
PART 1 GENERAL

1.1 SECTION INCLUDES

- .1 Temporary and permanent erosion and sediment control devices.

1.2 RELATED SECTIONS

- .1 Section 31 23 33.01 - Excavation, Trenching and Backfilling.

1.3 REFERENCES

- .1 ASTM D1777-96(2015), Test Method for Thickness of Textile Materials.
- .2 ASTM D3776-09a(2013), Test Methods for Mass Per Unit Area (Weight) of Fabric.
- .3 ASTM D4355-14, Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus.
- .4 ASTM D4632-15a, Test Method for Grab Breaking Load and Elongation of Geotextiles
- .5 ASTM D4751-12, Test Method for Determining Apparent Opening Size of a Geotextile.
- .6 ASTM D6818-14, Test Method for Ultimate Tensile Properties of Turf Reinforcement Mats.
- .7 Reference Documents
 - .1 Master Municipal Construction Documents, latest edition.
 - .2 Transportation Association of Canada (TAC) National Guide to Sediment and Erosion Control on roadway Projects (2005).
 - .3 British Columbia Ministry of Transportation and Infrastructure, Environmental Best Practices for Highway Maintenance Activities (2010).

1.4 DEFINITIONS

- .1 Erosion: Deterioration, displacement, or transportation of land surface by wind or water, intensified by land clearing practices related to construction activities.
- .2 Rain or Rain Storm: An event defined causing the pooling of water on road or other impervious surfaces.
- .3 Sediment: Particulate matter transported and deposited as a layer of solid particles within a body of water.
- .4 Snow Melt: An event in snow conditions when the temperature is above 0 degrees C or when environmental conditions causing snow on the ground to melt.

1.5 PERFORMANCE REQUIREMENTS

- .1 Design, supply, install and maintain erosion and sediment control system to prevent sedimentation of receiving streams and wetlands.

1.6 SUBMITTALS FOR REVIEW

- .1 Section 01 33 00: Submittal Procedures.
- .2 Contractor to submit Erosion and Sediment Control plan for work a minimum of 14 days prior to the work.

1.7 SUBMITTALS FOR INFORMATION

- .1 Section 01 33 00: Submittal Procedures.
- .2 Test Reports: Submit substantiating engineering data, test results of previous tests which purport to meet performance criteria, and other supportive data.
- .3 Installation Data: Manufacturer's special installation requirements.

1.8 QUALITY ASSURANCE

- .1 Products of this Section: Manufactured to ISO 14000 certification requirements.
- .2 Any changes to the Erosion and Sediment Control Plan (ESCP) shall conform to applicable erosion and sedimentation control codes and standards and be under direct supervision of a Professional Engineer experienced in design of this Work and licensed in the Province of Newfoundland and Labrador. All changes or additional measures are to be approved by Departmental Representative.

PART 2 PRODUCTS

2.1 SILT FENCING

- .1 Geotextile: Woven polypropylene filter fabric, resistant to ultra violet degradation.
 - .1 Rolls: 915 wide.
 - .2 Efficiency: Minimum 75%.
 - .3 Properties:

PHYSICAL PROPERTY	TEST METHOD	REQUIRED VALUE
Tensile Strength	ASTM D4632	41kg
Elongation	ASTM D4632	50%
Apparent Opening Size	ASTM D4751	0.60mm
Ultraviolet stability (retained strength after 500 hrs of exposure)	ASTM D4355	70%

- .2 Posts: Wood or Galvanized steel T bar, 1200 mm minimum length, painted fluorescent orange for safety.
- .3 Stabilization Plates: Galvanized, 115 cm² size.
- .4 Ties: Galvanized wire, minimum 2 mm diameter. Heavy duty plastic ties.
- .5 Wire Reinforcement: Galvanized, 1.9 mm wire with maximum 150 mm mesh spacing.

PART 3 EXECUTION

3.1 PREPARATION

- .1 The Erosion and Sediment Control Plan shall conform to local erosion and sediment control codes and standards to meet the following:
 - .1 Prevent loss of soil by storm water runoff.
 - .2 Prevent sedimentation in receiving streams.
 - .3 Prevent air pollution by dust and particulate matter.

3.2 INSTALLATION

- .1 Install silt fences and check dams as indicated in Site Specific Environmental Protection Plan and any approved revised plans.

3.3 MONITORING AND MAINTENANCE

- .1 Comply with maintenance requirements specified and with local standards.
- .2 Silt Fences:
 - .1 Maintain integrity of silt fences.
 - .2 Inspect silt fences within twenty four (24) of rainfall, and snow melt, and daily during prolonged rainfall or storm. Correct deficiencies.
 - .3 During holidays and when construction is not in progress, maintain and monitor silt fences on a weekly basis or as required by the Departmental Representative and the ESCP.
 - .4 Daily review location of silt fences in areas where construction activities have changed natural contours and drainage run off. Relocate or add additional measures as required to maintain required effectiveness.
 - .5 Repair or replace damaged products within twenty four (24) hours.
 - .6 Remove sediment deposits when deposit reaches approximately one third (1/3) the height of silt fence. Dispose of sediment in location where sediment will not erode into construction areas, offsite properties or watercourses.
 - .7 Do not remove silt fences until directed by the Departmental Representative.

3.4 CLEAN-UP AND REMOVAL

- .1 Remove and dispose of materials.
 - .1 Remove accumulated sediment or spread to match finished grade; ensure proper drainage.
- .2 Stabilize area disturbed by removal operations.
- .3 Clean, repair or re-instate erosion control measures that are designated as permanent.

END OF SECTION