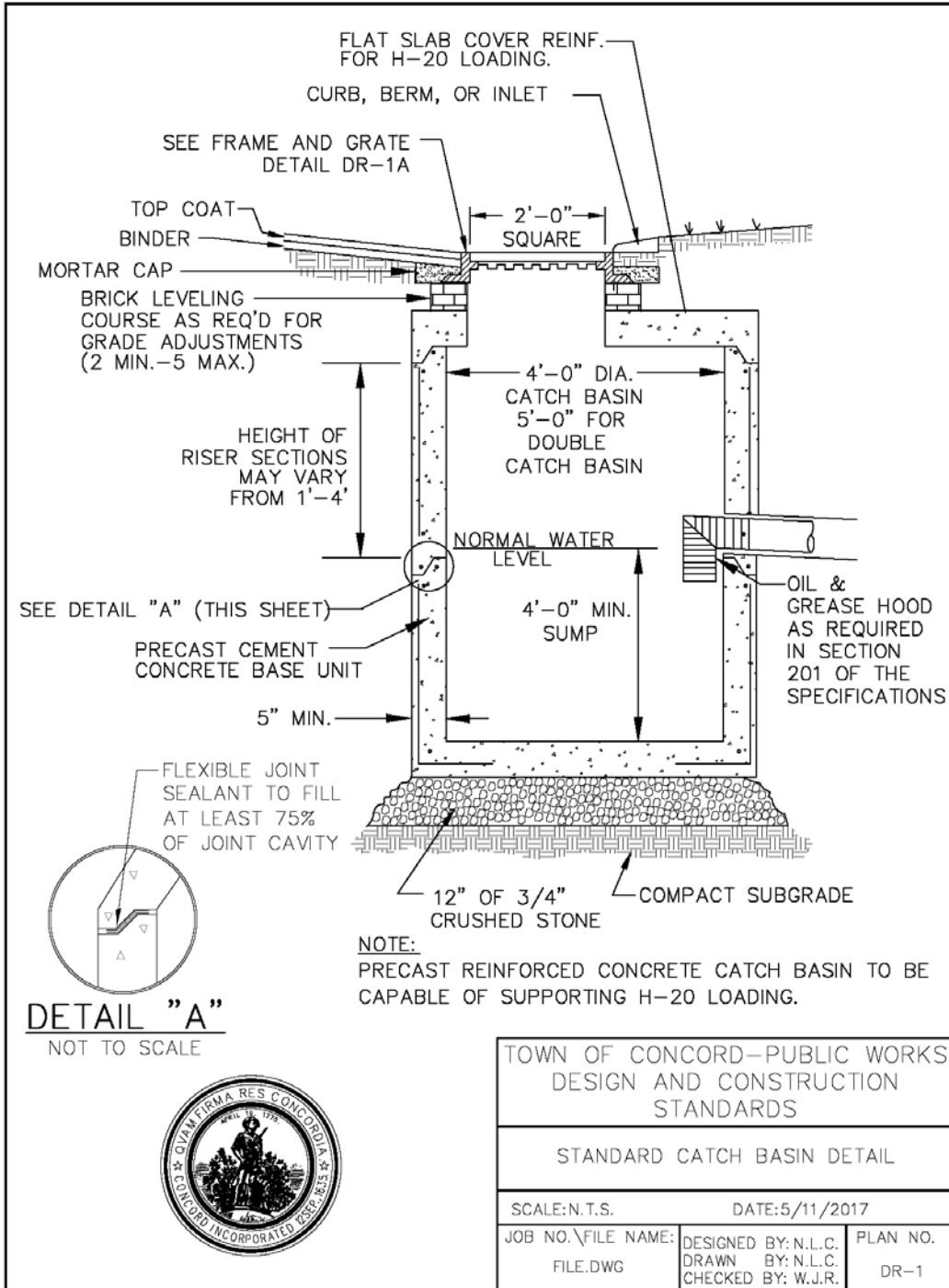


TOWN OF CONCORD—PUBLIC WORKS
 DESIGN AND CONSTRUCTION
 STANDARDS

STANDARD PRECAST DRAINAGE MANHOLE
 DETAIL

SCALE: N.T.S. DATE: 01/08/2015

JOB NO. \ FILE NAME:	DESIGNED BY: JCZ	PLAN NO.
FILE.DWG	DRAWN BY: JCZ	DR-5
	CHECKED BY: W.J.R.	



TOWN OF CONCORD—PUBLIC WORKS DESIGN AND CONSTRUCTION STANDARDS		
STANDARD CATCH BASIN DETAIL		
SCALE: N.T.S.		DATE: 5/11/2017
JOB NO. \ FILE NAME: FILE.DWG	DESIGNED BY: N.L.C. DRAWN BY: N.L.C. CHECKED BY: W.J.R.	PLAN NO. DR-1