

Construction Period Operation & Maintenance Plan

Construction Period Stormwater
Operation & Maintenance Plan

Site Redevelopment

47 Spy Pond Lane (Lot 1/A), Arlington, MA

Erosion and Sedimentation will be controlled at the site by utilizing Structural Practices, Stabilization Practices, and Dust Control. These practices correspond with site plans submitted for the 47 Spy Pond Lane (Lot 1/A) project.

Responsible Party

Seaver Construction, Inc.
215 Lexington Street
Woburn, MA 01801

City of Arlington Emergency Contact Information

Conservation Administrator

Town Hall
730 Massachusetts Avenue
Arlington, MA
(781) 316 3012

Project Summary

The project involves the construction of a new home, driveway, landscaping and utilities. Additionally, mitigation is provided through the installation of a Vortech unit within the Town roadway. A wetland resource area, ie Spy Pond, at the rear of the property requires diligence in ensuring that disturbance to the site does not cause erosion or detriment to the resource area. At the outset of the project, erosion controls shall be installed and maintained throughout the duration of the proposed work as follows.

Erosion & Sedimentation Control Practices

- 1) **Silt Sock Erosion Control Barrier** – A Filter Mitt erosion control barrier, backed by an entrenched row of siltation control fencing, will be installed along downward slopes at the limit of work shown on the site plans. This control will be installed prior to soil disturbance on the site. The sediment fence should be installed as shown on the Site Plans.

Filter Mitt Inspection/Maintenance *

- a) Erosion control should be inspected immediately after each rainfall event of 1-inch or greater, and at least daily during prolonged rainfall. Inspect the depth of sediment, fabric tears, if the silt sock is securely attached to the ground, and to see that the stakes are firmly in the ground. Repair or replace as necessary.
- b) Remove sediment deposits promptly after storm events to provide adequate storage volume for the next rain and to reduce pressure on the sock. Sediment will be removed from behind the sock when it becomes about 3 inches deep at the fence. Take care to avoid undermining sock during cleanout.

- c) Remove all materials after the contributing drainage area has been properly stabilized. Sediment deposits remaining after the fabric has been removed should be graded to conform with the existing topography and vegetated.
- 2) **Stabilized Construction Entrance** – A stabilized construction entrance shall be placed at the location of the proposed driveway, or at the location specified on the site plans. The stabilized entrance shall be installed immediately following the removal of the existing bituminous concrete driveway. The entrance will keep mud and sediment from being tracked onto Spy Pond Lane by vehicles leaving the site. This stabilized entrance shall be 15 feet long and as wide as the proposed drive.

Construction Entrance Design/Construction Requirements *

- a) Stone for a stabilized construction entrance shall consist of 1 to 3-inch stone placed on a stable foundation.
- b) Pad dimensions: The minimum length of the gravel pad should be 15 feet. The pad should extend the full width of the proposed driveway, or wide enough so that the largest construction vehicle will fit in the entrance with room to spare; whichever is greater. If a large amount of traffic is expected at the entrance, then the stabilized construction entrance should be wide enough to fit two vehicles across with room to spare.
- c) A geotextile filter fabric shall be placed between the stone fill and the earth surface below the pad to reduce the migration of soil particles from the underlying soil into the stone and vice versa. The filter fabric should be Amoco woven polypropylene 1198 or equivalent.

Construction Entrance Inspection/Maintenance *

- a) The entrance should be maintained in a condition that will prevent tracking or flowing of sediment onto Spy Pond Lane. This may require periodic topdressing with additional stone.
- b) The construction entrance and sediment disposal area shall be inspected weekly and after heavy rains or heavy use.
- c) Mud and sediment tracked or washed onto public road shall be immediately removed by sweeping.
- d) If washing facilities are used, the sediment traps should be cleaned out as often as necessary to assure that adequate trapping efficiency and storage volume is available.
- e) The pad shall be reshaped as needed for drainage and runoff control.
- f) All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization is achieved or after the temporary practices are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil areas resulting from removal shall be permanently stabilized.

- 3) **Temporary Seeding** – Temporary seeding will allow a short-term vegetative cover on disturbed site areas that may be in danger of erosion. Temporary seeding will be done at stock piles and disturbed portions of the site where construction activity will temporarily cease for at least 21 days. The temporary seedings will stabilize cleared and unvegetated areas that will not be brought into final grade for several weeks or months.

Temporary Seeding Planting Procedures *

- a) Planting should preferably be done between April 1st and June 30th, and September 1st through September 31st. If planting is done in the months of July and August, irrigation may be required. If planting is done between October 1st and March 31st, mulching should be applied immediately after planting. If seeding is done during the summer months, irrigation of some sort will probably be necessary.
- b) Before seeding, install structural practice controls. Utilize Amoco supergro or equivalent.
- c) The seedbed should be firm with a fairly fine surface. Perform all cultural operations across or at right angles to the slope. A minimum of 2 to 4-inches of tilled topsoil is required. The topsoil must have a sandy loam to silt loam texture with 15% to 20% organic content.
- d) Apply uniformly 2 tons of ground limestone per acre (100 lbs. Per 1,000 sq.ft.) or according to soil test. Apply uniformly 10-10-10 analysis fertilizer at the rate of 400 lbs. per acre (14 lbs. per 1,000 sq.ft.) or as indicated by soil test. Forty percent of the nitrogen should be in organic form. Work in lime and fertilizer to a depth of 4-inches using any suitable equipment.
- e) Select the appropriate seed species for temporary cover from the following table.

Species	Seeding Rate (lbs/1,000 sq.ft.)	Seeding Rate (lbs/acre)	Recommended Seeding Dates	Seed Cover required
Annual Ryegrass	1	40	April 1 st to June 1 st August 15 th to Sept. 15 th	¼ inch
Foxtail Millet	0.7	30	May 1 st to June 30 th	½ to ¾ inch
Oats	2	80	April 1 st to July 1 st August 15 th to Sept. 15 th	1 to 1-½ inch
Winter Rye	3	120	August 15 th to Oct. 15 th	1 to 1-½ inch

Apply the seed uniformly by hydroseeding, broadcasting, or by hand.

- f) Use an effective mulch, such as clean grain straw; tacked and/or tied with netting to protect seedbed and encourage plant growth.

Temporary Seeding Inspection/Maintenance *

- a) Inspect within 6 weeks of planting to see if stands are adequate. Check for damage within 24 hours of the end to a heavy rainfall, defined as a 2-year storm event (i.e., 3.2 inches of rainfall within a twenty-four hour period). Stands should be uniform and dense. Fertilize, reseed, and mulch damaged and sparse areas immediately. Tack or tie down mulch as necessary.
 - b) Seeds should be supplied with adequate moisture. Furnish water as needed, especially in abnormally hot or dry weather. Water application rates should be controlled to prevent runoff.
- 4) **Dust Control** - Dust control will be utilized throughout the entire construction process of the site. For example, keeping disturbed surfaces moist during windy periods will be an effective control measure. The use of dust control will prevent the movement of soil to offsite areas. However, care must be taken to not create runoff from excessive use of water to control dust. The following are methods of Dust Control that may be used on-site:
- Vegetative Cover – The most practical method for disturbed areas not subject to traffic.
 - Sprinkling – The site may be sprinkled until the surface is wet. Sprinkling will be effective for dust control on haul roads and other traffic routes.
 - Stone – Stone will be used to stabilize construction entrances; will also be effective for dust control.
- 5) **Material Stockpiling** – Material stockpiles shall be located as far from Wetland Resource Areas as possible and shall never be located within the 100-foot buffer zone as shown on the approved site plans. The preferred location for all stockpiles is at the front of the project locus between the house and Spy Pond Lane.
- 6) **Cleaning of Vortechincs Unit:** During construction, the contractor is responsible for maintaining silt sacks within the drainage area contributing to the newly installed Vortechincs Unit. The Vortechincs unit will be vacuumed prior to the issuance of a Certificate of Compliance, at which time maintenance responsibilities for the unit will be delegated to the Arlington Department of Public Works.

Post-Construction Stormwater
Operation & Maintenance Plan

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47 Spy Pond Land (Lot 1/A), Arlington, MA

Best Management Practices (BMPs) pursuant to the MA DEP Wetlands Protection Act, Arlington Wetlands Protection Bylaw and accepted design practice have been implemented and utilized for the project. The following information provided is to be used as a guideline for monitoring and maintaining the performance of the drainage facilities constructed as part of the site development. The structural Best Management Practices (BMPs) shall be inspected during rainfall conditions during the first year of operation to verify functionality.

Responsible Party

Homeowner

Town of Arlington Contact Information

Conservation Administrator

Town Hall

730 Massachusetts Avenue
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(781) 316 3012

Maintenance:

1. **Infiltration Systems** – Subsurface infiltration systems shall be inspected twice per year to verify that sediment is not being discharged into the system and that the system is functioning properly. If sediment depth within the system exceeds three inches, an experienced contractor or designer shall be contacted to consult on methods to clean and remediate the system. Furthermore, at least once per year, the system shall be inspected immediately following a heavy rainfall to ensure that the system drains within 72 hours of the end of said storm. If, after 72 hours, the system is still retaining water, the homeowner shall contact a licensed professional civil engineer to determine a method for remediating the system failure.
2. **Crushed Stone Infiltration Trench** – The crushed stone infiltration trench at the edge of the driveway shall be cleaned of debris during regular landscape maintenance. A standard leaf blower can be used to remove debris from the stone surface. If the trench fails to drain after rainfall, the stone shall be removed, washed, and placed back in the trench after the bottom is scarified.
3. **Pesticides, Herbicides and Fertilizers:** - Pesticides and herbicides shall not be used on the property. In addition, fertilizers that are used on the property shall be utilized sparingly and should be restricted to the use of organic fertilizers only
4. **Vortechnics Unit:** Maintenance of the unit will be done by the Town of Arlington, Department of Public Works. The unit will be inspected at least twice a year, and vacuumed as necessary to ensure full function of the unit.

Storage and Disposal of Household Waste and Toxics:

This management measure involves educating the general public on the management considerations for hazardous materials. Failure to properly store hazardous materials dramatically increases the probability that they will end up in local waterways. Many people have hazardous chemicals stored throughout their homes, especially in garages and storage sheds. Practices such as covering hazardous materials or even storing them properly, can have

dramatic impacts. Property owners are encouraged to support the household hazardous product collection events sponsored by the Town of Arlington.

MADEP has prepared several materials for homeowners on how to properly use and dispose of household hazardous materials:

<http://www.mass.gov/dep/recycle/reduce/househol.htm>

For consumer questions on household hazardous waste call the following number:

DEP Household Hazardous Waste Hotline

800-343-3420

Vehicle Washing:

This management measure involves educating the general public on the water quality impacts of the outdoor washing of automobiles and how to avoid allowing polluted runoff to enter the storm drain system. Outdoor car washing has the potential to result in high loads of nutrients, metals, and hydrocarbons during dry weather conditions in many watersheds, as the detergent-rich water used to wash the grime off our cars flows down the street and into the storm drain. The following management practices will be encouraged:

- Washing cars on gravel, grass, or other permeable surfaces.
- Blocking off the storm drain during car washing and redirecting wash water onto grass or landscaping to provide filtration.
- Using hoses with nozzles that automatically turn off when left unattended.
- Using only biodegradable soaps.
- Minimize the amounts of soap and water used. Wash cars less frequently.
- Promote use of commercial car wash services.

Landscape Maintenance:

This management measure seeks to control the storm water impacts of landscaping and lawn care practices through education and outreach on methods that reduce nutrient loadings and the amount of storm water runoff generated from lawns. Nutrient loads generated by fertilizer use on suburban lawns can be significant, and recent research has shown that lawns produce more surface runoff than previously thought.

Using proper landscaping techniques can effectively increase the value of a property while benefiting the environment. These practices can benefit the environment by reducing water use; decreasing energy use (because less water pumping and treatment is required); minimizing runoff of storm and irrigation water that transports soils, fertilizers, and pesticides; and creating additional habitat for plants and wildlife. The following lawn and landscaping management practices will be encouraged:

- Mow lawns at the highest recommended height.
- Minimize lawn size and maintain existing native vegetation.

- Collect rainwater for landscaping/gardening needs (rain barrels and cisterns to capture roof runoff).
- Raise public awareness for promoting the water efficient maintenance practices by informing users of water efficient irrigation techniques and other innovative approaches to water conservation.
- Abide by water restrictions and other conservation measures implemented by the Town of Arlington.
- Water only when necessary.
- Use automatic irrigation systems to reduce water use.