DIVISION 800

ROADSIDE DEVELOPMENT & EROSION CONTROL

800.00 GENERAL COMMENTS

Introduction

The highway right-of-way is largely a disturbed environment, lacking a natural soil profile and subject to unusual runoff, strong winds and abnormal air turbulence, pollutants, wide temperature variations and other extremes. Seeding, sodding, erosion control and landscaping are used to deal with this disturbed environment and help to permanently stabilize it as soon as possible.

Plants and seeds are living things in contrast to concrete, steel, stone and asphalt which are the inanimate materials used in the major part of road construction. Plants change in shape, size, color and texture from season-to-season and year-to-year while the inanimate materials remain virtually constant.

Seeding and landscaping involve living materials used to stabilize the right-of-way, protect the concrete and steel construction and provide other functions to help safely direct the motorist. It is understandable that survival of these living materials is important to the entire roadway system.

These living materials need to be of the quality specified, properly installed and maintained so they produce the desired results of stabilizing the right-of-way to protect the construction and provide a complete roadway system.

General Inspection

Inspection personnel assigned to erosion control work should review project plans, specifications, special provisions, and road standards pertaining to erosion control. The right-of-way contracts should be reviewed for special treated areas not mentioned on the plans. For seeding, fertilizing, and mulching, a pre-measurement using slope distances of the project is needed before the contractor starts. Both the contractor and inspector need to know the quantities of seed, fertilizer, and mulch required on the project.

Attention should be given to the erosion control plan and proposal notes for the special items and conditions involved with each individual project.

Material delivered to the project and damaged due to improper storage or handling should be rejected, even though it may have been previously accepted.

The testing requirements for seed and fertilizer are outlined in the *Materials Sampling Guide*.

801.00 REMOVING AND RESETTING TREES

801.01 REMOVING AND RESETTING TREES CHECKLIST

SSHC References: *Section 801*
Section 802

Other References: Equipment manufacturer recommendations
Special Provisions
Special Plan

Inspection Equipment: Tree Caliper

General Comments:

1. Make sure the location for resetting the trees is accessible by the mechanical tree spade.
2. Obtain from the contractor the equipment manufacturer's size rating for the tree spade and be sure the trees to be moved are within the allowable sizes for that machine. There may be size differences between evergreen trees and deciduous trees.
3. The size is usually called out as a caliper dimension - This should be the diameter of the tree trunk at 300 mm (12 inches) above the ground for trees over 100 mm (4 inches) in diameter.
4. After the trees have been properly set in their new location, make sure they are well watered. This watering and any required maintenance procedures in the Special Provisions are the most important part of keeping these plants alive.

The inspector is to observe the following operations:

- Application of seed, fertilizer, and mulch.

Record the quantities of these materials used in the project records. Record the drill settings for each type of seed mix.

All revisions made to the seed mixtures, fertilizer, or rate of fertilizer application should be approved by the Construction Division or the Roadway Design Division (Roadside Development Section).

SSHC Subsection 802.02, Paragraph 1.a. tells the contractor to submit the plant purchase orders 90 days before the planting season. If a landscaping contract is awarded with less than 100 calendar days before the planting season begins, a minimum of 60 days will be allowed.

Equipment

Proper equipment in good working condition and operated at a reasonable speed must be used to get the best results. Where possible, the equipment should be operated on the contour or parallel to the slope.

Equipment for preparation of the seed bed includes a disc, field cultivator, spike tooth harrow, spring tooth harrow, and a slope harrow. Other equipment may be approved for use provided that it achieves the desired results.

A heavy disc, such as a Rome disc, may be required in areas of heavy vegetation. A slope harrow may be required in areas of light soil, where equipment tracks damage the seed bed.

Equipment for applying seed and fertilizer consists of a hydro-seeder, gravity seeder, end gate cyclone seeder, cyclone seeder, and a native grass seed drill. The cyclone seeder (hand seeder) is usually used to spread seed and fertilizer in small areas or areas inaccessible to field equipment.

The mulch crimper needs to be looked at. The blades, when new, are serrated. Some serration should be left. The serrations allow the mulch to be tucked into the soil rather than cut. When in doubt, just have an area crimped and see how it does.

The mulch blower should not chop the hay or straw so badly that all we have is very short pieces. Most machines are adjustable for the length of straw or hay.

Equipment should be checked for proper rate of application of seed and fertilizer by measuring a representative area and weighing the required amount of seed to be applied. All seeders must be cleaned when changing seed mixtures, particularly when changing from Type A to Type B.

Contract Administration

Both the Project Manager and the inspector should review the construction period shown on the proposal form.

From March 1 to June 30 and from August 1 to freeze-up, working days should be charged whenever it is possible to perform a seeding contract controlling operation.

Erosion Control

Normal grading operations require the following erosion control:

- Install “Silt Fence” before grading begins.
- “Temporary Silt Checks” must be installed as soon as rough grading establishes ditches. The Contractor should also construct earth-berm dikes, dams, sediment basins, temporary slope drains and other erosion control features as shown in the plans or as necessary to control erosion and siltation.
- When final grading begins “Temporary Silt Checks” need to be removed.
- When final grading is complete, the area should be cover crop seeded and TSC’s reinstalled.
- As soon as possible after final grading and pavement is complete, permanent ersosion checks should be installed and the area should be permanently seeded.

** If permanent erosion checks are available and installed immediately after final grading, the TSC do not need to be reinstalled.