

**SECTION 32 92 00**

**TURF AND GRASSES**

**PART 1 GENERAL**

**1.01 WARRANTY**

- A. Warranty sodded areas against failure to take root and display vigorous growth for a period of 24 months from the date of final acceptance.
- B. During maintenance period, replace sod areas that die due to natural causes, poor maintenance procedures, or which in A/E's opinion are unhealthy. The A/E shall have the final decision as to areas of replacement.
- C. Install replacements as originally specified.
- D. Warranty for Seeded Areas: Warrant seeded areas to be in a healthy, vigorous growing condition, and for consistency and completion of coverage at the end of a period of 24 months from date of acceptance as a full stand of grass. Any area 1' by 1' or larger not showing established seedlings and acceptable coverage shall be re-seeded until grass coverage is acceptable.
- E. Non-irrigated seeded areas must have acceptable establishment by end of warranty period and will be accepted upon proof through inspection and submittals that the seeding has been accomplished as specified. Acceptance is a visual evaluation by A/E indicating a uniform ground cover normally to be expected for the specific condition.
- F. Warranty period and re-seeding requirement will be extended until final warranty acceptance.

**PART 2 PRODUCTS**

**2.01 FERTILIZER**

- A. Apply commercial nitrogen fertilizer as specified in Section 32 91 13. Apply after fine grading and prior to compaction.

**2.02 SEED**

- A. Furnish seed bags or containers clearly labeled to show the name and address of the supplier, the seed name, the lot number, net weight, the percent of weed seed content, and the guaranteed percentage of purity and germination.
- B. Seed shall be free from noxious weed seeds as determined by the State of Colorado.
- C. The Contractor shall submit to A/E certification that the seed furnished is from a lot that has been tested within six (6) months prior to the date of delivery.
- D. Seed shall be a hardy strain.
- E. Indicate rates of per live seed (PLS) per acre.
- F. Computations for quantity of seed required shall be based on the percent of purity and percent of germination. Pounds of seed x purity x germination = pounds of per live seed (PLS).
- G. Seed and seed labels shall conform to current State and Federal regulations and will be subject to the testing provisions of the Association of Official Seed Analysis.
- H. Seed mixtures and rates:

1. Dryland Seed Mix: (80.0 lbs./acre total application; by volume (1 $\frac{1}{8}$  lbs./1,000 sq. ft.))

<b>Common Name</b>	<b>Lbs./Acre</b>	<b>%Purity</b>	<b>% Germ</b>	<b>% Max. Weeds</b>
Rueben's Canada Bluegrass	20.0 (25%)	90.0	85.0	0.15
Ephraim Crested Wheatgrass	18.0 (23%)	90.0	85.0	0.25

Sheep Fescue	15.0 (19%)	85.0	90.0	0.25
Sodar Streambank Wheatgrass	15.0 (19%)	90.0	85.0	0.20
Hachita Blue Grama	12.0 (14%)			0.15

2. Dryland Seed Mix Alternative: (75.0 lbs./acre total application; by volume (1 ¼ lbs./1,000 sq. ft.))

Common Name	Lbs./Acre	%Purity	% Germ	% Weeds	Max.
Nordan Crested Wheatgrass	20.0 (26.5%)	0.92	90.0	0.20	
Sodar Streambank Wheatgrass	15.0 (20%)	0.90	85.0	0.25	
Candy Bluegrass	15.0 (20%)	0.95	90.0	0.20	
Lovington Blue Grama	15.0 (20%)	0.92	90.0	0.25	
Cody Buffalo Grass	10.0 (7.5%)	0.90	85.0	0.25	

3. Wetland Seed Mix: (20-25 ibls./acre)

- a) 50% Reed Canary Grass
- b) 25% Fleet Meadow Brome
- c) 20% Garrison Foxtail (coated)
- d) 5% Climax Timothy

**2.03 TOPSOIL**

- A. Refer to Section 32 91 13– Landscaping for topsoil requirements.

**2.04 SOD**

- A. Sod: Strongly rooted sod, not less than one (1) year old, free of weeds and undesirable native grasses and machine cut to pad thickness of 3/4” + 1/4”, excluding top growth. After April 15 and prior to October 31 provide sod capable of vigorous growth and development. After October 31, installed sod may be in dormant condition.
  - 1. Provide sod of uniform pad or jumbo roll sizes with maximum 5” deviation in either length or width. Broken pads or pads with uneven ends will not be accepted. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper ten percent (10%) of pad will be rejected. Jumbo roll sod will be acceptable upon approval by Owner’s Representative. Jumbo roll sod shall not include structural netting.
- B. Sod: Colorado grown A-34 bluegrass blend suitable for vigorous athletic field and general play use. Blend shall contain a minimum of three improved varieties.
- C. In certain situations, higher drought-tolerant grasses such as tall fescue (or approved equal) will be considered for water-saving measures. Subject to Project Manager/QAQC approval.

**2.05 ACCESSORIES**

- A. Mulching Material for Seeding: Wood cellulose fiber free of growth or germination inhibiting ingredients, dyed green for visual metering, 12% maximum water content, 1 ½-2 lbs. weight per cubic foot, pH 4.5-7.0.
- B. Mulch binder: Terratack III, 120 lbs./acre.
- C. Erosion control netting: Jute netting, 48” ± 1 inch wide, 75 yds. long, consisting of open weave, smolder resistant, unbleached single jute yarn not to vary in thickness by more than ½ normal diameter.
- D. Staples: No. 11 gauge steel wire formed into a “U” shape eight inches (8”) long with a one-inch crown.

- E. Cedar shake stakes (to secure sod on areas of slope over 3:1): ± 1" x 6" strips of cedar roofing shingles.

### **PART 3 EXECUTION**

#### **3.01 INSTALLATION**

- A. Coordination: Plant trees and shrubs after final grades are established and prior to planting of lawns.
- B. Time delivery so that sod will be placed within 24 hours after stripping at sod farm and within 12 hours of delivery to site. Protect sod against drying and breaking of rolled strips.
- C. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Tamp or roll lightly to insure contact with subgrade. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent grass.
- D. Beginning work of this section means acceptance of existing site conditions. Soil preparation and final grading shall be approved prior to seeding.
- E. Protect existing underground improvements from damage. Flag surface items for location. Ensure no compacting or settlement will occur.
- F. Prepare soil and fertilize as indicated elsewhere in the DPS standards.
- G. In irrigated areas, moisten prepared seed areas before planting to bring soil moisture to ideal soil moisture level and seeding condition.
- H. Bring grades next to curbs, mow edge, sidewalks, and pavements to specified levels.
- I. Water sod thoroughly with irrigation system immediately after laying to provide maximum root zone saturation. Do not lay sod which will not receive water within one (1) hour.

#### **3.02 SEEDING**

- A. Grass seeding:
  - 1. Complete within the following dates.
    - a) Spring seeding: From March 1 to May 15.
    - b) Fall seeding: From August 15 to October 1.
    - c) Special conditions may warrant a variance in the specified seeding dates. A written request shall be submitted stating the special conditions.
- B. Drill Seeding: Dryland grasses areas shall be drill seeded.
  - 1. Exception: Small areas inaccessible to seed drilling equipment. Such areas shall be broadcast seeded, using drop or whirly-bird type spreader.
- C. Specify hydro seeding.
- D. Specify mulch application.
- E. Specify erosion control.

**END OF SECTION 32 92 00**