COPY

OPERATION AND MAINTENANCE PROGRAM
for
A PROPOSED STORMWATER MANAGEMENT SYSTEM
located at
44 ESTABROOK AVENUE
GRAFTON, MASSACHUSETTS

Prepared for:

BlueWave Capital, LLC
75 Arlington Street
Boston, Massachusetts 02116

Prepared by:

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June 12, 2018
August 17, 2018

EXHIBIT 20

Project Name: Knowlton Farms Solar Development (Phase 3)
44 Estabrook Avenue
Grafton, Ma 01519

Owner Name: Patricia K. Knowlton, Trustee - Knowlton Farms Nominee Trust
44 Estabrook Avenue
Grafton, Ma 01519

Party Responsible for Maintenance During Construction:
BlueWave Capital, LLC
75 Arlington Street
Boston, Massachusetts 02116

Party Responsible for Maintenance After Construction:
BlueWave Capital, LLC
75 Arlington Street
Boston, Massachusetts 02116

Erosion and Sedimentation Control Measures during Construction Activities

Strawbales

Staked strawbales will be installed upgradient of the resource areas as depicted on the Erosion & Sediment Control Plan. The strawbales shall be installed prior to the commencement of any work on-site and in accordance with the design plans. An additional supply of strawbales shall be on-site to replace and/or repair any strawbales that have been disturbed or are in poor condition. The line of strawbales shall be inspected and maintained on a weekly basis and after every major storm event (2-year or greater) during construction. No construction activities are to occur beyond the strawbale line at any time. Deposited sediments shall be removed when the volume of the deposition reaches approximately one-half the height of the hay bale.

Water Quality Swales with Checkdams

The Water Quality Swales shall be checked weekly and after major storm events during construction for rilling, erosion, and debris removal. Avoid compaction of the parent material by working from the edge of the areas proposed as the locations of the Water Quality Swales. Debris and sediment accumulated at the checkdams is to be removed.

Sedimentation Basins

The Sedimentation Basin shall be checked weekly and after major storm events during construction for rilling, erosion, and debris removal. Avoid compaction of the parent material by working from the edge of the areas proposed as the locations of the Sedimentation Basins.

Temporary Diversion Swales

Swales shall be checked weekly and after every major storm event during construction for rilling, gullying, erosion and debris removal.

Gravel Access Drive & Temporary Construction Parking Areas

The gravel access drive and temporary construction parking areas shall be inspected weekly. The access drive should be inspected for ruts, channelized drainage, gullying and sedimentation. Repairs to the drive and parking areas shall be made with new clean stone, and shall be compacted into place. Large ruts may be filled with larger stone and set in place with dense grade material, then overlain by new crushed stone.

Stockpiles

All unused debris, soil, and other material shall be stockpiled in locations of relatively flat grades, away from any trees identified to be saved and upgradient of the strawbales. Stockpile side slopes shall not be greater than 2:1. All stockpiles shall be surrounded by a row of strawbales, and shall be placed outside the 100 foot buffer to any bordering vegetated wetland. Surrounding strawbales shall be inspected and maintained on a daily basis.

Surface Stabilization

Once the forested areas have been cleared and grubbed, the entire area will be tilled following the installation of the array; areas of exposed soils, will be seeded with a seed mixture of orchard grass and tall fescue. This seed mix contains a variety of tall-growing, low-maintenance fescues and grass that will stabilize the ground surface.

Construction Tracking Pad

Construction tracking pads shall be installed at the designated entrances/exits to the site at Cape Road and on both sides of the wetland crossing, as shown on the Erosion & Sediment Control plans to reduce the amount of sediment transported off site. The construction tracking pads shall be inspected weekly.

Removal of Sediment and Erosion Controls

At the completion of construction activities and after receiving approval from the Town of Grafton, all physical sediment and erosion controls shall be removed from the site. The areas where the controls have been removed shall be seeded and stabilized immediately upon removal.

Long-Term Inspection and Maintenance Measures after Construction

Erosion Control

Eroded sediments can adversely affect the performance of the stormwater management system. Eroding or barren areas should be immediately re-vegetated.

Gravel Access Drive

The gravel access drive shall be inspected bi-annually and after every major storm event for ruts, channelized drainage, gullying and sedimentation. Repairs to the drive shall be made with new clean stone, and shall be compacted into place. Large ruts may be filled with larger stone and set in place with dense grade material, then overlain by new crushed stone.

Water Quality Swales with Checkdams

The Sedimentation Basin shall be checked bi-annually and after every major storm event for rilling, gullying, erosions and debris removal. Maintenance mowing shall occur at a minimum of twice per year.

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Debris and Litter Removal

Trash may collect in the BMP's, potentially causing clogging of the facilities. All debris and litter shall be removed when necessary, and after each storm event. Sediment and debris collected from vacuuming and/or sweeping should be disposed of at a permitted waste disposal facility. Avoid disposing of this material on site, where it could be washed into the proposed detention basin.

Grass Mowing

Grass shall be inspected annually and maintenance mowing shall occur as needed. All lawn mowing to take place will be done with a mulch mower so grass clippings will not be an issue.

Good Housekeeping Practices (in accordance with Standard 10 of the Stormwater Management Handbook to prevent illicit discharges)

Provisions for storing paints, cleaners, automotive waste and other potentially hazardous household waste products inside or under cover

- All materials on site will be stored inside in a neat, orderly, manner in their appropriate containers with the original manufacturer's label.
- Only store enough material necessary. Whenever possible, all of a product shall be used up before disposing of container.
- Manufacturer, local, and State recommendations for proper use and disposal shall be followed.

Vehicle washing controls

- A commercial car wash shall be used when possible. Car washes treat and/or recycle water.
- Cars shall be washed on gravel, grass, or other permeable surfaces to allow filtration to occur.
- Use biodegradable soaps.
- A water hose with a nozzle that automatically turns off when left unattended.

Requirements for routine inspection and maintenance of stormwater BMPs

See Inspection and Maintenance Measures after Construction.

Spill prevention and response plans

Spill Control Practices shall be in conformance with the guidelines set forth in the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SWPPP)

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

- Grass shall not be cut shorter than 2 to 3 inches and mulch clipping should be left on lawn as a natural fertilizer.
- Use low volume water approaches such as drip-type or sprinkler systems. Water plants only when needed to enhance root growth and avoid runoff problems.
- The use of mulch shall be utilized where possible. Mulch helps retain water and prevents erosion.

Requirements for storage and use of fertilizers, herbicides and pesticides

- Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.
- Do not fertilize before a rainstorm.
- Consider using organic fertilizers. They release nutrients more slowly.
- Pesticides shall be applied on lawns and gardens only when necessary and applied only in the minimum amounts recommended by the manufacturer.

Pet waste management

- Scoop up and seal pet wastes in a plastic bag. Dispose of properly, in the garbage.

Provisions for operation and management of septic systems

Not Applicable

Provisions for solid waste management

- All solid waste shall be disposed of or recycled in accordance with local town regulations.

Snow disposal and plowing plans relative to Resource Area

- Snow shall be plowed and stored on gravel, grass, or other permeable surfaces to allow filtration to occur.
- Once snow melts all sand salt and debris shall be extracted from surface and properly disposed of.
- Snow shall not be disposed of in any resource area or waterbody.
- Avoid disposing snow on top of storm drain catchbasins or stormwater drainage swale.

Winter Road Salt and/or Sand use and storage restrictions

- Salt storage piles should be located outside the 100-year buffer zone and shall be covered at all times.
- The amount of road salt applied should be regulated to prevent over salting of roadways and increasing runoff concentrations. Alternative materials, such as sand or gravel, should be used in especially sensitive areas.

Roadway and Parking Lot sweeping schedule

- Pavement sweeping shall be conducted at a frequency of not less than once per year.
- Removal of any accumulated sand, grit, and debris from driveway after the snow melts shall be completed shortly after snow melts for the season.

Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL

Not Applicable

Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan

To be determined by the owner.

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

To be determined by the owner.

STORMWATER MANAGEMENT
CONSTRUCTION PHASE

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 44 Estabrook Avenue, Grafton, Massachusetts **WEATHER:** _____

Inspection Date	***Inspector***	***Area Inspected***	***Required Inspection Frequency if BMP***	***Comments***	***Recommendation***	***Follow-up Inspection Required (yes/no)***
		Strawbales	*Weekly and After Major Storm Events*			
		Construction Tracking Pads	*Weekly and After Major Storm Events*			
		Gravel Access Drive and Temporary Parking Areas	*Weekly and After Major Storm Events*			
		Water Quality Swales	*Weekly and After Major Storm Events*			
		Sedimentation Basin	*Weekly and After Major Storm Events*			
		Temporary Diversion Swales	*Weekly and After Major Storm Events*			

(1) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.

(2) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)

Stormwater Control Manager: _____

STORMWATER MANAGEMENT
AFTER CONSTRUCTION

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 44 Estabrook Avenue, Grafton, Massachusetts **WEATHER:**_____

Inspection Date	***Inspector***	***Area Inspected***	***Required Inspection Frequency if BMP***	***Comments***	***Recommendation***	***Follow-up Inspection Required (yes/no)***
		Sedimentation Basin	*Bi-annually and After Major Storm Event*			
		Gravel Access Drive	*Bi-annually and After Major Storm Event*			
		Water Quality Swales	*Bi-annually and After Major Storm Event*			

(1) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.

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Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)
Stormwater Control Manager: _____