

CONSTRUCTION SPECIFICATION

NV-6. SEEDING AND MULCHING FOR PROTECTIVE COVER

1. SCOPE

The work shall consist of furnishing all materials and placing them on all exposed, disturbed, or barren areas within the project area or site to the limits as shown on the drawings, or as staked in the field.

2. MATERIALS

Seed - All seed shall be delivered to the site tagged and labeled in accordance with the state laws and the U.S. Department of Agricultural Rules and Regulations under the Federal Seed Act. Bag tag figures will be evidence of purity and germination. Time since date of seed test shall not exceed 9 months.

Seed shall be of a quality that weed seed shall not exceed 0.5 percent of the aggregate of pure live seed (PLS) (percent germination x percent purity) and other material.

Fertilizer - Unless otherwise specified on the Vegetation Plan, all fertilizer shall be Ammonium Phosphate Sulfate containing a minimum of 16 percent Nitrogen, 20 percent available phosphoric acid and 0 percent water soluble potash and be uniform in composition, dry and free flowing, pelleted or granular.

All fertilizer shall be labeled in accordance with applicable state regulations and bear the warranty of the producer for the grade furnished.

Inoculants - The inoculant for treating legume seeds shall be a pure culture of Nitrogen fixing bacteria prepared specifically for the plant species and shall not be used later than the date indicated on the container. A mixing medium, as recommended by the manufacturer or approved substitute, shall be used to bond the inoculant to the seed. For nonpellet inoculated seed, two times the amount of the inoculant recommended by the manufacturer shall be used and seed shall be sown within 24 hours.

For pellet inoculated seed, at least 30 pounds of inoculant shall be used per 1,000 pounds of raw seed and the seed shall be labeled to show the Lot Number, Expiration Date, and Percent Coat of the finished product. Pellet inoculated seed shall be kept cool and sown within 180 days.

Wood Fiber - Wood fiber shall be a wood cellulose fiber that contains neither germination nor growth inhibiting factors. The wood fiber shall be produced from nonrecycled wood such as wood chips or similar wood materials and shall have the property to be evenly dispersed and suspended when agitated in water. It shall be colored with a nontoxic water-soluble green dye to provide a proper gauge for metering of material over ground surfaces.

The wood fiber mulch may also be produced from the following materials:

- a. recycled wood fiber, such as wood chips or similar wood materials

- b. a combination of recycled newsprint and cardboard materials that contain at least 50 percent cardboard, or
- c. a combination of recycled newsprint and non-recycled wood fiber or recycled wood fiber materials that does not contain more than 50 percent newsprint

Erosion Control Blanket - The erosion control blanket shall consist of a machine-produced mat of wood excelsior fiber with consistent thickness and fiber evenly distributed over the entire area of the blanket. At least 70 percent of the fibers shall be six (6) inches or longer in length. The topside of each blanket shall be covered with biodegradable extruded plastic mesh with openings not exceeding two inches by two inches.

Erosion control blankets may also be machine produced mats of 70 percent wheat straw and 30 percent coconut fiber or 100 percent coconut fiber with consistent thickness and fiber evenly distributed over the entire area of the blanket. These blankets shall have a minimum density of 0.5 pounds per square yard and be enclosed in netting material.

Staples - Staples shall be "U" shaped with legs at least ten (10) inches in length and have a two (2) inch crown and shall be made of eleven (11) gauge or heavier wire.

3. SEEDING MIXTURE AND PLANTING

The seed(s) and rate(s) specified on the Vegetation Plan shall be used. The seeding rate(s) shall be the weight exclusive of any coating material. Any legume seed used shall be inoculated. Based on bag tags, the seeding rates shall be adjusted to insure the required amounts of pure live seed.

Planting shall be performed after final grading is completed unless otherwise specified on the Vegetation Plan.

4. SEEDBED PREPARATION

The area to be planted shall be weed free and have a firm seedbed which has previously been roughened by scarifying, disking, harrowing, chiseling, or otherwise worked to a depth of 2 to 4 inches. No implement shall be used that will create an excessive amount of downward movement of clods on sloping areas. Seedbed may be prepared at time of completion of earth moving work.

Rocks larger than 6 inches in diameter, trash, weeds, and other debris that will interfere with seeding or maintenance shall be removed.

Seedbed preparation shall be suspended when soil moisture conditions are not suitable for obtaining a satisfactory seedbed.

5. FERTILIZING, SEEDING, MULCHING

Fertilizing - Fertilizer shall be distributed uniformly over the seedbed at the rate of 500 pounds per acre unless a different amount is specified on the Vegetation Plan.

Fertilizer shall be applied in any way that will result in uniform distribution. When specified on the Vegetation Plan, fertilizer shall be incorporated into the soil as part of the seedbed preparation or as part of the seeding operation.

Fertilizer shall be applied hydraulically by hydroseeder in the form of a slurry that also contains the required seed. Fertilizer shall not remain in the slurry longer than two (2) hours.

Seeding - Seed shall be drilled, broadcast, or distributed uniformly in a water slurry by hydroseeder. When specified on the Vegetation Plan, seed shall be incorporated into the soil but not more than the specified depth.

The hydroseeder shall be equipped with a built-in continuous agitation system of sufficient operating capacity to produce a homogeneous slurry and a discharge system that will apply the slurry to the slopes at a continuous and uniform rate.

Seed shall not remain in the slurry longer than thirty (30) minutes. The slurry shall also contain wood fiber at the rate of 500 pounds per acre and the required fertilizer. The wood fiber shall not remain in the slurry longer than two (2) hours. Water used shall be potable water or Class 1 or 2 agricultural irrigation water.

Application rates for wood fiber mulch products that have moisture contents greater than 15 percent shall be increased by the following factor, c:

$$c: = \frac{85 \text{ percent}}{\text{percent fiber (solids) in product}}$$

The slurry shall be continuously mixed and shall be mixed for at least five (5) minutes after the last addition before application starts. The slurry shall be applied uniformly over the site at a rate that is nonerosive and minimizes runoff.

Mulching - Erosion control blankets shall be distributed uniformly over the surface of the seeded area within 48 hours following seeding. The blankets shall be started on the backside three (3) feet below the crest of the treated slope and installed vertically down the treated slope. The netting shall be on top and the fibers in contact with the soil. The edges shall overlap at least four (4) inches onto adjoining blankets.

Anchoring the Mulch - Staples shall be driven vertically into the ground with reference to the slope. Four (4) staples shall be uniformly spaced across the start and end of each roll and placed four (4) inches from the starting edge at the crest of the slope and two (2) inches from the end of each roll.

Staples shall also be uniformly spaced down both sides of each roll at six (6) foot intervals and two (2) inches from the edge. Staples shall also be spaced down the center of each roll at six (6) foot intervals and alternately spaced with respect to the staples on each side.

6. IRRIGATION

When specified, irrigation water shall be applied at the times and rates as listed on the Vegetation Plan.

7. SPECIAL MEASURES

Measures and methods that enhance fish and wildlife values, protect visual resources, and maintain key shade, food, and den trees shall be performed when specified on the Vegetation Plan.

8. OTHER REQUIREMENTS

Other details for the establishment and maintenance of the plants including, but not limited to, the need for livestock and traffic control shall be applied when specified on the Vegetation Plan.

Operations shall be done in such a manner that erosion and air and water pollution are minimized and held with legal limits.