
10. STORMWATER MANAGEMENT

The proposed project must comply with the water quality, stormwater management, and erosion control standards identified by the City of Portland in the Land Use Chapter of the Code of Ordinance. Section 14-527 of the Code of Ordinance requires that the stormwater standards must be met for this level of permit submission.

10.1 EXISTING CONDITIONS

The site is located in the Eastern Waterfront Area on City-owned property. The project area is primarily impervious packed and is currently used for parking. The project area is relatively flat. Ultimately runoff from the site enters catch basins on adjacent properties that drain into the combined sewer or Portland Harbor.

10.2 PROPOSED DEVELOPMENT

The proposed project consists of extension of Thames Street public roadway and utilities, as described in Section 2 of this report. The proposed work will be limited to the right-of-way agreed upon by the City of Portland, Maine DOT and the 58 Fore Street Developer. Construction access will be provided from the existing Thames Street. No new impervious area will be created as part of this project. In the post-development condition, runoff from the northwest side of the Thames Street Extension will discharge to a Storm Tree box system for treatment and runoff from the southeast side of the Thames Street Extension will be diverted through a sand infiltration bed prior to discharging into the Portland Harbor.

10.3 STORMWATER STANDARDS

The project will comply with the Basic, General, and Flooding standards as outlined in the City of Portland's Technical Manual Section 5 and the MaineDEPs Chapter 500 Stormwater Management Rules.

10.3.1 Basic Standard

In accordance with Section 5 of the City of Portland Technical Standards, the project is required to meet the Basic Standard of the MaineDEP Chapter 500 rules. Erosion and sedimentation control measures will be utilized during construction to ensure that the work will not result in the contamination of any natural resources.

Details for all proposed erosion and sedimentation control measures are included in the engineering plan set submitted with this application. The plans include a narrative describing the plan for all temporary and permanent erosion control techniques to be utilized on this project in accordance with MaineDEP Erosion Control Best Management Practices.

10.3.2 General Standard

The proposed project results in a net decrease in impervious area of approximately 900 square feet. In accordance with Section 5 of the Technical Manual, projects including redevelopment of non-roof impervious area greater than 5,000 square feet shall provide stormwater quality treatment in accordance with the General Standard for at least 50 percent (11,768 square-feet of 23,536 square-feet) of the redeveloped impervious area. Calculations demonstrating the proposed BMPs meet the redevelopment requirements of the General Standard are provided in Appendix C. The proposed stormwater systems have been designed based on Volume III of the DEP Stormwater BMP Manual. A proprietary Storm-Tree system sized to treat 9,200 square-feet of impervious area is proposed for the northwest side of the proposed roadway. A 25-foot by 6-foot infiltration bed with 18 inches of engineered filter media and 6 inches of storage is proposed for the southeast side of the roadway. The combination of the two treatment measures results in

treatment of greater than 50 percent of the redeveloped area. Overflow will be directed via gutter flow to proposed storm drain catch basins.

10.3.3 Flooding Standard

The project will not create any new impervious surface and is therefore not required to provide stormwater management features for stormwater quantity control in accordance with the Flooding Standard; in addition, discharge from the site is directed to the adjacent tidal water. No changes to stormwater flow rate or volume will result from the proposed project.

10.4 STORM DRAIN OUTFALL

The proposed project includes design of an storm drain outfall for the an approximately 50-acre drainage area in the Munjoy Hill neighborhood. It is our understanding that the City of Portland intends to separate storm water from the currently combined sewer system in this area and discharge to a new outfall. The proposed roadway and sidewalk direct drainage to storm water treatment measures prior to discharge through the new outfall. The outfall was sized using the Environmental Protection Agency Storm Water Management Model (EPA SWMM) version 5. Please refer to the attached technical memorandum for documentation of the sizing calculations.

10.5 INSPECTION AND MAINTENANCE OF STORMWATER SYSTEMS

General inspection and maintenance during and after construction must take place in accordance with the requirements outlined in Chapter 500, Stormwater Management, Appendix B, Inspection and Maintenance and Stormwater Management, Maine Department of Environmental Protection publication No. DEPLW0738. The City of Portland will be responsible for implementing the maintenance and inspection requirements for the stormwater management system associated with the new development, potentially by way of a contractor that specializes in stormwater management system maintenance. The Storm Tree filter and infiltration basin will be inspected and maintained per the guidance outlined herein.

City of Portland personnel or a stormwater BMP service contractor hired by the City with knowledge of stormwater management and erosion and sediment control, including the standards and conditions in the permit, will conduct the inspections and perform maintenance of the facilities. On or by June 30th of each year, Certification that the stormwater management system has been inspected, cleaned, and maintained shall be recorded by the Department of Public Works in a form provided by that Department.

The inspection and maintenance criteria outlined in Chapter 500 Stormwater Regulations will be followed. Monitoring and maintenance is critical for the proper operation of stormwater treatment systems. First year post-construction monitoring differs primarily by its increased frequency to assure proper system functioning. Post-construction routine monitoring is based on USEPA requirements for good housekeeping practices.

Post-Construction: Inspection frequency should be at least once every six months and after every major storm in the first year following construction.

- Perform sediment removal for depths reaching 12 inches or greater, or within 3 years.
- Removal all trash and debris

10.6 ATTACHMENTS

- Stormwater Erosion & Sedimentation Control Inspection Report Form



**STORMWATER EROSION & SEDIMENTATION CONTROL
INSPECTION REPORT FORM**

Inspectors:

Date: ___ / ___ / ___

_____ of _____ (Project Owner)
_____ of _____ (Contractor)
_____ of _____
_____ of _____

Storm Event? Yes No Rainfall Amount _____ Storm Duration _____ hours

Visual Observations of Activity and Site Conditions:

Disturbed Soil Areas:

Storage of Soils:

Sediment & Erosion Control Measures:

Construction Site Entrance:

Surface Stabilization:

Corrective Actions Taken

Attachments (if any):

Signature:

Representing:

Representing: