

PART 1 - GENERAL

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|------------------------------------|----|---|
| 1.1 References                     | .1 | CGSB 15-GP-1M-80, Calcium Chloride.   |
| 1.2 Measurement for Payment        | .1 | Supply and application of water for dust control is incidental to the work, to be included in overall tendered price. |
| 1.3 Delivery, Storage and Handling | .1 | Supply potable water in quantities and at times as directed by Department Representative.                             |

PART 2 - PRODUCTS

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| 2.1 Materials | .1 | Water: potable to Department Representative's approval. |
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PART 3 - EXECUTION

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| 3.1 Application | .1 | Apply water with equipment approved by Department Representative at rate of 0.5 to 5.0 l/m <sup>2</sup> as appropriate when directed by Department Representative. |
|                 | .2 | Apply water with distributors equipped with spray system to ensure uniform application and with means of shut-off.   |

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END

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PART 1 - GENERAL

- 1.1 Scope of Work      .1    This Section specifies seed, mulch, slurry preparation and application, and maintenance for hydraulic seeding.
- 1.2 Related Sections    .1    Section 01 35 44 - Environmental Protection Procedures
- .2    Section 31 23 13 - Rough Grading
- .3    Section 32 91 21 - Topsoil and Finish Grading
- 1.3 Submittals           .1    Provide product data for:
- .1    Seed
- .2    Mulch
- .3    Tackifier
- .4    Fertilizer
- .2    Submit in writing to Consultant 7 days prior to commencing work:
- .1    Volume capacity of hydraulic seeder in litres.
- .2    Amount of material to be used per tank based on volume.
- .3    Number of tank loads required per hectare to apply specified slurry mixture per hectare.
- 1.4 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.
- .3    Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

- 1.5 Scheduling
  - .1 Schedule hydraulic seeding to coincide with preparation of soil surface.
  - .2 Schedule hydraulic seeding to be completed not later than September 30 without written approved from Consultant.
- 1.6 Waste Management and Disposal
  - .1 Separate and recycle waste materials.
  - .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by Municipality.
  - .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 Seed
  - .1 "Canada pedigreed grade" in accordance with Government of Canada Seeds Act and Regulations.
  - .2 Mixture composition:
    - .1 60% Creeping Red Fescue
    - .2 20% Hard Fescue
    - .3 10% Perennial Rye
    - .4 10% White Clover
- 2.2 Mulch
  - .1 Specially manufactured for use in hydraulic seeding equipment, non-toxic, water activated, green colouring, free of germination and growth inhibiting factors with following properties:
    - .1 Made from wood cellulose fibre
    - .2 Organic matter content: 95% plus or minus 0.5%
    - .3 Value of pH: 6.0
    - .4 Potential water absorption: 900%
- 2.3 Tackifier
  - .1 Water soluble vegetable carbohydrate powder.

- 2.4 Water                      .1    Free of impurities that would inhibit germination and growth.
- .2    Obtain water from outside Park Boundaries.  
                                        Extraction of water from Dalvay Lake is prohibited.
- 2.5 Fertilizer                .1    To Canada "Fertilizers Act" and "Fertilizers Regulations". Complete synthetic, slow release with 35% of nitrogen content in water-insoluble form.
- 2.6 Inoculants                .1    Inoculant containers to be tagged with expiry date.

### PART 3 - EXECUTION

- 3.1 Workmanship            .1    Do not spray onto structures, signs, guiderails, fences, plant material, utilities and other than surfaces intended.
- .2    Clean-up immediately, any material sprayed where not intended, to satisfaction of Consultant.
- .3    Do not perform work under adverse field conditions such as wind speeds over 10 km/h, frozen ground or ground covered with snow, ice or standing water.
- .4    Protect seeded areas from trespass until plants are established.
- 3.2 Preparation of Surfaces    .1    Fine grade areas to be seeded free of humps and hollows. Ensure areas are free of deleterious and refuse materials.
- .2    Cultivated areas identified as requiring cultivation to depth of 25 mm.
- .3    Ensure areas to be seeded are moist to depth of 150 mm before seeding.
- .4    Obtain Consultant's approval of grade and topsoil depth before starting to seed.

- 3.3 Fertilizing Program
- .1 Fertilize prior to fine grading incorporating fertilizer equally distributed in accordance with the following program.
  - .2 Following germination, all seeded areas to receive an application of fertilizer at rate specified by fertilizer manufacturer after one cut.
  - .3 Apply additional soil supplements as determined necessary by soils analysis conducted during establishment period.
- 3.4 Preparation of Slurry
- .1 Measure quantities of materials by weight or weight-calibrated volume measurement satisfactory to Consultant. Supply equipment required for this work.
  - .2 Charge required water into seeder. Add material into hydraulic seeder under agitation. Pulverize mulch and charge slowly into seeder.
  - .3 After all materials are in the seeder and well mixed, charge tackifier into seeder and mix thoroughly to complete slurry.
- 3.5 Slurry Application
- .1 Hydraulic seeding equipment:
    - .1 Slurry tank.
    - .2 Agitation system for slurry to be capable of operating during charging of tank and during seeding, consisting of recirculation of slurry and/or mechanical agitation method.
    - .3 Capable of seeding by 50 m hand operated hoses and appropriate nozzles.
    - .4 Slurry mixture applied per 100 square metres:
      - .1 Seed: Grass mixture 2.0 kg
      - .2 Mulch: 10 kg
      - .3 Tackifier: as recommended by manufacturer
      - .4 Water: Minimum 100 litres
      - .5 Fertilizer: not less than 1,650 kg of phosphorous.

- .2    Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.
- .3    Using correct nozzle for application.
- .4    Using hoses for surfaces difficult to reach and to control application.
- 5    Blend application 300 mm into adjacent grass areas or sodded areas to form uniform surfaces.
- .6    Re-apply where application is not uniform.
- .7    Remove slurry from items and areas not designated to be sprayed.
- .8    Protect seeded areas from trespass satisfactory to Consultant.
- .9    Remove protection devices as directed by Consultant.

3.6 Maintenance  
During Establishment  
Period

- .1    Perform following operations from time of seed application until acceptance by Consultant.
- .2    Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
- .3    Mow grass once whenever it reaches height of 90 mm. Remove clippings which will smother grass.
- .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; water in well.
- .5    Control weeds by mechanical or chemical means utilizing integrated pest management practices approved by the PWGSC.
- .6    Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.

- 3.7 Acceptance                    .1    Seeded areas will be accepted by Consultant provided that:
- .1    Plants are uniformly established. Seeded areas are free of rutted, eroded, bare or dead spots.
- .2    Areas have been mown at least twice.
- .3    Areas have been fertilized.
- .2    Areas seeded in fall will achieve final acceptance in following spring, one month after start of growing season provided acceptance conditions are fulfilled.
- 3.8 Maintenance                    .1    Perform following operations from time of acceptance During Warranty                    until end of warranty period. Period
- .2    Repair and reseed dead or bare spots to satisfaction of Consultant.
- .3    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.
- 3.9 Cleaning                        .1    Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

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END

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