

**SECTION 02931
NATIVE GRASSES SEEDING**

PART 1 - GENERAL

1.1 DESCRIPTION

A. Provide seeded lawns as shown and specified. Renovated lawn area refer to existing lawn areas disturbed by construction.

1. Soil Preparation
2. Seeding lawns, athletic fields, and other indicated areas
3. Maintenance

B. Related Sections:

1. SECTION 02815 - Irrigation System
2. SECTION 02920 – Soil Preparation

1.2 QUALITY ASSURANCE

A. Comply with Section 02920 requirements.

1.3 SUBMITTAL

A. Submit seed vendor's certification for required grass seed mixture, indicating percentage by weight, and percentages of purity, germination, and weed seed for each grass species.

1. Specified native seed mix – indicated

B. Submit the following material samples:

1. Custome native seed mix

C. Warranty for Native Seed Areas: At completion of work, furnish written warranty to Owner based upon requirements as specified.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver seed and fertilizer materials in original unopened containers, showing weight, analysis, and name of manufacturer. Store in a manner to prevent wetting and deterioration.

1.5 PROJECT CONDITIONS

- A. Work notification: Notify owner's authorized representative at least seven (7) working days prior to start of seeding operations.
- B. Protect existing utilities, paving, and other facilities from damage caused by seeding operations.
- C. Perform seeding work only after planting and other work affecting ground surface has been completed.
- D. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.
- E. Provide hose and lawn watering equipment as required.
- F. The irrigation system will be installed prior to seeding. Locate, protect, and maintain the irrigation system during seeding operations. Repair irrigation system components during seeding operations at Contractor's expense.

1.6 WARRANTY

- A. Provide a uniform stand of grass by watering, mowing, and maintaining seeded areas until final acceptance. Reseed areas, with specified materials, which fail to provide a uniform stand of grass until all affected areas are accepted by the Consultant and the Owner.

PART 2 - PRODUCTS

2.1 PRODUCTS

2.2 MATERIALS

A. Native seed:

1. Fresh, clean, and new crop mixture mixed by an approved method.
2. All irrigated seed areas are to be the following custom blended native seed mix:
 - 30% Blue grama – *Bouteloua gracilis*
 - 20% Western Wheatgrass – *Agropyron smithii*
 - 20% Sand Dropseed – *Sporobolus cryptandrus*
 - 15% Hairy Grama – *Bouteloua hirsute*
 - 10% Galleta – *Hilaria jamesii*
 - 5% Wildflower Seed Mix consisting of at least four species at not more than 25% each of the following acceptable perennial wildflowers:

Golden Aster – *Heterotheca villosa*
Desert Four O'clock – *Mirabilis multiflora*
Scarlet Globemallow – *Sphaeralcea coccinea*
Blazing Star – *Menizelia oligosperma*
Western Wallflower – *Eysimum asperum*
Fireweed – *Liatris angustifolium*
Gayfeather – *Liatris punctata*
Blanket Flower – *Gallardia aristata*
Blue Flax – *Linum perenne lewisii*

3. Variations to seed mix will be acceptable based on topsoil analysis. Variations are to be approved by Landscape Architect.
4. Seeding Rate: 40 lbs/acre for Hydroseeding. Other seeding methods to be reviewed and approved by Landscape Architect and Owner.

B. Water: Free of substance harmful to seed growth. Hoses or other methods of transportation furnished by Contractor.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine finish surfaces, grades and depth. Do not start seeding work until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Limit preparation to areas which are ready to be seeded immediately.

B. The contractor shall prepare the subgrade to all areas to be seeded by discing or rototilling the soil to a depth of six (6) inches. No organic amendments will be applied to dryland seed grass area.

C. Prior to the second tilage, the fertilizer shall be applied to the surface of the rough subgrade of the areas to be seeded and tilled during the second operation. When completed, the soil shall be firmed by rolling and float drag, followed by steel raking, to provide for the proper seeded surface. The seed bed shall be totally free from rock or clay clods over one (1) inch in diameter.

3.3 INSTALLATION

A. Seeding:

1. Seed immediately after preparation of bed. Seed irrigated seed areas between April 1 - August 15 and dryland areas between October 1 - April 15 or at such other times acceptable to the Landscape Architect.

2. Seed indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.

3. Native Seed:

a. Do not use wet seed or seed which is moldy or otherwise damaged in transit or storage. Deliver seed to the job site in the original unopened containers and present certified labels to the Consultant prior to opening containers.

b. Seeding shall be done by means of broadcast seeding. Seeds shall be uniformly sown and raked to a depth of approximately 1/4".

3.4 MAINTENANCE, GUARANTEE, AND ACCEPTANCE

A. Maintenance Period and Guarantee:

1. The maintenance and warranty period shall begin immediately after each area is seeded until final acceptance of the project. During this time, the contractor shall be responsible for watering, if needed, mowing, spraying, weeding, and all related work and costs as necessary to insure that seeded areas are in a vigorous growing condition until final acceptance. The Landscape Architect will direct the contractor on what seeded areas need to be replaced at the final walk-through.

2. The contractor shall, for a period of one (1) year, monitor his work once every two months to verify that major settlement has not taken place and that no seeded area has become waterlogged in settled swales or other areas. Should settlement occur, the contractor shall repair damage according to these specifications.

3. The contractor shall maintain the seeded areas until all work on the contract has been completed and accepted. Maintenance shall consist of, in addition to watering, mowing, weed control, and protection from vandalism, the repair of areas damaged by erosion protection from vandalism, the repair of areas damaged by erosion or wind.

Such areas shall be repaired during the maintenance period at no expense to the Owner to re-establish the condition and grade of the soil prior to application of the mulch and shall be refertilized, reseeded, and remulched as directed. Major repair of areas due to the work or failure of other contractor's systems or work shall be by that contractor who damaged the work, provided that during this maintenance period the lawn contractor notifies the Owner's authorized representative in writing of such damage within ten (10) days of the occurrence. Major damage due to vandalism (major damage is defined as damaged costing over \$5,000.00 in time and

materials) in any one incident shall be borne by the Owner, again provided that notification was made within ten (10) days as specified herein. After receiving final acceptance, maintenance shall become the responsibility of the Owner.

4. The seeded areas shall be accepted on the basis of having a uniform plant growth over the entire seeded area. Two (2) months after seeding, the areas seeded shall be reviewed by the Landscape Architect and the Contractor. Any areas (as determined by the Landscape Architect) where the seed has failed to germinate shall be reseeded and raked to cover the seed. Any area where the seed has failed to grow, reseeding shall be at the Contractor's expense until grass is established and accepted. Acceptable uniform plant growth shall be defined as when the scattered bare spots, not greater than 4 square inches, do not exceed 5% of the seeded area.

3.6 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from seeding operations.

END OF SECTION 02931