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Construction Period Pollution Prevention & Erosion and Sedimentation Control Plan

Site Plan
Downey Street
New Bedford, MA 02746

May 20, 2014

Owner:

City of New Bedford, Airport Commission
131 William Street
New Bedford, MA 02740

Prepared For:

Claremont Companies
1 Lakeside Center
Bridgewater, MA 02324

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Project No. 13-894

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1.0 Introduction

1.1 Introduction

The subject property associated with this project is located on the northerly side of Downey Street in New Bedford, MA. This property is part of the New Bedford Regional Airport site. The parcel is situated in the Mixed Use Business District. The project site currently consists of mostly paved area that has been utilized a parking area used by the airport facility. The Soils underlying the upland portions of the site consist of excessively drained Udorthents, smoothed, 0% to 15% slopes. Soil information was taken from United States Department of Agriculture, Soil Conservation Service, 1989, Interim Soil Survey of Bristol County, Massachusetts.

A portion of the site falls within the 100 foot buffer zone of a Bordering Vegetated Wetland (BVW). The BVW is located on the south side of Downey Street, across the street from the proposed development.

The project consists of the construction of a 120' x 100' airplane hangar building along with an associated 12 space bituminous concrete parking area, utilities, landscaping and stormwater management.

All contractors working on the project will be responsible for stormwater management from construction activities that are contractually their responsibility, and must ensure that their activities are not compromising another contractor's stormwater controls or Best Management Practices (BMPs).

The purpose of storm water management is to prevent erosion both on the construction site itself and on adjacent undisturbed areas, and to prevent sedimentation through both stabilization and structural control practices. Storm water management also addresses pollution prevention using measures to reduce pollutants in storm water as well as using good housekeeping practices on the construction site.

The purpose of this plan is to establish requirements and instruction for the management of construction related storm water discharges. These requirements have been established to comply with applicable federal, state and local laws, regulations and standards. Best Management Practices (BMPs) are one of the major issues addressed and they will be incorporated in order to mitigate for potential pollutants, sediments and storm water peak flows, and to dissipate storm water velocities.

2.0 Coordinator and Duties

The construction site coordinator for the facility is the General Contractor. His duties include the following:

- Implementation of this plan;
- Oversee maintenance practices identified as BMPs;
- Conduct or provide for inspection and monitoring activities;

- Identify other potential pollutant sources and make sure they are added to the plan;
- Identify any deficiencies and make sure they are corrected;
- Ensure that any changes in construction plans are addressed.

3.0 Project Description

3.1 Description of Proposed Work

The project consists of the construction of a 120' x 100' airplane hangar building along with an associated 12 space bituminous concrete parking area, utilities, landscaping and stormwater management. Stormwater associated with the development will be controlled through a series of deep sump catch basins and a water quality inlet that ultimately ties into the existing city drainage system.

3.2 Sequence of Construction Activities

The contractor shall ensure specified erosion and sedimentation controls are in place and functional prior to commencement of anticipated work associated with construction as shown on the approved plans. Similar erosion and sedimentation control measures shall be deployed prior to commencement of all incidental and unanticipated tasks to complete the work.

Minimum erosion and sedimentation control standards for the work shall be as outlined in the Massachusetts Erosion and Sedimentation Control Guidelines for urban and suburban areas, this document, and the approved Site Plans.

At a minimum, the contractor's construction schedule shall meet the following constraints and other measures listed in this document:

1. Install erosion control measures prior to earth disturbance.
2. Clear and grub to the limits of work of work proposed on this plan as required for construction.
3. Construct drainage facilities, temporary sediment traps, and temporary swales as soon as possible in the construction sequence.
4. Excavate for building foundation.
5. Install foundation and construct building.
6. Maintain erosion controls as needed.
7. When all exposed surfaces are stabilized, the drainage system components shall be cleaned of accumulated sediment. Erosion Control Measures shall be removed as directed by the Engineer.

4.0 Storm Water Management Controls

4.1 Potential Sources for Storm Water Contamination

Any activities and processes that result either in the generation of storm water or the potential to add pollutants to run-off are subject to the requirements of this document. This includes all areas of land disturbed either through grading, excavating, and construction or material storage areas. Water that comes in contact with the surface of the project site as a result of precipitation (snow, hail, rain, etc.) is considered as storm water associated with construction activity and is subject to the requirements of this plan.

Grading and Site Excavation Operations – Exposed soils have the potential for erosion and discharge of sediment to off-site areas.

Fugitive Dust – Dust generated by construction vehicles can be deposited in wetlands and waterways.

Foundation/Duct Bank Construction – Excavating for foundations create soil stockpiles with the potential for erosion.

Materials Storage Areas – general construction materials, solvents, adhesives, paving materials, paints, aggregates, trash, etc.…

Construction Vehicles – Refueling of vehicles may spill or drip gasoline and diesel fuel onto the ground. On-site maintenance of excavating equipment may drip hydraulic oil, lubricants and antifreeze onto the ground.

Concrete trucks are directed to wash out their chutes, etc. at designated areas only and the effluent must be discharged into an Owner approved BMP and cannot be discharged into the closed drainage system. These concrete washout area(s) shall be as remote and far away from the top of bank drainage structures as possible.

4.2 Temporary and Permanent Erosion Control Practices

The contractor shall be solely responsible for setting up erosion and sedimentation control prior to construction. The contractor will utilize a system of operations and all necessary erosion and sedimentation control measures, even if not specified herein or elsewhere, to minimize erosion damage at the site. The following information explains how potentially polluted discharges will be controlled, filtered, and on site. The locations of the proposed BMPs and control measures will be depicted on the site plans.

Erosion and Sediment Controls

Erosion and sediment controls have been incorporated in the design of the site with the objective of retaining sediment on site, filtering and reducing stormwater discharge and protecting undisturbed areas. A combination of stabilization and structural practices is included to meet the objective, as described in detail below. The following is a list of common temporary and permanent structural erosion control devices, which will be applied:

Temporary: Silt Fence
Stone Check Dams/ Stone Protection
Sediment Trap
Stabilized Construction Entrance
Haybale perimeter control
stockpile, silt fabric liner and haybale perimeter control
storm drain inlet protection (haybale and silt fabric or approved equal)

Permanent: stabilization of all disturbed areas with pavement, stone, or loam/ seed.

Throughout the development project, erosion controls will be installed to prevent sedimentation from disturbed areas. The erosion and sedimentation control devices, as depicted in the Site Plans, must be installed prior to a land disturbance on the project site. The controls will be inspected on a regular basis (weekly) and as adequate supply of erosion control materials such as haybales and filter fabric will be approximately stored onsite in the instance immediate repairs are required. Existing and proposed catch basins and storm drain inlets will be protected from additional sedimentation via filter fabric inserts in the grates, or perimeter haybales placed around the inlet. The temporary measures will not be removed until permanent stabilization has occurred.

A gravel construction entry pad will be installed to reduce any off site tracking. The location of this area or multiple areas shall be determined by site contractor. Street sweeping will also be utilized in an effort to reduce pollutants in he stormwater. Areas that will not be constructed for sometime should not be cleared until the area is ready for development.

Stabilization Measures

Stabilization of surfaces includes the placement of pavement, stones, and building structures. Any remaining disturbed areas following construction will be loamed and seeded, mulched, landscaped, or planted for final stabilization.

Areas that have been completed or that will not be worked on for more than 14 days should be stabilized with permanent vegetative cover as soon as possible but not more than 14 days after the last construction activity. Surfaces that are disturbed by ongoing construction activities or erosion processes shall be stabilized as soon as possible. Loam will not be placed unless it is to be seeded or otherwise stabilized in an appropriate manner directly thereafter. All disturbed areas will have a minimum of 4” of loam placed before being seeded and mulched. Consideration will be given to hydro-mulching, especially on slopes in excess of 3 to 1. Loamed and seeded slopes will be protected from washout by mulching or other acceptable slope protection until vegetation begins to grow. All landscaping and plantings shall be conducted in accordance with approved plans.

Temporary seeding or mulching or stonework will be performed on areas that are left bare for more than 14 days but will be under construction sometime in the future. Soil

stockpiles stored for twenty-four (24) hours or longer will be provided with any necessary erosion control to prevent erosion and sedimentation, including installation of perimeter haybales/silt fence, silt fabric liner and plastic sheeting, as shown on the Plans.

Solid Waste

Waste disposal receptacles and trailers will be used for the disposal of construction debris, which will be removed from site according to state, local and federal guidelines. Construction debris will include pavement, utility, earth and building materials, which cannot be reused. The receptacles will be located on-site, covered, and placed well away from the wetland resource areas and catch basins as possible. All machinery will be operated and maintained so as to limit impacts to wetland areas and associated buffer zones by avoiding leakage of fuel. If stockpiles of debris materials are necessary, perimeter controls or plastic sheeting/covering will be used if deemed necessary during regular site inspections. A concrete washout area will be established as necessary and utilized.

Portable sanitary units will be placed on-site during construction and will be serviced regularly. They will be placed over 100 feet from wetland resource areas wherever possible.

Dust Control

To avoid sediment tracking and/or fugitive dust from leaving the site, a variety of mitigation measures are employed. As needed, a stone entrance for construction vehicles shall be established. Also, as necessary, water trucks shall be used to wet dry, dusty soil if it becomes an issue. Street sweeping shall be performed as needed to reduce the build-up of dust and sediment on roadways and parking areas.

Material Storage

Material storage yards are also covered by this SWPPP and must be managed appropriately. At this time, it is anticipated that all storage of materials will occur on site. The storage area will also include supplies of additional erosion control materials such as haybales. The contractor will mark the plans with the location of the storage area.

Hazardous materials necessary for construction will be stored in water tight containers or buildings in accordance with state and local regulations and that the manufacturer's recommendations, with appropriately sized spill kits on hand. The storage site will be inspected for signs of leakage or unsafe storage and transfer practices. Any heavy equipment permitted to work adjacent to wetland areas, will be equipped with emergency spill kits.

5.0 Inspections and Amendment Requirements

5.1 Inspections

Maintenance of existing and proposed best management practices (BMPs) to address storm water management facilities during construction is an on-going process. The owner's appointed representative is responsible for performing regular inspections of erosion controls and ordering repairs as necessary. The inspections will observe all sources of storm water or non-storm water discharges as identified in this plan, as well as the status of the receiving waters. The inspector should also be concerned with the condition of all implemented BMPs and how well they are controlling or filtering run-off. The inspection will also recommend whether corrective actions to established BMPs are required or whether additional BMPs are necessary to prevent storm water contamination based on field conditions.

Status of slopes, stockpiles, or other disturbed surfaces during construction should also be noted, including whether an area is experiencing erosion or reaching stabilization. The inspector is responsible not only for the inspection of the condition of the construction site, but all material storage yards as well. Storage yards should be checked for leakage, unsafe storage, and for the presence of adequate spill kit materials. Inspectors must be aware of practices on site, which may lead to additional pollutants in discharges, such as locating dumpsters or stockpiles or refueling equipment near direct flow of storm water.

Inspections will be performed by qualified personnel as required or once a month. The inspections must be documented on the inspection form provided in Exhibit B and completed forms will be provided to the on-site supervisor and maintained at the Owner's office during the entire construction.

Each inspection report (Exhibit B) will summarize the scope of the inspection, name(s) and qualifications of personnel making the inspection, and major observations relating to the implementation of this plan including compliance and non-compliance items.

Maintenance of existing and proposed best management practices (BMPs) to address storm water management facilities during construction is an on-going process. Build-up of sediment must be cleared away and old materials replaced so that the controls are working to capacity. Silt must not be allowed to accumulate more than halfway up the height of the hay bales or silt fencing.

If a portion of the site/project area is permanently stabilized, inspections can cease in that are as long as the condition has been documented by amending this plan.

Exhibit A

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present on site during construction:

- Concrete
- Detergents
- Paints (enamel and latex)
- Metal Studs
- Concrete
- Tar
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Wood
- Masonry Block
- Roofing Shingles

SPILL PREVENTION

Material Management Practices

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

Good Housekeeping:

The following good housekeeping practices will be followed onsite during the construction project:

- An effort will be made to store only enough product required to do the job.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container
- Manufacturer's recommendations for proper use and disposal will be followed
- The site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

Hazardous Products

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resalable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local State recommended methods for proper disposal will be followed.

Product Specific Practices

The following product specific practices will be followed onsite:

Petroleum Products

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

Fertilizers

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.

Paints

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions or State and local regulations.

Concrete Trucks

Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.

Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.

- The spill area will be kept well ventilated and personnel will wear appropriate State or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what cause it, and the cleanup measures will also be included.

Exhibit B

Inspection and Maintenance Report
Updated on a Continual Basis

Inspection No.:_____ Location:_____

To be completed as necessary during construction activities. After site stabilization, to be completed at least once per month for three years of until a Notice of Termination is filed.

Inspector Name/Qualifications:_____

Weather at the Time of Inspection:_____

Amount and Date of Last Precipitation Event:_____

Site Stabilization Status:_____

Project Section	Date and Type of Last Disturbance	Conditions/Stability	Recommendations
Perimeter Erosion Controls (Haybale/Silt Fence, etc.)			
Building Construction			
Exposed Slopes and Stockpiles			
Water Quality Inlet			
Hazardous Materials/Fuels Storage Conditions			
Catch Basins and Piping Network			
Status of Wetlands			