

## **PART 1 GENERAL**

### **1.1 SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Provide product data for:
    - .1 Seed.
    - .2 Fertilizer.

### **1.2 QUALITY ASSURANCE**

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

### **1.3 SCHEDULING**

- .1 Schedule seeding to coincide with topsoil installation work.

### **1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 Construction/Demolition Waste Management and Disposal.
- .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by Departmental Representative.
- .3 Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

## **PART 2 PRODUCTS**

### **2.1 GRASS SEED**

- .1 Grass seed shall be certified Canada No. 1 grade to Government of Canada Seeds Regulations and having minimum germination of 75% and minimum purity of 97% and consist of:
  - .1 100%: Seed at 60kg per hectare
  - .2 25% "Elbee" Northern Wheatgrass or Agropyron Dasystachum.
  - .3 25% "Adanac" Slender Wheatgrass or Agropyron Trachycaulum.
  - .4 15% "Tufted Hairgrass" or Deschampsia Caespitosa: Nutraceoating 50%.
  - .5 20% "Nakiska" Sheeps Fescue or Festuca Ovina.

- .6 15% "Alpine Bluegrass" or Poa Alpina.
- .2 If Grass Seed Mixture is unavailable due to a demand shortage, a generic Western Canada Parks Seed Mixture is acceptable. Departmental Representative to approve the alternative seed mixture at the time of initial start-up meeting.

## **2.2 WATER**

- .1 Free of impurities that would inhibit germination and growth.
- .2 Available from standpipes on site or as directed by Departmental Representative.

## **2.3 FERTILIZER**

- .1 To Canada "Fertilizers Act" and "Fertilizers Regulations".
- .2 Complete synthetic fertilizer with guaranteed minimum analysis as specified.

# **PART 3 EXECUTION**

## **3.1 QUALITY OF WORK**

- .1 Do not perform work under adverse field conditions as determined by Departmental Representative.
- .2 Remove and dispose of weeds, debris, stones 50mm in diameter and larger, soil contaminated by oil, gasoline and other deleterious materials, outside of Banff National Park, as directed by Departmental Representative.

## **3.2 SEED BED PREPARATION**

- .1 Verify that grades are correct. If discrepancies occur, notify Departmental Representative and do not commence work until instructed by Departmental Representative.
- .2 Fine grade surface free of humps and hollows to smooth, even grade, to contours and elevations indicated, to tolerance of plus or minus 15mm, surface to drain naturally.
- .3 Cultivate fine grade approved by Departmental Representative to 25 mm depth immediately prior to seeding.

## **3.3 SEED PLACEMENT**

- .1 For mechanical seeding:
  - .1 Use "Brillion" type mechanical landscape seeder which accurately places seed at specified depth and rate and rolls in single operation.
  - .2 Use equipment and method acceptable to Departmental Representative.
- .2 For manual seeding:
  - .1 Use "Cyclone" type manually operated seeder.

- .2 Use manually operated, water ballast, landscaping type, smooth steel drum roller. Ballast as directed by Departmental Representative.
- .3 Use equipment and method acceptable to Departmental Representative.
- .3 On cultivated surfaces, sow seed uniformly at rate of:
  - .1 1.0 kg/ 100m<sup>2</sup>
- .4 Blend applications 150 mm into adjacent grass areas to form uniform surfaces.
- .5 Sow half of required amount of seed in one direction and remainder at right angles as applicable.
- .6 Incorporate seed by light raking in cross directions.
- .7 Consolidate mechanically seeded areas by rolling area if soil conditions warrant or if directed by Departmental Representative with equipment approved by Departmental Representative immediately after seeding.

### **3.4 MAINTENANCE DURING ESTABLISHMENT PERIOD**

- .1 Perform following operations from time of seed application until acceptance by Departmental Representative:
  - .1 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.
  - .2 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
  - .3 Cut grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Departmental Representative.
  - .4 Fertilize seeded areas after first cutting in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
  - .5 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.

### **3.5 FINAL ACCEPTANCE**

- .1 Seeded areas will be accepted by Departmental Representative provided that:
  - .1 Areas are uniformly established and turf is free of rutted, eroded, bare or dead spots and free of weeds.
  - .2 Areas have been cut at least twice.
  - .3 Areas have been fertilized.
- .2 Areas seeded in fall will be accepted in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

### **3.6 MAINTENANCE DURING WARRANTY PERIOD**

- .1 Perform following operations from time of acceptance until end of warranty period.

- .1 Water seeded area to maintain optimum soil moisture level for continued growth of grass. Control watering to prevent washouts.
- .2 Repair and reseed dead or bare spots to satisfaction of Departmental Representative.
- .3 Cut grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Departmental Representative.
- .4 Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
- .5 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.

### **3.7 CLEANING**

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION**