

1.0 GENERAL

1.1 Related Work

- 1.1.1 Section 02210 - Site Grading – Rough
- 1.1.2 Section 02930 - Seeding – Irrigated
- 1.1.3 Section 02931 - Seeding – Native
- 1.1.4 Section 02950 - Trees, Shrubs and Ground Covers

1.2 Source Quality Control

- 1.2.1 Inspection and testing of soil materials will be carried out by the Contractor.
- 1.2.2 Contractor shall inform the Consultant of proposed source of topsoil to be supplied.
- 1.2.3 Acceptance of soil materials subject to inspection and/or soil analysis test results. Do not commence work until materials are accepted by the Consultant.

1.3 Scheduling of Work

- 1.3.1 Schedule placing of planting soil and finish grading to permit sodding or seeding operations under optimum conditions.

1.4 Measurement for Payment

- 1.4.1 Preparation of sub-grade for placing of planting soil will be measured in square metres of area prepared.
- 1.4.2 Topsoil stockpiled will not be measured.
- 1.4.3 Supplying and placing planting soil will be measured in cubic metres determined by truck box measurement as loaded. Each truck to have predetermined capacity computed from its box dimensions. Each truck to be loaded to not less than predetermined capacity. Loading in excess of predetermined capacity to allow for settlement will not be required. No deduction will be made for settlement of load during transit provided such settlement is not caused by spillage or leakage.
- 1.4.4 Supply only of fertilizer will be measured in kilograms supplied as ordered by the Consultant in writing.
- 1.4.5 Supply and application of fertilizer will be incidental to the supply and placing of planting soil.

2.0 PRODUCTS

2.1 Materials

2.1.1 Planting soil for planting of trees, shrubs, and ground covers: mix 3 parts topsoil with 1 part peat moss, manure, or compost and 1 part sand. Incorporate 16-32-6 controlled release, sulfur coated urea (SCU) or ammonium sulfate, fertilizer at a rate of 0.5 kg per 10 cubic metres of planting soil at time of placing.

2.1.2 Planting soil for seeded or sodded areas: mix 3 parts topsoil with 1 part peat moss, manure, or compost and 1 part sand. Incorporate 16-32-6 controlled release, sulfur coated urea (SCU) or ammonium sulfate, fertilizer at a rate of 2.5 kg per 100 m² or as recommended by soils test.

2.1.3 Topsoil: friable, neither heavy clay nor of very light sandy nature consisting of:

| <u>Name of Separate</u> | <u>Diameter, mm</u> | <u>Percentage in Soil</u> |
|-------------------------|---------------------|---------------------------|
| Sand | 0.050 – 2.000 | 20% - 45% |
| Clay | 0.000 – 0.002 | 27% - 40% |
| Organic matter | N/A | 4% - 6% |

.1 Soil pH to range from 6.5 – 8.0 inclusive.

.2 Salinity level as measured by conductivity of extract should be less than 2mS/cm.

.3 Soil shall be free of any roots, rhizomes, living vegetation, weed seeds and quack grass.

.4 Soil shall be free of any clay lumps, coarse sand and gravel 2mm larger, and of any other foreign matter.

2.1.4 Peat Moss

.1 Derived from partially decomposed fibrous or cellular stems and leaves of species of Sphagnum Mosses. Sedge Peat is not permitted.

.2 Elastic and homogeneous, brown in colour.

.3 Free of wood and deleterious material which could prohibit growth.

.4 Shredded particle minimum size: 5 mm.

2.1.5 Manure

- .1 Manure shall be well decomposed cattle excrement, rich in organic matter and humus containing balanced proportions of nitrogen, phosphorus and potash. It shall be reasonably free of living vegetation, weed seeds, quack grass or bromegrass rhizomes. It shall be in a pulverized, friable condition and shall not contain any fresh, or "green", manure, clay, silt, gravel or other foreign material.

2.1.6 Sand

- .1 Sand shall be coarse and sharp with grains measuring from 0.5 to 1.5mm.

2.1.7 Fertilizer

- .1 Formulation ratio and application rate to be determined by the Contractor based on recommendation of approved soils test. Submit test results to Consultant for approvals.
- .2 Fertilizer shall be sulfur based sulfur coated urea (SCU) or ammonia sulfate, and controlled release.

2.2 Testing

- 2.2.1 Topsoil: Test for pH level, salinity and nutrients; one test per 300 m³ of material used.
- 2.2.2 Sand: One gradation test per 100m³ of material used.
- 2.2.3 Planting Soil: Test for pH level, salinity, nutrients, organic matter, particle size (texture) and fertilizer recommendations. One test per 500m³ of material placed.

3.0 EXECUTION

3.1 Preparation of Existing Grade

- 3.1.1 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage. Remove soil contaminated with toxic materials. Dispose of removed materials as directed by the Consultant.
- 3.1.2 Cultivate entire area which is to receive topsoil to depth of 100 mm. Repeat cultivation in those areas where equipment used for hauling and spreading has compacted soil.
- 3.1.3 Remove surface debris, roots, vegetation branches and stones in excess of 40 mm diameter.

3.2 Spreading of Topsoil/Planting Soil

- 3.2.1 Spread topsoil after the Consultant has inspected and approved subgrade.
 - 3.2.2 Spread topsoil with adequate moisture in uniform layers over approved, unfrozen subgrade, where planting is indicated.
-

- 3.2.3 For sodded areas keep topsoil 15 mm below finished grade.
- 3.2.4 Apply planting soil mix to follow minimum consolidated depths:
 - .1 185 mm planting soil for sodded areas.
 - .2 200 mm planting soil for seeded areas.
 - .3 200 mm planting soil for perennial beds.
 - .4 500 mm planting soil for shrub beds.
- 3.2.5 Manually spread planting soil around trees, shrubs and obstacles.
- 3.3 Application of Fertilizer
 - 3.3.1 Spread fertilizer uniformly over entire area of planting soil at manufacturer's recommended rate of application, rate determined on basis of soil sample test, and as directed by the Consultant.
 - 3.3.2 Mix fertilizer thoroughly to full depth of the planting soil.
- 3.4 Finish Grading
 - 3.4.1 Fine grade and loosen topsoil. Eliminate rough spots and low areas to ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
 - 3.4.2 Roll to consolidate planting soil for areas to be seeded or sodded leaving surface smooth, uniform, firm against deep foot printing, and with a fine loose texture to approval of the Consultant.
- 3.5 Restoration of Stockpile Sites
 - 3.5.1 Restore stockpile sites acceptable to the Consultant.
- 3.6 Surplus Material
 - 3.6.1 Legally dispose of materials not required off site as directed by the Consultant.