

SECTION 04000  
SOIL EROSION, SEDIMENTATION CONTROL, AND LANDSCAPING

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## 04010 SCHEDULING

Temporary and permanent erosion control measures shall be provided for all land disturbing work in accordance with an erosion control plan approved by the Town. A grading permit shall be obtained from the Town prior to beginning site work. Temporary measures shall be installed and inspected by the Town for compliance prior to any land disturbing activity. All permanent erosion control measures shall be incorporated into the work at the earliest practical time. All temporary measures shall be maintained until the permanent measures have taken effect or approved by the Erosion Control Officer. Temporary and permanent measures shall be coordinated to provide effective and continuous erosion control throughout the construction and post-construction period to minimize siltation of streams, lakes, reservoirs, and other impoundments, ground surfaces, and other property. These measures shall remain in effect until Final Approval is given by the Town.

## 04020 TEMPORARY MEASURES

Silt Fence shall be installed in accordance with the details at the toe of all fill slopes and any other necessary locations as directed by the Town.

Diversion Ditches shall be installed in accordance with the details at the top of cut and fill slopes and any other necessary locations as directed by the Town.

Construction Entrances shall be installed at all points of access to construction sites in accordance with the details. Any access point which does not have a construction entrance shall be barricaded to prevent its use.

Sediment Pits or Filter Basins shall be installed in accordance with the details at all points where accumulated runoff is released to natural drainage channels, and any other necessary locations as directed by the Town. All sediment basins shall be sized according to State of North Carolina design guidelines, which includes a surface area calculation. The following calculation shall be utilized for this determination: design flow (acres) = (0.01) peak inflow rate (CFS).

Temporary Seeding is the use of rapid growing annual grasses, small grains or legumes to provide initial, temporary cover for erosion control on disturbed areas for less than 12 months. Seed bed preparations and soil amendments shall be in accordance with the method described under "Seeding and Mulching".

Seeding and Mulching shall be done immediately following construction. All disturbed areas shall be dressed to a depth of 8 inches. The top 3 inches shall be pulverized to provide a uniform seedbed. Agricultural lime shall be

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applied at the rate of 95 lb/1000 sq. ft. immediately before plowing. Grass seed shall be applied at the rates outlined in Tables 04100 and 04200. In areas where maintenance will eventually be assumed by the Town under heavy vehicular traffic situations (i.e. right of ways, medians) consultation shall be made with the Building and Grounds Superintendent and the Erosion Control Officer as to the requirements and use of alternate grass.

On projects that will be maintained by the Town, verification of soil amendments and seeding rates may be required, and changes to these rates may be requested by the Town during the plan review process. Reuse of topsoil and/or other measures to assure final soil conditions are conducive to rapid establishment of vegetation cover is required.

5-10-10 fertilizer shall be applied to all disturbed areas at a rate of 21 lb/1000 sq. ft., and mulching shall consist of small grain straw applied at a rate of 70 lb./1000 sq. ft. Mulched areas shall be tacked with asphalt at a rate of 200 to 400 gallons per acre, or other approved method sufficient to hold the straw in place.

If active construction ceases, meaning no substantial or significant progress is made in any area for more than 30 days, all disturbed areas must be seeded, mulched, and tacked unless written approval is granted by the Erosion Control Officer. Incidental grading shall not constitute substantial or significant progress in construction activity.

## **04030 PERMANENT MEASURES**

Permanent Ground Cover is the establishment of perennial vegetation cover for periods longer than 12 months. All disturbed areas shall receive a permanent ground cover. Permanent seeding and temporary seeding differ only in the type of seed to be used (i.e. annual versus perennial). Seed bed preparations and soil amendments shall be in accordance with Section 04020 "Seeding and Mulching". As a part of permanent seeding, maintenance may be required to maintain vegetation for 12 months (including mowing and watering). This maintenance shall be considered a part of establishing permanent ground cover. In areas where maintenance will eventually be assumed by the Town under heavy vehicular traffic situations (i.e. right of ways, medians) consultation shall be made with the Building and Grounds Superintendent and the Erosion Control Officer as to the requirements of acceptable soil conditions and use of alternate grass or ornamental landscaping.

### Riprap Dissipation Pads and Riprap Protection

All stormwater release points shall be protected by riprap dissipation pads designed to reduce discharge velocities to non-erosive levels. Dissipation

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pads shall be designed and constructed with either an engineering fabric or washed stone barrier between the pad and the natural ground. Calculations shall be furnished to indicate the sufficiency of the dissipation pads specified. Riprap pad design shall be in accordance with NYDOT or NRCS methods. Filter fabric, or a washed stone liner, shall be used on all sediment basins, riprap dissipaters, and channels.

## **04040 COMPUTATIONS**

All computations and assumptions used to formulate an erosion control plan shall be reviewed by the Town. Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to control the calculated peak runoff from a 10-year frequency storm. Runoff rates shall be calculated using the USDA Soil Conservation Service Method, the Rational Method, or other acceptable calculation procedures. Runoff computations shall be based on rainfall data published by the National Weather Service for this area.

## **04050 CONSTRUCTION SEQUENCE**

The construction sequence on projects shall be as follows:

1. Obtain grading permit;
2. Install all erosion control measures as shown;
3. Obtain certificate of compliance through on-site inspection by Erosion Control Officer;
4. Proceed with grading;
5. Clean sediment basins when one-half full;
6. Seed and mulch denuded area within 30 days after any phase of grading;
7. Maintain soil erosion control measures until permanent ground cover is established;
8. Request final approval by Erosion Control Officer;
9. Remove soil erosion control measures and stabilize these areas.

<b>TABLE 04100</b>		
<b>SHOULDERS, SIDE DITCHES, SLOPES (For Slopes Between 2:1 and 3:1)</b>		
<b>Date</b>	<b>Type</b>	<b>Planting Rate</b>
Mar 1 - June 1	Sericea Lespedeza (scarified) <u>and</u>	50 lbs./acre
Mar 1 - Apr 15	<u>Add</u> Tall Fescue <u>or</u>	120 lbs./acre
Mar 1 - June 30	<u>Add</u> Weeping Lovegrass <u>or</u>	10 lbs./acre
Mar 1 - June 30	<u>Add</u> Hulled Common Bermudagrass	25 lbs./acre
June 1 - Sept 1	***Tall Fescue <u>and</u> ***Browntop Millet <u>or</u> ***Sorghum-Sudan Hybrids	120 lbs./acre 35 lbs./acre 30 lbs./acre
Sept 1 - Mar 1	Sericea Lespedeza (unhulled/unscarified) and Tall Fescue	70 lbs./acre 120 lbs./acre
Nov 1 - Mar 1	<u>Add</u> Abruzzi Rye	25 lbs./acre
<b>TABLE 04200</b>		
<b>SHOULDERS, SIDE DITCHES, SLOPES (For Slopes 3:1 and Flatter)</b>		
<b>Date</b>	<b>Type</b>	<b>Planting Rate</b>
Aug 15 - Nov 1	Tall Fescue	300 lbs./acre
Nov 1 - Mar 1	Tall Fescue and Abruzzi Rye	300 lbs./acre
Mar 1 - Apr 15	Tall Fescue	300 lbs./acre
Apr 15 - June 30	Hulled Common Bermudagrass	25 lbs./acre
July 15 - Aug 15	Tall Fescue <u>and</u> ***Browntop Millet <u>or</u> ***Sorghum-Sudan Hybrids	35 lbs./acre

Notes:

Consult Stormwater Management Engineer or Natural Resources Conservation Service (NRCS) for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations may be possible, but must be approved by the Engineer.

\*\*\*Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12 inches in height before mowing to keep fescue from being shaded out.

END OF SECTION 04000

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