

SEEDING

1.0 **SEEDING - GENERAL**

1.1 **WORK INCLUDED**

- 1.1.1 This section covers the seed requirements, the seed-bed operation, and the seeding and maintenance of the seeded area.

2.0 **MATERIALS**

- 2.1 The grass seed shall meet the requirements of The Seed Act for Canada No. 1 Seed, and shall be mixed to the following mixture by weight:

GRASS SEED MIXTURES

Alone or as part of another seed mixture the following varieties will be Canada Certified #1 Seed.

A. PARK/ BOULEVARD SEED MIXTURE

- 60% Creeping Red Fescue "Boreal"
40% Kentucky Blue Grass Mixture (see *Kentucky Blue Grass Mixture*)

B. SPORTSFIELD SEED MIXTURE

- 60% Creeping Red Fescue "Boreal"
40% Kentucky Blue Grass Mixture (see *Kentucky Blue Grass Mixture*)

*Includes cover crop of 5% Fall Gold Annual Rye Grass to be included if required due to environmental factors such as fall seeding.

Kentucky Blue Grass Mixture

- 25% Nugget Kentucky Blue Grass
25% Touchdown Kentucky Blue Grass
25% Baron Kentucky Blue Grass
25% Banff

C. DRYLAND SEED MIXTURE

The following is the seed mix used in land reclamation for road right of way and disturbed

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areas.

Slender Wheat	30%	Western Wheat	20%
Green Needle	15%	June Grass	10%
Streambank Wheat	10%	Blue Grama	10%
Indian Rice	5%	Cover Crop	*

- Note: Cover crop to be approved on a site-specific basis. Erosion and time of year that the seeding will occur will influence the seed variety used.

D. NATIVE GRASS SEED FOR COULEE RESTORATION

Prior to formulating a native grass seed mix, a site evaluation is essential to ensure the mix corresponds with the environmental conditions of the site.

GRASS SPECIES		
Common Name	Botanical Name	Conditions
Western Wheat Grass	Agropyron Smithii	Dry / moist
Sand Reed Grass		Dry / sandy
June Grass	Koeleria Macrantha	Dry
Blue Grama	Bouteloua Gracilis	Dry
Canada Wild Rye		Wet / moist
Green Needlegrass	Stipa Viridula	Dry / moist
Northern Wheatgrass		
Slender Wheatgrass	Agropyron Trachycaulum	
Needle & Thread Grass	Stipa Comata	Dry
Sandbergs Blue Grass	Poa Sandbergii	Moist
Slough Grass	Beckmannia Syzigachne	Moist (<i>but rare in Lethbridge</i>)
Alkali Grass	Spartina Gracilis	Moist (<i>but rare in Lethbridge</i>)
Green Needle	Stipa Vuridula	Moist / dry
Northern Wheat Grass	Agropyron Dasystachym	Moist / dry
Slender Wheat Grass	Agropyron Trachycaulum	Moist / dry
Western Wheat Grass	Agropyron Smithii	Moist / dry

E. NATIVE WILDFLOWER SEED

Prior to formulating a "native wildflower" mix, a site evaluation is essential to ensure the mix corresponds with the environmental conditions of the site.

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Botanical Name	Common Name	Condition
Butierrezia Sarothrae	Broomweed or Matchbrush	Dry
Eriogornum Flavum	Sulfur or Umbrella Plant	Dry
Gaillardia Ariostata	Brown Eyed Susan	Moist
Hymenoxis Acaulis	Butte Marigold	Dry
Hymenoxis Richardsonii	Colorado Rubber Plant	Dry
Linum Rigidum	Yellow Flax	Dry
Oxtropis Sericea	Locoweed	Dry
Ratibida Columnifera	Prairie Cone Flower	Dry
Solidago Missouriensis and Solidago Mollis	Goldenrod	Dry / moist
Thermopsis Rhombifolia	Golden Bean	Dry / moist
Anemone Patens	Prairie Crocus	Moist
Aster Laevis	Smooth Aster	Dry / Moist
Astragalus Adsurgens	Astragalus Adsurgens	
Campanula Rotundifolia	Harebell	Moist
Geum Triflorum	Three Flowered Avens	Moist
Hedysarum Boreale	Northern Hedysarum	Dry / moist
Liatris Punctata	Blazingstar	Dry
Linum Perenne	Blue Flax	Dry
Malvastrum Coccineum	Scarlet Mallow	Dry
Monarda Fisulosa	Bergamot	Moist
Penstemon Nitidus	Smooth Blue Beard Tongue	Dry
Petalostemon Purpureum	Purple Prairie Clover	Dry

- 2.2 The seed mixture shall be mixed and supplied by a recognized seed house with the tested rates for germination of not less than the government standards rated. Written evidence shall be forwarded to the Engineer prior to seeding.
- 2.3 The Engineer may test the seed for purity and germination at his own expense.
- 2.4 All seed shall be stored in a dry weatherproof storage place and shall be protected from damage by heat, rodents or other causes.

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- 3.1 The surface shall be floated to achieve the design elevations after the fertilizer has been spread and cultivated.

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- 3.2 The seeding shall be carried out during calm conditions when the wind is less than 8 km/h.
- 3.3 The seed shall be applied by seeding with a “Brillion” Seeder in two (2) perpendicular directions at the total rate of 110 kg/hectare(100 lb/acre) (100 lbs per acre) or by a hand broadcast seeder followed by raking.
- 3.4 The seeded area shall be floated and rolled to a smooth surface to a tolerance of 15 mm in 3000 mm when measured in any direction.
- 3.5 The Contractor shall notify the Engineer in writing that the seeding has been completed.
- 3.6 Deficiency Resolution for Irrigated Areas

Re-apply seed to all areas that do not show a uniform stand of grass. Perform such reapplication to allow for establishment prior to Substantial Performance of the work. For irrigated areas, a uniform stand of grass will be considered growth that shows no bare spots greater than 50 mm by 50 mm in size and provides a minimum of ninety-five percent ground cover.

- 3.7 Deficiency Resolution for Non-Irrigated Areas

Re-apply seed to all areas that do not show a uniform stand of grass. Perform such reapplication to allow for establishment prior to Substantial Performance of the work. For non-irrigated areas, a uniform stand of grass will be considered growth that shows no bare spots greater than 150 mm by 150 mm in size and provides a minimum of ninety percent ground cover.

4.0 **MAINTENANCE OF SEEDED AREAS**

- 4.1 Maintenance of turf areas shall be provided by the Contractor and shall include all measures necessary to establish and maintain grass in a healthy and vigorous growing condition.
- 4.2 Watering shall be carried out when the seed is first applied to prevent grass and the underlying soil from drying out.