

## **SECTION 106 - SEEDING**

### 106.1 GENERAL

106.1.1 Related requirements specified in other Sections of the Specifications:

Section 104 - Trenching & Backfilling

106.1.2 Reference Specifications are referred to by abbreviation as follows:

American Society for Testing and Materials - ASTM  
Virginia Department of Transportation - VDOT

106.1.3 Submit two copies of the following:

- A. Seed Test Report
- B. Fertilizer Analysis

106.1.4 Materials shall be delivered in unbroken containers, clearly marked by the manufacturer as to contents. Seed, lime, and fertilizer shall be labeled as to proportions, analysis and quality. Store all materials in a manner affording protection from damage by weather or vandalism.

106.1.5 Seed only when wind velocity is less than 15 miles per hour.

### 106.2 PRODUCTS

106.2.1 Topsoil shall be the top 4 inches or original soil from the site, unless otherwise noted on the Drawings. Topsoil obtained off-site shall be fertile, friable loam or silt, containing not less than 2 pct., by weight, of finely divided, decomposed vegetable matter. Topsoil shall be free of subsoil, clay lumps, brush, weeds, roots larger than 1/2 inch diameter, stones larger than 1/2 inch diameter and other material toxic or harmful to growth.

106.2.2 Fertilizer shall be 5-10-5 applied at 1000 pounds per acre.

106.2.3 Seed mixture shall be 40% lawn fescue, 40% lawn bluegrass, 10% annual rye grass and 10% white Dutch clover applied at 5 pounds per 1000 square feet unless otherwise specified.

106.2.4 Lime shall be ground agricultural grade lime containing not less than 85 pct. calcium and magnesium carbonates. Fineness shall be such that 100 pct. will pass a No. 20 sieve, not less than 50 pct. will pass a No. 100 sieve. Burnt lime or hydrated lime may be substituted in equivalent carbonates, if requested.

106.2.5 Mulch shall be clean, seed free, loose, unweathered, unchopped small grain straw. Spray mulch of an approved wood cellulose fiber material that is in accordance with the Virginia Department of Transportation (VDOT) specifications shall be accepted.

106.2.6 Sod shall be composed of at least 70 pct. of Kentucky 31 tall fescue and be cut to provide a minimum thickness of 2 inches. Vegetation more than 5 inches in height shall be cut to 3 inches or less before sod is lifted.

### 106.3 EXECUTION

106.3.1 Prepare soil for permanent seeding by tilling of topsoil in place to loosen thoroughly and break up all clods to a depth of 6 inches. Remove all stumps and roots, coarse vegetation, stones larger than 1-1/2 inches and all construction debris. Soil shall be worked by suitable agricultural equipment to a depth of not less than 4 inches. Rake to a uniform, smooth and drainable surface.

Apply lime and fertilizer uniformly and mix well into top 4 inches of seed bed. Apply lime at the rate of 100 lbs. per 1000 sq. ft. Apply fertilizer at the rate of 50 lbs. of 5-10-5 per 1000 sq. ft.

106.3.2 Sow permanent grass seed between dates of March 15 and May 31 or August 15 and October 31<sup>st</sup> unless otherwise approved. Temporary seeding and/or mulching is required at all other times.

106.3.3 Sow seed by mechanical seeder as follows:

- A. Mix seed thoroughly with clean dry sawdust and broadcast at rate of 5 lbs. of seed per 1000 sq. ft. in cross directions to ensure uniform distribution. Rake surface lightly and roll with appropriate type of lawn roller weighing maximum of 150 lbs. per foot of width.
- B. Protect the complete seeded area against erosion by mulching with straw at a rate of one (1) bale per 1000 square feet or by spray mulching with a wood cellulose fiber material applied by hydro-jet method at a rate of 35 pounds (dry weight) per 1000 square feet, in accordance with the VDOT Standard method.
- C. Anchor mulch by the following methods.
  - (1) In residential areas, apply synthetic mulch binder at rate recommended by manufacturer.
  - (2) On slopes steeper than 4 horizontal to 1 vertical, fasten heavy jute mesh to wooden stakes.

106.3.4 Remove all soiling or staining of finished walks, drives and parking areas resulting from seeding work. Maintain paved areas in clean condition.

106.3.5 Turfgrass Maintenance

- A. Water as required to keep soil moist during germination period.
- B. Mowing
  - (1) When grass reaches height of 3-1/2 to 4 inches, mow to height to 2-1/2 inches.
  - (2) Maintain grass height between 2-1/2 and 4 inches.
  - (3) Do not remove more than 33 pct. of total height of grass in one mowing.
- C. Reseed and mulch spots larger than 1 square foot without uniform stand of grass.
- D. Mow and maintain all seeded areas until uniform stand of grass is acceptable to Engineer.
- E. In the event that growth is not established by final project inspection, continue the specified attention until stand is accepted by Engineer.
- F. Correct or repair all undue settling as evidence by complaints received within one year after final inspection.

106.4 HYDROSEEDING

- A. The Contractor may elect the use of approved hydraulic seeder (s) for the application of seed and mulch.
- B. Hydraulic applications shall not begin until the topsoil preparation and the lime application has been completed, as specified herein. The method shall be in accordance with VDOT specifications.
- C. Hydraulic Seeder(s) shall be equipped with an agitation system capable of maintaining all mixture solids in complete suspension and shall be equipped with spray nozzles that produce an even distribution.
- D. Wood Fiber Mulch shall consist of specially prepared wood cellulose fibers. Mulch shall not contain growth or germination inhibiting factors. Mulch shall be dyed an appropriate color to facilitate visual detection during application.

E. Slurry mix for hydro seeding shall supply the following rates per acre:

Kentucky 31 Tall Fescue (100%) or,	32 pounds
Kentucky 31 Tall Fescue (67%) and,	21.5 pounds
Red Creeping Fescue (33%)	10.5 pounds
Fertilizer 10-20-10	1,000 pounds
Wood Fiber Mulch, or	1,500 pounds
Straw tacked with,	3,000 pounds
Wood Fiber	750 pounds

106.5 INSPECTION AND ACCEPTANCE

106.5.1 At the beginning of the next planting season after that in which the permanent grass crop is sown, the seeded areas will be inspected. Any section not showing dense, vigorous growth at that time shall be promptly reseeded by the Contractor at his own expense. The lawns shall be watered, weeded, cut and otherwise maintained until the end of that planting season, when they will be accepted.

106.6 MEASUREMENT AND PAYMENT

106.6.1 Topsoil and Seeding. Measurement and payment shall be per acre or lump sum as listed on the Bid Schedule. When there is no topsoil and seeding bid item the work is considered incidental to other associated work items.

106.6.2 Sod – when specified sod shall be paid for by square foot.

106.6.3 Maintenance – There shall be no separate payment for maintenance of seeded or sodded areas.