

SECTION 02110

EROSION AND SEDIMENTATION CONTROL

This Plan has been developed as a strategy to control soil erosion and sedimentation during and after construction of the Waterview at Bayside Condominium located at 409 Cumberland Avenue in Portland, Maine. This plan is based on the Maine Erosion and Sedimentation Control Handbook for Construction, Best Management Practices, March 2003.

1.1 PROPOSED DEVELOPMENT

The project consists of the development of a 10,779 square foot twelve story apartment and condominium building with a total of 94 units. The primary pedestrian access to the building will be from Cumberland Avenue, although pedestrian access can occur from three sides of the building. Vehicular access to the site will be from Forest Avenue and a drop-off area will be along the Forest Avenue side of the building. All vehicles will exit the site onto Mechanic Street. Due to the sloping site, handicap accessible and temporary parking will be provided beneath the building. Parking for the project will be provided at the Gateway Garage.

The access drive, building, drainage improvements and site improvements and associated grading define the limits of proposed earth movement for the development. The horizontal and vertical placement of the access drive, walkways and seating areas has been designed to maximize the topographic opportunities available.

1.2 EROSION CONTROL PRACTICES / TEMPORARY MEASURES

The following temporary measures to control erosion and sedimentation shall be utilized:

- A. Each ground area, opened or exposed, whether directly or indirectly due to the development, shall be minimized and shall be stabilized within 15 days of initial disturbance of soil and shall be permanently stabilized within seven days of final grading.
- B. Temporary soil stabilization shall be either by temporary mulching, permanent base gravel, or as follows:
 - Temporary Mulching. Mulch shall consist of chopped hay or straw mulch and spread by mechanical blower evenly at a rate of 150-200#/1000 SF. Temporary mulch shall be removed prior to permanent soil stabilization. Mulch must not be placed over snow. Snow shall be removed prior to mulching.
 - Erosion Control Mix. Processed wood chip and soil mix, spread along areas of site adjacent to residential properties.
 - Permanent Base Gravel. Base gravel shall be suitable as temporary soil stabilization under the following conditions:
 - a. Slopes shall be less than eight percent.
 - b. Gravel shall meet the specifications for base or subbase gravel for the proposed completed surface.

1.3 EROSION CONTROL PRACTICES / PERMANENT MEASURES

The following permanent measures to control erosion and sedimentation shall be utilized:

A. Permanent seeding shall be performed during construction operations as each disturbed area has been brought to finish grade. Permanent seedings shall be made as dormant seeding after the first killing frost. Dormant seeding and mulch shall be used at two times the permanent seeding and mulching rate shown below for lawn areas. Seed, loam, lime, fertilizer and mulch are to be as follows:

- Seed. The seed mixture shall consist of seeds proportioned by weight. All seed shall be fresh, clean, "new crop" seed. Harmless inert matter and weed seeds shall be permitted up to one percent of the gross weight of each variety of seed. All seed supplied shall be packed in approved containers bearing the manufacturer's name and analysis of contents. The following materials and application rates shall be required for permanent seeding:

Creeping red fescue:	0.69#/1000 SF
Kentucky bluegrass:	0.57#/1000 SF
Perennial ryegrass:	0.46#/1000 SF
Redtop:	0.12#/1000 SF
Total:	1.84#/1000 SF

- Loam. Loam shall be free of grasses, roots, large stone and inorganic debris. Place loam at four inches minimum depth over all disturbed areas. Final grading of all lawn areas to be approved by Landscape Architect prior to seeding.
- Lime. Lime shall be agricultural ground limestone and applied as per recommendation of a State Commercial Soil Testing Laboratory.
- Fertilizer. Fertilizer shall be 10-20-20 classification and applied as per recommendation of a State Commercial Soil Testing Laboratory.
- Mulch. Mulch shall consist of hay or straw mulch. Mulch shall be spread evenly at a rate of two and one half tons per acre over all seeding. After application, the mulch shall be thoroughly wetted. In steep areas, the mulch shall be held in place by the use of jute erosion control netting or approved alternative netting material. Note: All exposed soil must be covered regardless of mulching rates specified.

The contractor shall maintain the seeded and mulched areas until final acceptance of the work. Maintenance shall consist of providing proper watering, protection against traffic and repairing any areas damaged due to wind, water, erosion, fire or other causes. Such damaged areas shall be repaired to re-establish the condition and grade of the soil prior to seeding and shall then be refertilized, reseeded and remulched.

- B. Winter Construction. The winter construction period is from November 1 through April 15. Winter excavation and earthwork shall be completed such that no more than 1 acre of the site is without stabilization at any one time. Limit the exposed area to those areas in which work is expected to be undertaken during the proceeding 15 days and that can be mulched in one day prior to any snow event. Hay and straw mulch rates shall be a minimum of 150#/1000 SF (3 tons/acre) and shall be properly anchored. The contractor must install any added measures which may be necessary to control erosion/sedimentation from the site dependent upon the actual site and weather conditions. Continuation of earthwork operations on additional areas shall not begin until the exposed soil surface on the area being worked has been stabilized in order to minimize areas without erosion control protection.

1.4 CONSTRUCTION SEQUENCE

The general sequence of work shall be as follows:

- A. Install erosion control devices (silt fence, stabilized construction entrance and or Sediment barrier). Note: when frozen ground conditions exist, silt fence shall be replaced with wood-waste filter berms.
- B. Site Demolition; remove all existing structures, pavement and site appurtenances.
- C. Temporarily stabilize disturbed areas by mulching all exposed soil within 15 days of initial disturbance.
- D. Rough grade and install road/pavement base.
- E. Install underground utilities.
- F. Install stormwater structures and associated piping.
- G. Complete site construction work.
- H. Install permanent vegetation on all exposed areas within 15 days of final grading.
- I. Perform continuing maintenance on all erosion and sedimentation control devices and measures.

1.5 SITE INSPECTION & MAINTENANCE

Weekly inspections, as well as routine inspections following rainfalls of 0.5" over a consecutive 24-hour period, shall be conducted by the Site Contractor, of all temporary and permanent erosion control devices until final acceptance of the project. Necessary repairs shall be made to correct undermining or deterioration. Final acceptance shall include a site inspection to verify the stability of all disturbed areas and slopes. Until final inspection, all erosion and sedimentation control measures shall immediately be cleaned, and repaired by the General Contractor after storm events. Disposal of all temporary erosion control devices shall be the responsibility of the Site Contractor.

Continued temporary maintenance and long-term provisions for permanent maintenance of all erosion and sedimentation control facilities after acceptance of the project shall be the responsibility of Waterview Development LLC, or Assigns.