

ITEM 0103011

EROSION AND SEDIMENTATION CONTROL

DESCRIPTION

The work of this section includes, but is not limited to the furnishing of all labor, materials and equipment required to provide silt fences, hay bale erosion, checks, temporary swales, ponding, erosion control linings and any other measures necessary to prevent erosion and resulting sedimentation in areas adjacent to the construction activities. All materials provided, and work undertaken shall be performed in accordance with the soil erosion and sedimentation control plans or, in the absence of, in conformance with the Connecticut Guidelines for Soil Erosion and Sedimentation Control, 1985 as amended.

REFERENCED ITEMS

None

REQUIRED SUBMITTALS

1. **MANUFACTURER'S PRODUCT DATA**

- a. Filter fabric
- b. Erosion control lining

2. **SUBMITTALS SCHEDULE**

(Before Installation)

- a. Manufacturer's Product Data

MATERIALS

1. **SILT FENCES**

- a. Filter Fabric

Conform to the requirements of Article M.08 of the State of Connecticut, Department of Transportation, Standard Specifications for Roads, Bridges and Incident Construction Form 816, 2004. The fabric used must be recommended by its manufacturer for use as silt fencing.

- b. Wire Backing for Filter Fabric

Provide either 4" x 4" hogwire or chicken wire with hog rings or staples for attaching the filter fabric.

c. Posts

Provide wood or metal posts of the length shown in the contract documents and of sufficient strength to support the wire backing and filter fabric.

2. **HAY BALE EROSION CHECKS**

a. Hay Bales

Bales shall be made of hay with forty pounds minimum weight and one hundred and twenty pounds maximum weight.

b. Wood Stakes

Wood stakes shall be a minimum of 2" square on plans by a minimum of 3' long.

3. **EROSION CONTROL LINING**

Provide commercially available biodegradable material with a maximum nominal mesh opening of 2". Material which shows signs of degeneration before installation shall be rejected.

CONSTRUCTION METHODS

1. **EXISTING CONDITIONS**

The Contractor shall examine all work that the work of this section is contingent upon, and report any deficiencies to the Engineer. Commencement of the work will be construed to mean complete acceptance by the Contractor of the preparatory work of others. No adjustment will be made for discrepancies brought to the Engineer's attention after work has begun.

2. **PROTECTION OF ADJACENT LANDS**

Coordinate all work of this section with related work of other sections. Failure to coordinate properly will not reduce the obligation to meet the standard of acceptance of the various elements of the work contained herein.

3. SEQUENCING AND SCHEDULING

Erosion control construction shall be done prior to the commencement of site preparation or earthwork operations. The initial construction outlined herein is intended to route all practicable surface water from the construction area into erosion control facilities. The Contractor shall install any additional protective measures as may be required to control siltation from the site.

Grading operations shall be scheduled to allow permanent erosion control to take place in the same construction season. The exposure of vulnerable soils to winter weather shall be avoided or minimized. Mass site grading operations shall be done only between May 15 and November 1.

The following sequence of construction shall be followed: revisions shall be only with the approval of the Engineer and the responsible municipal governing agency.

Place sedimentation control measures along slopes, across swales and outfalls and where directed by the Engineer.

Place erosion control measures around topsoil stockpile areas.

Prepare areas to receive topsoil.

Strip topsoil and stockpile in designated areas. Lawn area shall be topsoiled, seeded and mulched immediately after completion of sub-grade.

Proceed with construction of the remaining items of work in accordance with the approved project sequence and schedule. The Contractor shall be responsible for maintaining the integrity of all sediment and erosion control measures for the duration of the contract.

Clean and maintain all sedimentation control components to achieve the intended purpose of both temporary and permanent erosion and sediment control facilities.

4. PRE-INSTALLATION REQUIREMENTS

a. Job Meeting

Prior to the installation of work, conduct a job meeting at the project site with the Contractor's superintendent and foreman, the primary materials installer, the installer of each component of associated work, and the installers of other work requiring coordination, for the purpose of reviewing job conditions, and project requirements and procedures to be followed in performing work.

b. Manufacturer's Recommendations

At the pre-installation job meeting, review the manufacturer's data publications, installation data, supplementary installation instructions and other published instructions for material installation compliance.

5. **INSTALLATION**

a. Silt Fences

Install silt fences in the locations shown and as detailed and described in the contract documents.

Drive the support posts firmly into the ground so as to maintain the silt fence in a vertical position.

Attach the filter fabric firmly to the wire backing with the bottom edge of the fabric buried in a trench as detailed and described in the contract documents.

b. Hay Bale Erosion Checks

Install hay bale erosion checks where shown and as detailed and described in the contract documents and, additionally, in locations as directed by the Engineer in the vicinity of new construction from which, in the opinion of the Engineer, runoff would create or is creating an erosion and sedimentation problem.

Hay bale erosion checks shall be periodically checked and maintained in place until such time as the Engineer deems that they are no longer required. At such time, they will be removed by the Contractor and legally disposed of off site.

c. Erosion Control Lining

Install erosion control lining where shown and as detailed and described in the contract documents. Install erosion control lining in additional locations within the construction area as determined by the Engineer for purposes of erosion control.

Install erosion control lining in the required locations immediately after the area has been seeded.

Place the erosion control lining over the seed mulch to fit against the contours of the area. It shall be applied without stretching, lie smoothly but loosely, and be free of wrinkles and bunches. Roll the material in place and in the direction of the flow of surface water. Anchor the upgrade end of the erosion lining in a narrow trench six inches deep. Firmly tamp the trench backfill in place.

In ditches and on slopes, provide check or junction slots at no greater than 50-foot intervals or as directed by the Engineer.

Where the erosion lining comes into contact with the edges of catch basins or other structures, place a tight fold in the edge of the material and bury it a minimum of 6" into the soil.

Place staples no more than 6" apart at all anchor, junction or check slots.

Where two lengths of erosion control lining are joined, the end of the upgrade strip shall overlap the downgrade by a minimum of 6" strip and the two strips shall be anchored together.

6. MAINTENANCE AND CLEANING

All temporary erosion and sedimentation control devices shall be maintained and cleaned as required from the time of their installation until their final removal. Permanent erosion control devices shall be maintained and cleaned as required until their final acceptance.

a. Installation

Upon installation, all erosion and sedimentation control devices shall be inspected by the Engineer. The Contractor shall make any additions or adjustments required as a part of this inspection.

b. Periodic Inspections

All erosion and sedimentation control devices will be subject to periodic inspections by the Engineer. The Contractor shall clean, repair, or modify the devices as required by the Engineer as an outcome of periodic inspections.

c. Silt Fences

Remove silt as required to maintain the integrity of silt fences. If required, remove the silt fence completely and remove all accumulated silt, then reinstall.

d. Hay Bale Erosion Checks

Hay bale erosion checks shall be periodically checked and maintained in place until such time as the Engineer deems that they are no longer required. At such time, they will be removed by the Contractor and disposed of.

e. Erosion Control Lining

The Contractor shall maintain and protect the net-lined areas until such time as the turf grass is established. The Contractor shall replace or repair all erosion control lining areas damaged by fire, water or other areas including construction operations.

7. ADJUSTMENTS AND CLEANUP

At the end of construction, remove and legally dispose of, off site, all non-permanent erosion control devices and restore the damaged areas. Leave the site neat and clean.

METHOD OF MEASUREMENT

The work, materials, tools, equipment, and labor incidental to the installation of erosion and sedimentation control will be measured for payment according to the following schedule.

50% of lump item at completion of initial installation
50% / Number of months in project schedule

BASIS OF PAYMENT

“EROSION AND SEDIMENTATION CONTROL” will be paid for on a lump sum basis for performing all work, supplying all materials, equipment, labor and supervision necessary to properly install, maintain, and remove erosion and sedimentation control devices in conformance with these specifications.

<u>PAY ITEM</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
0103011	Erosion and Sedimentation Control	LS