

**SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROL**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Erosion and sedimentation control.

1.02 RELATED REQUIREMENTS

- A. Section 31 11 00 - Clearing and Grubbing
- B. Section 31 23 16 - Trenching
- C. Section 31 23 19 - Dewatering
- D. Section 31 30 00 - Earthwork

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2 year experience installing similar products.
- C. Codes and Standards: Install and maintain erosion control systems in compliance with all authorities having jurisdiction.

1.05 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to starting work of this section.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handling: Handle materials to avoid damage.

1.07 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.08 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturers: _____.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.02 MATERIALS

- A. Erosion and Sedimentation Control:
 - 1. Type: High-density polypropylene reinforcing geogrids.

2. Type: Turf reinforcement mat.
 3. Type: High-strength geotextiles.
 4. Type: Crushed stone bedding with filter fabric and stone riprap.
- B. Geotextile fabric for Silt Fences must be listed on the NYSDOT approved list.
- C. Straw bale protection shall be standard rectangular hay bales bound by baling wire, clean and dry.
- D. Inlet Protection Barriers:
1. Hardwood Posts shall be 2x2 minimum length 4 feet.
 2. Net reinforced fence shall be 2 inch by 4 inch welded wire fabric mesh. The mesh support height shall be the equivalent height, or greater, of the geotextile fabric to be attached.
- E. Rock Filter Dams:
1. Geotextile fabric shall consist of a woven monofilament or spunbond nonwoven fibers consisting of long-chain synthetic polymers composed of at least 95 percent by weight of polyolefins. Geotextile fabric shall equal or exceed the following average roll values or as directed by the Engineer:
 - a. Elongation – 50 percent minimum.
 - b. Grab Strength – 200 pounds minimum.
 - c. Puncture Strength – 75 pounds minimum.
 - d. UV Stability (retained strength) – 50 percent minimum after 500 hours of exposure.
 - e. Apparent Opening Size (AOS) – 0.02 inch/#30 US sieve maximum.
 2. Geotextile fabric shall be resistant to commonly encountered soil chemicals, mildew, rot, insects, and deterioration resulting from exposure to sunlight or heat. Geotextile fabric shall provide an expected useable life comparable to the anticipated construction period.
 3. Aggregate for the rock filter dams shall consist of crushed stone. Aggregate particles shall be composed of clean, hard, durable materials free from adherent coatings, salt, alkali, dirt, clay, loam, shale, soft or flaky materials or organic and injurious matter. Aggregate shall be cubic or rounded form, not elongated, flat, shapes. Spalls, fragments, and chips shall not exceed 5 percent by weight. Crushed concrete shall not be substituted for the crushed stone unless as approved by the Engineer.
 4. Aggregate size shall depend upon the type of rock filter dam specified in the construction plans. Aggregate size based on type of rock filter dam is as follows:
 - a. Type 1: 3 inches to 5 inches, open-graded.
 - b. Type 2: 3 inches to 5 inches, open-graded.
 - c. Type 3: 4 inches to 8 inches, open-graded.
 - d. Type 4: 3 inches to 5 inches, open-graded.
 5. Mesh is required for reinforced type rock filter dams. Mesh shall be 20 gauge galvanized double twisted hexagonal wire mesh with 1-inch diameter hexagonal openings. Mesh wire shall be zinc coated prior to being double twisted. Reinforcing spiral binders, lacing wire, and stiffeners shall be made of wire having the same coating material and same wire size as the wire mesh. Gabion wire baskets shall equal or exceed the requirements of the wire mesh.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

- B. Use all means necessary to control dust on and near the work, and on and near off-site storage, and spoil areas, if such dust is caused by performance of the work of this Section, or if resulting from the condition in which Project Site is left by Contractor.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction.
- B. Install erosion control devices to protect adjacent and downstream properties from damage and pollution resulting from erosion caused by the work of this Contract.
- C. Implement erosion control measures indicated on drawings and additional erosion control measures necessary to prevent damage to adjacent and downstream properties.
- D. Install silt fence located along perimeter of site or grading limits immediately following site clearing operations specified under Section 31 11 00 - Clearing and Grubbing.
- E. Rock filter dams shall be installed so as to prevent downstream deposition of sediment and debris from the construction site. Rock filter dams shall be constructed to meet the following criteria:
- F. The Contractor shall be responsible for periodic reshaping, repairing, and maintaining of rock filter dams as directed by the Engineer.
- G. The Contractor is responsible for removal and proper disposal of sediment and debris. Removed sediment and debris shall not be allowed to flush into the storm sewer system, waterways, jurisdictional wetlands, or onto adjacent properties. Uncontaminated sediment can be placed at the project spoil site or, if properly handled, spread out to supplement fill requirements. If sediment has been contaminated, then it shall be disposed of in accordance with the applicable federal, state, and local regulations. Offsite disposal shall be the responsibility of the Contractor. Contractor is encouraged to reuse aggregate and wire mesh if remaining materials meet original spec requirements.

3.04 INSPECTIONS

- A. Inspect all erosion control systems and devices at least once every seven calendar days.
- B. Inspect all erosion control systems and devices within 24 hours of the end of any storm which results in precipitation of 1/2 inch or more.
- C. During inspections, locations where stormwater leaves the site shall be inspected for evidence of erosion or sediment deposition.
- D. Correct deficiencies within three calendar days.

3.05 PROTECTION

- A. Protect installed products until completion of project.
- B. Protect benchmarks, monuments, existing structures, existing fences, existing roads, existing sidewalks, existing paving, existing curbs, and other features indicated on Drawings to remain, or not indicated to be removed, from damage and displacement. If damaged or displaced, notify Engineer and correct defects as directed.
- C. Protect above and below grade utilities which are to remain.

END OF SECTION 31 25 00