

**CITY OF COLUMBIA ENGINEERING REGULATIONS
PART 20: SPECIFICATIONS FOR SODDING, FERTILIZING, AND
SEEDING**

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PART 20: SPECIFICATIONS FOR SODDING, FERTILIZING, AND SEEDING

20.1 General

- 20.1.1 At locations indicated on the plans, in the special provisions, or where designated by the Engineer, the Contractor shall prepare seed beds, furnish and spread fertilizers, and furnish and plant the seed specified herein on disturbed areas.
- 20.1.2 Any disturbed areas, which had established grass (sod), must be replaced with sod. Any seeding in these areas shall be considered temporary.
- 20.1.3 The Contractor shall water seeded areas and sodded areas until grass has become established.

20.2 Construction Materials

- 20.2.1 Fertilizer shall be standard commercial 10-08-6 or 10-7-4 grade, uniform in composition, free flowing and suitable for application with approved equipment, delivered to the site in bags or other convenient containers, each fully labeled, conforming to applicable State Laws.
- 20.2.2 Lime shall be ground limestone containing all of the finer particles obtained in the grinding process and ground sufficiently fine so that not less than 80 per cent will pass through a No. 8 sieve. The calcium carbonate equivalent must be at least 80 per cent. One or both must be greater than 80 so that the multiplication of the per cent of calcium carbonate equivalent by the per cent of material passing through the No. 8 sieve will be equal to or be in excess of 0.72. The moisture content at the time of shipment must not exceed 8 per cent.
- 20.2.3 The classes of Seeding Mixture shall consist of one or more of the classes listed below. Seeding Mixtures form the specified class shall be designated by the Engineer, based on the season of the year when seeding operations are performed.

20.2.3.1 Seeding Mixtures

Table 20-1. *Seeding Mixtures*

| Locations | Seeds | Lbs./Acre | Season to Use |
|-----------|--------------------|-----------|--------------------------|
| 1 – Sunny | Bermuda, hulled | 25 | February through April |
| | Bermuda, unhulled | 25 | |
| | Rye grass, Italian | 150 | |
| 2 – Sunny | Bermuda, hulled | 25 | May through September 15 |
| | Bermuda, unhulled | 25 | |
| | Millet, brown top | 25 | |

| Locations | Seeds | Lbs./Acre | Season to Use |
|-----------------|--|-----------|-------------------------------|
| 3 – Sunny | Bermuda, unhulled | 60 | September 15 through February |
| | Rye grass, Italian | 150 | |
| 4 – Shady | Substitute carpet grass for Bermuda in 1, 2 and 3 | 40 | All season |
| 5 – Step Slopes | Lespedeza, Sericea (Clay Soils) Add to 1, 2, 3 and 4 | 25 | |
| OR | | | |
| 6 - | Love grass, weeping (Sandy Soils) Add to 1, 2, 3 and 4 | 30 | |
| | Use Dolomitic Limestone at one ton per acre. | | |
| | Use 500 lbs. of 10-10-10 Fertilizer per acre. | | |

20.2.3.2 Hydro Seeding Steep Slopes:

20.2.3.2.1 After proper preparation – use the following:

- ½ lb. unhulled Bermuda seed / 1,000 sq.ft.
- ½ lb. hulled Bermuda seed / 1,000 sq. ft.
- 8 lbs. 12-4-8 Fertilizer / 1,000 sq.ft.
- 35 lbs. wood fibre with tack /1,000 sq.ft.
- *4 lbs. Italian Rye grass seed / 1,000 sq.ft. (September 15 – Mark)
- *Substitute ¾ lb. Brown top Millet / 1,000 sq.ft. from April to September 15

20.3 Construction Methods

20.3.1 After the areas to be seeded have been brought to the proper grades and cleared on all stones, boulders and debris, the areas shall be thoroughly tilled to a depth of at least three (3) inches by discing, harrowing or other approved methods until the condition of the soil is acceptable to the Engineer. If, as a result of a rain, a crust is formed over the prepared surface, the surface shall again be placed in a suitable condition for planting.

20.3.2 Fertilizer shall be distributed uniformly at the rate of four hundred (400) pounds per acre, over the area indicated to be fertilized, and shall be incorporated into the soil to a depth of at least three (3) inches by discing, harrowing or other approved methods acceptable to the Engineer. The incorporation of fertilizer may be a part of the tillage operation specified above.

20.3.3 Lime shall be distributed uniformly on all areas to be fertilized at the rate of one (1) ton to one (1) acre and shall be incorporated in the soil to a depth of at least three (3) inches by discing, harrowing, or other methods acceptable to the Engineer, immediately following or simultaneously with the incorporation of the fertilizer.

20.3.4 Seeding Methods – No seed shall be sown during high winds or when the ground is not in a proper condition for seeding or shall any seed to sown until the purity test has been completed for the seeds to be used, and shows that the seed meets the noxious weed

free requirements. Equipment shall be operated in a manner to insure complete coverage of the entire area to be seeded. When seed or fertilizer is applied with a hydraulic seeder, the rate of application shall be not less than 1,000 gallons of slurry per acre. This slurry shall contain the proper quantity of seed or fertilizer specified per acre. When using a hydraulic seeder, the fertilizer and seed shall be applied in two separate operations.

- 20.3.5 Within 12 hours, all seed areas, shall be rolled at right angles to the run-off with an approved type roller or cultipacker to compact the seed bed and place the seed in contact with the soil. On areas seeded with a hydraulic seeder, rolling shall not be required.
- 20.3.6 The optimum depth for seeding shall be one quarter (1/4) inch.
- 20.3.7 All legumes shall be inoculated with the proper bacteria in the amounts and manner recommended by the manufacturer of the inoculant before sowing or being mixed with other seeds for sowing. The inoculant shall be furnished by the Contractor and shall be approved by the Engineer. The seed shall be sown as soon as possible after inoculation and seed that has been standing more than five hours after inoculation shall be reinoculated before sowing. If legumes are applied by hydro seeder, three times the normal amount of inoculant shall be used. The Contractor shall furnish the inoculant and the cost of furnishing same shall be included in the contract unit price per acre for seeding of the class specified.
- 20.3.8 The classes of seeding mixtures shall consist of one or more of the classes listed. Seeding Mixtures from the specified classes shall be designated by the Engineer, based on the season of the year when seeding operations are performed.
- 20.3.9 Replacement of sodded areas – At locations specified, or shown on the plans, or designated by the Engineer, the Contractor shall remove and carefully store the sod. Upon compaction of the trench in a manner satisfactory to the Engineer, the sod shall be replace in a neat, workman like manner, over a minimum of two (2) inches of topsoil. Any deficiency in sod necessary to restore the surface to a condition comparable to that which existed before construction operations began will be furnished by the Contractor unless other specified.
- 20.4 Testing (Omitted)**
- 20.5 Measurement and Payment**
- 20.5.1 Sodding, Fertilizing and Seeding – Measurement of surfaces to be sodded or seeded shall be made of the area within the right-of-way designated by the Engineer for restoration. Payments shall be made at the contact unit price per acre measured to the nearest one-tenth (0.10) acre as specified. The cost of restoring areas beyond the right-of-way, designated by the Engineer, shall be borne by the Contractor.