

SECTION 02920 - LAWNS AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes **seeding and sodding**.
- B. Verify with CVS Project Manager on which method to be used.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.4 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding."

PART 2 - PRODUCTS

2.1 SEED

- A. Seed Species: State-certified seed of grass species, as follows:
1. Full Sun: **<Insert species.>**
 2. Sun and Partial Shade: Proportioned by weight as follows:
 - a. **<Insert percentage>** percent **<Insert species.>**.
 - b. **<Insert percentage>** percent **<Insert species.>**.
 - c. **<Insert percentage>** percent **<Insert species.>**.
 3. Shade: Proportioned by weight as follows:
 - a. **<Insert percentage>** percent **<Insert species.>**.
 - b. **<Insert percentage>** percent **<Insert species.>**.
 - c. **<Insert percentage>** percent **<Insert species.>**.

2.2 TURFGRASS SOD

- A. Turfgrass Sod: Number 1 Quality/Premium, including limitations on thatch, weeds, diseases, nematodes, and insects, complying with TPI's "Specifications for Turfgrass Sod Materials" in its "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.
- B. Turfgrass Species: **<Insert species.>**
- C. Turfgrass Species: Sod of grass species as follows:
1. Full Sun: **<Insert species.>**
 2. Sun and Partial Shade: Proportioned by weight as follows:
 - a. **<Insert percentage>** percent **<Insert species.>**.
 - b. **<Insert percentage>** percent **<Insert species.>**.
 - c. **<Insert percentage>** percent **<Insert species.>**.
 3. Shade: Proportioned by weight as follows:
 - a. **<Insert percentage>** percent **<Insert species.>**.
 - b. **<Insert percentage>** percent **<Insert species.>**.
 - c. **<Insert percentage>** percent **<Insert species.>**.

2.3 PLANTING MATERIALS

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth. Import topsoil from either of the following sources:
1. Topsoil Source: Reuse surface soil stockpiled on-site and supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Verify suitability of stockpiled surface soil to produce topsoil.
 2. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources.
- B. Inorganic Soil Amendments:
1. Lime: ASTM C 602, Class T, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.
 2. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Organic Soil Amendments
1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8.
 2. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with pH range of 3.4 to 4.8.
 3. Peat: Finely divided or granular texture, with pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having water-absorbing capacity of 1100 to 2000 percent.
 4. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
- D. Fertilizer:
1. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.
 2. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
 3. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - a. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soils reports from qualified testing agency.

4. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - a. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soils reports form qualified testing agency.

E. Mulches:

1. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
2. Peat Mulch: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with pH range of 3.4 to 4.8.
3. Peat Mulch: Finely divided or granular texture, with pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having water-absorbing capacity of 1100 to 2000 percent.
4. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8.

2.4 PLANTING SOIL MIX

- A. Planting Soil Mix: Mix topsoil with the following soil amendments **[and fertilizers]** in the following quantities:
 1. Ratio of Loose Compost to Topsoil by Volume: **[1:4] [1:3] [1:2] <Insert ratio.>**
 2. Ratio of Loose Peat to Topsoil by Volume: **<Insert ratio.>**
 3. Ratio of Loose Wood Derivatives to Topsoil by Volume: **<Insert ratio.>**
 4. Weight of Lime per 1000 Sq. Ft. (92.9 Sq. m): **<Insert weight.>**
 5. Weight of Sulfur per 1000 Sq. Ft. (92.9 Sq. m): **<Insert weight.>**
 6. Weight of Bonemeal per 1000 Sq. Ft. (92.9 Sq. m): **<Insert weight.>**
 7. Weight of Superphosphate per 1000 Sq. Ft. (92.9 Sq. m): **<Insert weight.>**
 8. Weight of Commercial Fertilizer per 1000 Sq. Ft. (92.9 Sq. m): **<Insert weight.>**
 9. Weight of Slow-Release Fertilizer per 1000 Sq. Ft. (92.9 Sq. m): **<Insert weight.>**

PART 3 - EXECUTION

3.1 LAWN PREPARATION

- A. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 6 inches (150 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 1. Apply superphosphate fertilizer directly to subgrade before loosening.
 2. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.

3. Spread planting soil mix to a depth of 6 inches (150 mm) but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- B. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 2. Loosen surface soil to a depth of at least of 6 inches (150 mm). Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 6 inches (150 mm) of soil. Till soil to a homogeneous mixture of fine texture.
 3. Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, trash, and other extraneous matter.
 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch (13 mm) of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.
- D. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- E. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

3.2 SEEDING

- A. Sow seed at the rate of [2 lb/1000 sq. ft. (0.9 kg/92.9 sq. m)] [3 to 4 lb/1000 sq. ft. (1.4 to 1.8 kg/92.9 sq. m)] [5 to 8 lb/1000 sq. ft. (2.3 to 3.6 kg/92.9 sq. m)] <Insert rate>.
- B. Rake seed lightly into top 1/8 inch (3 mm) of topsoil, roll lightly, and water with fine spray.
- C. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre (42 kg/92.9 sq. m) to form a continuous blanket 1-1/2 inches (38 mm) in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
- D. Protect seeded areas from hot, dry weather or drying winds by applying peat mulch within 24 hours after completing seeding operations. Soak and scatter uniformly to a depth of 3/16 inch (4.8 mm) and roll to a smooth surface.

3.3 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across angle of slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches (38 mm) below sod.

3.4 SATISFACTORY LAWNS

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding **[90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm)]** <Insert coverage>.
- B. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- C. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

END OF SECTION 02920

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