



LONG-TERM OPERATION AND MAINTENANCE

PLAN Proposed Distribution Facility | 75 Plain Street |
Hopedale, MA

Proposed Distribution Facility
75 Plain Street
Hopedale, Massachusetts

Dated: August 25, 2021

Revised: January 14, 2022

I. OWNER:

75-101 Pearl Street, LLC
c/o GFI Partners, Inc.
133 Pearl Street, Suite 300
Boston, MA 02110

II. RESPONSIBLE PARTY:

75-101 Pearl Street, LLC
c/o GFI Partners, Inc.
133 Pearl Street, Suite 300
Boston, MA 02110

III. PROJECT OVERVIEW:

Prevention of offsite flooding and improvement to existing stormwater management are the main priorities of the project with respect to the drainage design. The project will improve existing stormwater management within the property with respect to what occurs today by installing Best Management Practices (BMPs) within the new stormwater collection system. Long-term water quality BMPs to mitigate the runoff generated by the site improvements include

underground detention/infiltration systems, sediment forebays, grassed swales, surface detention/infiltration basins, and periodic sweeping to remove sand and sediment from paved surfaces.

It is the intent of the stormwater management design to achieve an 80% Total Suspended Solids (TSS) removal efficiency and 44% TSS removal efficiency prior to discharge to infiltration BMPs as outlined in the DEP Stormwater Management Standards.

The BMPs used in this design were chosen for their effectiveness and ease of maintenance. Providing for maintenance requirements that are practical is essential to achieve the desired result of improved stormwater quality and peak flow attenuation. This plan will be provided to the Property Owner, Property Manager, and General Contractor to educate them on the recommendations of this plan and the DEP Stormwater Management Guidelines.



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IV. POST CONSTRUCTION - BEST MANAGEMENT PRACTICES:

a) NON-STRUCTURAL DRAINAGE BEST MANAGEMENT PRACTICES

Implementing source controls can aid in reducing the types and concentrations of contaminants in stormwater runoff. This principle for pollution prevention and non-structural controls, or BMPs, is to minimize the volume of runoff and to minimize contact of stormwater with potential pollutants. Measures such as street sweeping, managing snow removal, and educating the owner/operator of good maintenance practices are examples of non-structural BMPs.

i. PUBLIC AWARENESS

The responsible party shall issue periodic reminders to the building tenant to avoid dumping or releasing pollutants into storm drains, onto the ground, and into on-site wetland resource areas.

ii. STREET SWEEPING

Pavement sweeping is an integral part of the stormwater management plan as a fundamental component of source reduction efforts. Parking lot, loading and trailer storage area, driveway, and roadway sweeping activities shall begin around April 1. However, sweeping may be done after winter thaw and the onset of early spring. It is critical to remove the accumulated sediment in the parking areas from the winter months as soon as possible before spring precipitation.

Parking lot sweeping should be performed a minimum of two times annually (April 1 and September 1).

iii. SNOW AND SNOWMELT MANAGEMENT

All snow stockpiling and disposal activities shall be conducted in accordance with the Massachusetts DEP Bureau of Water Resources Snow Disposal Guidance Document dated December 11, 2020. Refer to the Layout and Materials Plans (sheets C301 through C306) of the Site Development Plans.

The removal contractor shall avoid stockpiling snow within surface detention/infiltration basins, wetland resource areas, and upland areas directly tributary to wetland resource

areas. The removal contractor shall also avoid stockpiled snow within the paved parking lots, driveways, and loading and trailer storage areas to allow normal vehicular maneuverability.

During significant snow fall event, six (6) inches or greater, accumulated snow shall be removed from the site by a snow removal contractor. It is the responsibility of the Owner and/or Responsible Party to ensure that the snow removal contractor utilizes previously approved stockpile areas as shown on the Site Development Plans. The owner shall remove sediment from snow storage areas every spring.

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No sodium-based de-icing compounds such as calcium chloride (CaCl_2), calcium magnesium acetate (CMA) or the like shall be used on site. The snow removal contractor shall store all sand off-site. No quantities of sand compounds shall be stored on site.

iv. PUBLIC SAFETY FEATURES

The project has been designed with consideration for public safety and does not require any specific features as part of the stormwater management system.

b) STRUCTURAL DRAINAGE BEST MANAGEMENT PRACTICES:

Structural BMPs are those physical facilities that are designed to manage both stormwater quantity and quality. Proper maintenance of the proposed structural BMPs will ensure design performance and promote longevity of the structure and may decrease operator maintenance costs.

i. UNDERGROUND DETENTION/INFILTRATION SYSTEMS

Five (5) underground detention system consisting of stone-embedded perforated corrugated metal pipe (CMP) networks are proposed to provide detention, infiltration, and water quality volume for proposed landscape, hardscape, pavement, and roof runoff for the development, and are located on the north and south sides of the proposed building, as shown on the Grading & Drainage Plans (sheets C401 through C406) as included in the Site Development Plans. All underground detention/infiltration systems are sized to mitigate peak runoff increases associated with the proposed project for all storm events up to and including the 100-year storm.

It is anticipated that maintenance of the detention/infiltration systems will be limited. Post construction, the systems shall be inspected twice per year, at the beginning of July and late October/ early November, to determine if any loss of capacity has occurred. The systems

shall also be inspected 24 hours after a rainstorm of over 2.5 inches in a 24-hour period to ensure that the systems are free of extraneous debris and fines and are draining adequately. If inspections indicate accumulation of sediment within the systems, cleaning shall be conducted through the inspection ports via vacuum truck. Removed materials shall be hauled off site and disposed of in compliance with all local, state, and federal guidelines.

ii. **GRASSED SWALE**

Grassed drainage swales are proposed along the northwest and west limits of pavement, along the main site driveway entrance, and down gradient of the parking areas at either end of the proposed building. The swales provide additional nutrient uptake for pavement

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runoff prior to discharging to downstream forebays, as well as reduce the need for underground drainage conveyance pipe.

The swales shall be inspected twice annually. The sides slopes and swale bottoms shall be checked for erosion, cracking, and undesirable vegetative growth (i.e. trees and invasive plant species). Accumulated sediment, organics, and trash shall be removed as observed. Mowing of side slopes and swale bottoms shall be done in conjunction with the site mowing schedule; clippings shall be removed from swales.

Disposal of accumulated sediment and trash is to be in accordance with applicable local, state, and federal guidelines and regulations.

iii. **DETENTION/INFILTRATION BASINS AND SEDIMENT FOREBAYS**

Seven (7) vegetated detention/ infiltration basins are proposed on site: one (1) located south of the main driveway entrance, one (1) located at the southeast corner of the proposed building, two (2) south of the southernmost trailer storage area, one (1) west of the westernmost trailer storage area, one (1) at the northernmost portion of the developed portion of the site, and one (1) in a landscaped island northwest of the proposed building. Three (3) of the basins are designed for full groundwater recharge of all runoff up to and including the 100-year storm event; the remainder are equipped with riprap spillways and/or outlet control structures to allow controlled downstream discharge of overflow runoff toward on-site wetland resource areas. Six (6) of these detention/infiltration basins are equipped with dual forebays arranged in series, which provide water quality pre-treatment of surface runoff from proposed paved areas. One of the underground detention/infiltration systems receiving overland runoff from driveway and loading/ trailer storage areas is also equipped with dual pre-treatment forebays upstream.

Each sediment forebay shall be inspected monthly, and cleaning shall be done on a

quarterly basis. Check for erosion and cracking on side slopes and at spillways. Check for undesirable vegetative growth (i.e. trees) and differential settlement on side slopes and forebay floors. The stone aprons up gradient of each forebay shall be checked for clogging and wash-out and cleaned and re-stabilized as conditions warrant. Mowing of side slopes and forebay floor shall be performed in conjunction with overall site mowing schedule; clippings shall be removed from forebays.

Each detention/infiltration basin shall be inspected twice a year at minimum and cleaned as needed. Check for erosion and cracking on side slopes. Check for undesirable vegetative growth (i.e., trees) and differential settlement on side slopes and basin floors. Confirm spillways are clear of trash, sediment, debris, organics, or other obstructions. Clogged surfaces shall be broken up by way of deep tilling and re-vegetated immediately. Light machinery shall be used for all maintenance to avoid compaction of underlying soil. Mowing shall be performed in conjunction with overall site mowing schedule; clippings shall be removed from all basins.

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Disposal of accumulated sediment and trash is to be in accordance with applicable local, state, and federal guidelines and regulations.

c) SITE FURNISHINGS BEST MANAGEMENT PRACTICES:

Site furnishings, as they pertain to this Operation and Maintenance Plan, comprise driveways and parking lots; walkways and stairs; fences, walls, and guardrails; landscape areas; and solid waste management facilities.

i. DRIVEWAYS AND PARKING LOTS

All driveways, parking lots, truck court areas, and emergency access ways shall be inspected twice annually (early Spring and Fall) to assess damage, cracking, differential settlement, and fading of pavement markings. Deteriorated asphalt and damaged curbs, berms, and signage shall be repaired as needed based on observation. Faded striping shall be re-painted in kind as needed.

Landscape vegetation around the perimeter of the driveway, parking, loading, and trailer storage areas shall be inspected for overgrowth twice annually (early Spring and Summer) and pruned as needed based on inspection.

ii. WALKWAYS AND STAIRS

All concrete walkways, stairs, landings, pads, driveways, and patios shall be inspected annually for spalling, cracking, and heaving. Cracked or spalled concrete shall be patched and repaired with cement or grout as needed based on inspection. In the case of

widespread structural damage to concrete surfaces, slabs shall be demolished and reconstructed in kind and sub-base shall be inspected for settlement or heaving and corrected and/or re compacted as needed.

Galvanized handrails at concrete stair locations shall be inspected annually. Structurally compromised handrails shall be replaced in kind immediately upon observation. If rust accumulation is observed, it shall be sanded off manually, and handrail surfaces shall be smoothed and re-painted to prevent further deterioration.

iii. FENCES, WALLS, GUARDRAILS, AND GUARD HOUSES

All chain link fences, segmental block retaining walls, galvanized steel pipe bollards, and guardrails shall be inspected annually.

Chain link fences shall be repaired of damaged mesh, rails, and hardware immediately upon observation. Accumulated debris, leaf litter, and trash shall be removed from edge of fence immediately upon observation.

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Segmental block retaining walls shall be inspected for damage, subsidence, and settlement of adjacent surfaces. Any such observed defects shall be repaired immediately. The Responsible Party shall monitor repairs on a weekly basis once established to ensure integrity of corrective action and coordinate follow-up action immediately upon observation of resurgence of defects, if applicable.

Bollards adjacent to pad-mounted utility equipment and loading doors (where present) shall be inspected for damage and rust. In the event of damage, pipes and concrete bases shall be replaced in kind immediately. In the event of rust, affected areas shall be smoothed manually and pipes shall be re-painted with emergency yellow paint to prevent further deterioration.

Guardrails shall be inspected for rail and post damage and dislodgement, rot, and defacing. Any timber members observed to be structurally damaged or rotted shall be replaced in kind immediately upon observation.

Modular guard houses shall be inspected and maintained according to manufacturer's recommendations.

iv. LANDSCAPE AREAS

Spring clean-up shall be conducted twice annually in the months of March and April. Spring clean-up comprises removal of winter wraps from trees, lawn raking/ leaf blowing, weeding, and fertilization as needed. Landscape edges shall also be inspected and

re-established as needed during Spring clean-up activities.

Mulch areas shall be inspected once annually during the month of April. New mulch shall be added to planting beds as needed and washed-out mulch shall be removed from adjacent areas. Subgrade in washout areas shall be checked for erosion and re-graded as needed prior to replacement of mulch. Pre-emergent weed control shall be applied to planting beds concurrently with inspection activities.

Shrub and tree planting fertilization activities shall be limited to twice annually between April 15 and October 15 as needed. Fertilizer use shall be minimized to the extent practicable and shall never be applied before a heavy rainfall event, on frozen ground, or within vegetated stormwater management BMPs (i.e., forebays, grassed swales, and detention/infiltration basins). Insect and disease sprays shall be used as needed on shrub and tree plantings throughout the Summer and never during frozen ground conditions or before heavy rainfall events.

The irrigation system shall operate between April and October. The irrigation shall be winterized in advance of cold-weather months to prevent freeze damage.

Mowing shall be conducted as necessary between the months of May and October. Lawn clippings shall be removed from vegetated stormwater management BMPs prior to next

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rainfall. Shrub and ornamental tree pruning shall be conducted twice annually during the months of July and August. Structural tree pruning shall be conducted twice annually during the months of August and September.

Turf aeration and overseeding shall be conducted once annually in the month of October. Aeration equipment shall be utilized to relieve soil compaction and allow oxygenation of roots. Aerated turf shall subsequently be overseeded.

Fall cleanup shall be conducted twice annually during the months of October and November. Fall cleanup activities comprise application of winter wraps to trees, raking/leaf blowing lawn areas, and weeding. Lawn fertilization, if conducted during fall cleanup, shall not occur after October 15. Lime application treatment for lawn areas shall be conducted once annually in the month of November.

v. SOLID WASTE MANAGEMENT

Dumpster enclosures shall be inspected weekly for damage, rust, leaks, and loose hardware. Any such defects shall be repaired immediately upon observation.

Concrete dumpster and compactor pads shall be inspected quarterly. Staining and accumulated spillage shall be managed by manual removal/sweeping and power washing.

Power washing runoff shall be directed toward sediment forebays.

The site perimeter and on-site bordering vegetated wetlands shall be inspected monthly for wind-blown trash and debris. Such trash and debris shall be hand collected and disposed of in the on-site dumpster containers.

V. SPILL PREVENTION PLAN (ADDED 1/14/22)

Landscape maintenance and parking and loading operations which occur on site necessitate the use of various materials and must be considered in the spill prevention and response practices. The following is a summary of pollutants and the respective property use and maintenance activities generating each:

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)	Location on Site
Landscaping Maintenance Operations	Gasoline (from lawnmowers), fertilizers	Lawn and landscape areas throughout site
Parking and Loading Operations	Hydraulic oil/fluid, Antifreeze, diesel/gasoline (all from automobiles)	Driveway, parking, and loading areas throughout site

The Owner/Responsible Party shall be responsible for coordinating necessary containment and cleanup efforts in the event of a spill at any location on the Campus. Should a spill occur, equipment necessary to attend to spills or leaks shall be stored on site in a designated storage area within the building and shall consist, at minimum, of the following:

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- Safety goggles.
- Chemically resistant gloves and overshoe boots.
- Water and chemical fire extinguishers.
- Shovels.
- Absorbent materials.
- Proprietary compact spill containment berms.
- Containers suitable for storage of site-specific materials.
- First aid kits.

Spills and leaks shall be treated according to the type, volume, and location of the released material. Generally, mitigation shall consist of the following:

- Prevention of additional material storage.
- Containment of spilled material.
- Safe, thorough, and environmentally sound removal of spilled material. •

Remediation of environmental damage.

The following describes specific preventative methods to be employed for materials to be used on site.

SPILLS FROM VEHICLES ACCESSING PARKING AND LOADING AREA

Spills due to vehicular operations are not anticipated on pervious surfaces. In the case of a spill in the driveway, parking or loading areas, the spill shall be contained using spill berms and/or adhesive drain seals at all vulnerable trench drain grate inlets; or gravel areas to prevent entering the drainage system, and the spill shall then be treated with absorbent material.

SPILLS FROM LANDSCAPE AND LAWN MAINTENANCE EQUIPMENT

In the case of a spill on a pervious surface, the spill shall be contained and treated with absorbent polymer material immediately and the affected soil, mulch, and/or planted vegetation shall be excavated and stored in a proprietary spill containment berm (by Ultratech or the like) for removal by a professional hazardous material removal company.

Town of Hopedale Emergency Contacts are as follows:

- Emergency Management: (888) 304-1133 (MassDEP 24-Hour Spill Reporting) •
- Police Department: 911
- Fire Department: (508) 473-1050

For spills of less than five (5) gallons of material, mitigation shall consist of source control, containment and clean-up with absorbent materials, unless an imminent hazard necessitates



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that a local professional hazardous material removal company become involved to mitigate the spill.

For spills greater than five (5) gallons of material, the incident shall be reported immediately to the MassDEP Hazardous Waste Incident Response Group at (617) 792-7653 and a professional emergency response contractor (ERC). Information that shall be provided to the said ERC is as follows:

- Type of material spilled.
- Quantity of material spilled.

- Location of the spill.
- Time of the spill.

The Owner/Responsible Party shall then employ measures to prevent further spillage, contain and/or clean up the spill.

If a Reportable Quantity (RQ) of material is spilled during site maintenance and access activities, the National Response Center (NRC) shall be notified immediately at (800) 424-8802. Reportable Quantities of hazardous material are available in 310 CMR 40: Massachusetts Contingency Plan Subpart P: Massachusetts Oil and Hazardous Material List. Within 14 days a report shall be submitted to the EPA New England Regional Office describing the following:

- Type of material released.
- Date and circumstances of the release.
- Measures taken to prevent future releases.

END



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SPILL PREVENTION AND

COUNTERMEASURES PLAN Equipment

Material Inspection List

Q1 END

Inspector Signature

END OF Q4

Inspector Signature

Safety Goggles

Chemically Resistant Gloves

Chemically Resistant Overshoe

Boots Water & Chemical Fire

Extinguishers Shovels

Absorbent Materials

Proprietary Compact Spill
Containment Berms

Containers Suitable for Storage
of Site-Specific Material

First Aid Kits

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