

## Section 3 - Restoration

<b>Overview .....</b>	<b>2</b>
<b>Chapter 1 – Fertilizing and Grassing .....</b>	<b>3</b>
Section 1.0 – Material .....	3
Section 1.1 – Planting.....	3
Section 1.2 – Temporary Cover .....	4
<b>Chapter 2 – Maintenance .....</b>	<b>6</b>

## **Overview**

This section includes specifications regarding all material, equipment, and labor required to properly restore areas disturbed by this construction as specified, as shown on the Plans, and as directed by the Engineer.

Restoration shall include replacing fences, driveways, sidewalks, mailboxes, landscaping, and other surface features in addition to cultivating the soil, fertilizing, seeding, and mulching grass on all disturbed areas. The specified procedures may be adjusted as approved by the Engineer to meet varying weather and soil conditions. All eroded areas shall be filled and grassed. A stand of grass with complete coverage shall be established prior to acceptance by the Engineer.

## Chapter 1 – Fertilizing and Grassing

### Section 1.0 – Material

All materials for fertilizing and grassing must be approved by the Engineer prior to use.

- 1.00 Fertilizer shall be an acceptable commercial fertilizer known as 4-12-12, or equivalent.
- 1.01 Limestone shall be agricultural limestone containing at least 34% magnesium carbonate, and crushed especially for agricultural purposes.
- 1.02 Seed shall have at least 90% purity and 80% germination. In residential areas the type of grass seed shall match grass in adjacent areas and shall be determined by the Engineer. In highway right-of-ways, drainage ditches or other non-residential areas, the type of seed and application rates shall be in accordance with Table 1.

*Table 1 - Grassing Schedule for Non-Residential Areas*

<b>Schedule Number</b>	<b>Common Name of Seed</b>	<b>Rate of Application (lbs/ac)</b>	<b>Planting Date</b>
1	Common Bermuda (Hulled)	60	March 1 – August 14
	Love Grass	50	
2	Common Bermuda (Un-hulled)	90	August 15 – February 28
	Love Grass	80	
	Annual Rye Grass	15	

- 1.03 Sod shall be installed as required by the Engineer. The type of sod shall match grass in adjacent areas and shall be determined by the Engineer.

### Section 1.1 – Planting

All preparation, fertilizing, planting and watering shall be done in an acceptable manner by competent personnel.

- 1.10 Area to be seeded or sodded shall be loosened or pulverized to a depth three to four inches (3" – 4") by disc harrowing, with all clods broken up and all sticks and other debris removed. Fertilizer shall be distributed over the area at a minimum rate of one thousand pounds per acre (1,000 lb/ac), and limestone at a minimum rate of two thousand pounds per acre (2,000 lb/ac).

1.11 Seed shall be distributed on the prepared area by the use of a commercial applicator that will provide even distribution. For grassing in residential areas, minimum application rates shall be as specified below; heavier applications shall be made where necessary to provide an acceptable cover.

1.11.0 Fescue shall be applied at two hundred pounds per acre (200 lb/ac).

1.11.1 Bermuda, Centipede, and Zoysia shall be applied at fifty pounds per acre (50 lb/ac).

1.12 Seed shall then be raked into the ground and lightly covered. After the seed is covered, the area shall be rolled and dressed smooth by a cultipacker or other means acceptable to the Engineer. Immediately after seeding, the area shall be covered with a mulch of ripe native hay or other acceptable material.

1.13 Sod shall be rolled out or placed in straight rows. The ends of rolls or squares shall be staggered at least one foot (1'). All edges shall be pulled tightly together. After sodding is complete, the sod shall be set in place using a hand-pushed drum roller.

1.14 After planting is completed, the planted areas shall be sufficiently watered. Watering shall be continued as necessary until an acceptable grass cover is obtained.

## **Section 1.2 – Temporary Cover**

If grading is completed and ready for seeding at a time inappropriate for establishing the permanent grass cover, temporary coverage shall be provided for erosion control as specified below. Contractor shall return to the site and provide the permanent cover, in the manner specified above, at such time as may be suitable.

1.20 Surface area to be seeded shall be prepared as for permanent cover except that fertilizer shall be applied at one half (1/2) the rate specified therefor.

1.21 Area to be grassed shall be planted according to Table 2. Seed shall be applied in the manner specified in Section 1.1.

Table 2 - Grassing Schedule for Temporary Cover

Schedule Number	Common Name of Seed	Rate of Application (lbs/ac)	Planting Date
1	Annual Sudan Grass (Sweet or Tift)	40	April 1 – August 15
2	Brown Top Millet	50	April 1 – August 15
3	Rye Grain	55	August 16 – March 31
	Annual Rye Grass	15	

1.22 After temporary planting is completed, the planted areas shall be watered as specified in Section 1.2.

## **Chapter 2 – Maintenance**

During the maintenance guarantee period, the Contractor shall maintain all grassed areas and repair all damage due to erosion, drought, etc. A stand of grass having complete coverage shall be in place at the end of the guarantee period.