

## **PART 1 - GENERAL**

### **1.1 SCOPE OF WORK**

- .1 This section specifies the requirements for supplying and installing topsoil and sodding materials for landscaping purposes.

### **1.2 SCHEDULING OF WORK**

- .1 Schedule the removal, re-use and placing of topsoil and sodding to ensure placement under optimum conditions. Sods placed in the Fall will not be accepted until the following SPRING.

### **1.3 MEASUREMENT FOR PAYMENT**

- .1 No separate measurement for payment to be made under this section. Include all costs under the lump sum cost item indicated on the bid and acceptance form.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- .1 All topsoil and sods required for the work shall be sourced from within the construction site itself where possible, to prevent the introduction of invasive species to the park. This shall be accomplished by ensuring that all sods to be removed from the construction area shall be removed in uniform squares using a sod cutter prior to any site grading. Removed topsoil shall be collected and stored on site for re-use as well.
- .2 Where insufficient materials are recovered from the construction site itself for the required landscaping, all sod, soil, plants, etc. sourced from outside the park shall be clean and free of any weeds or seeds. Imported topsoil to be certified weed free and be subject to prior approval of PWGSC/Parks Canada. Submission of material source to be provided to PWGSC a minimum of two (2) weeks prior to needing the materials on site.
- .3 Disturbed areas to be re-vegetated at first opportunity.
- .4 Fertilizer shall be 6-12-12 grade, uniform in composition, free flowing and suitable for application with approved equipment delivered to the site in bags or other convenience containers, each fully labelled, conforming to the applicable local government laws, and bearing the name, trademark or trade name and warranty of the producer.

## **PART 2 – PRODUCTS** **(CONT'D)**

### **2.1 MATERIALS** **(CONT'D)**

- .5 Lime shall be ground limestone containing not less than 85% of total carbonates and shall be ground to such fineness that at least 50% will pass through a 100 mesh sieve and at least 90% will pass through a 20 mesh sieve. Coarser materials will be acceptable provided the specified rates of application are increased proportionally on the basis of quantities passing the 100 mesh sieve, but no additional payment will be made for the increased quantity.
- .6 Staples: 25 mm wide by 300 mm deep by 3 mm thick steel wire.
- .7 Water: potable, free of impurities that would inhibit germination.

## **PART 3 - EXECUTION**

### **3.1 SCOPE OF WORK**

- .1 All areas disturbed as part of the work that are not scheduled to be surfaced with asphalt, concrete, timber decking or granular base shall be provided with a topsoil and sod finish.

### **3.2 RAISING GRADE AROUND EXISTING TREES**

- .1 Apply fertilizer before revising grade.
- .2 Protect bark of buried portion of tree from abrasion by surrounding trunk with water impervious material. Leave minimum 50 mm space between protective material and bark. Fill space with washer stones.
- .3 Use approved topsoil to raise grade to required level.
- .4 Compact fill without disturbing or damaging roots. Use frost-free materials over frost-free ground conditions. Compact fill to 90% Standard Proctor density to ASTM D698-78.

### **3.2 LOWERING GRADE AROUND EXISTING TREES**

- .1 Cut slope from edge of branch spread to new grade level. Build dike of topsail for each treat periphery of branch spread to hold water where required.

**PART 3 – EXECUTION**  
**(CONT'D)**

**3.2 LOWERING GRADE AROUND EXISTING TREES**  
**(CONT'D)**

- .2 If excavation through roots is required, excavate by hand and cut roots with sharp axe, tree lopper or saw. Seal cut edges 10 mm in diameter and larger with wound dressing.
- .3 Apply fertilizer after excavation is backfilled and grading is completed. Do not permit root system to dry out at any time.

**3.3 TOPSOIL**

- .1 The topsoil shall be uniformly distributed on the designated areas and evenly spread to an average thickness of 100 mm with a minimum thickness of 75 mm. Spreading shall be performed in such a manner that planting can proceed requiring little additional soil preparation or tillage. Irregularities in the surface resulting from top soiling or other operations shall be corrected so as to prevent the formation of depressions where water will stand. Topsoil shall not be placed where the subgrade is frozen, excessively wet, extremely dry or in a condition otherwise detrimental to the proposed planting or to proper grading.
- .2 After the topsoil has been spread and graded as required, the surface shall be cleared of stone, stumps or other objects larger than 50 mm in thickness or diameter, and or root, brush, wire or other objects that might be a hindrance to planting or maintenance operations.

**3.4 SODDING**

- .1 Before sodding, the surface is to be raked smooth to provide uniform slopes. Topsoil with a uniform organic content will be raked smooth to conform with the preparation slopes. Lime will be added to the topsoil at the rate of 1.125 kg/ha. The lime may be placed up to three weeks ahead of placing of sod. Fertilizer will be spread evenly over the top 50 mm of the soil.
- .2 Fertilizer cannot be added at the same time as the lime. The fertilizer shall be applied at the rate of 1.125 kg/ha, and will have a plant food ratio of 10 nitrogen to 20 phosphorous to 20 potash plus 2% FTE. The fertilizer must be placed not more than one week ahead of sodding. After adding fertilizer, the surface shall be fine graded.

**PART 3 – EXECUTION**  
**(CONT'D)**

**3.4 SODDING**  
**(CONT'D)**

- .3 Sod shall be laid on the prepared sod bed as soon after cutting as practical. Sod may be stored in stacks or piles, grass to grass and roots to roots for not more than five (5) days. Sod shall be protected against drying from sun or wind and from freezing as necessary. The moving and laying of sod shall, as far as possible, be done when weather conditions and soil moisture are favourable. On slopes, stakes shall be driven flush with the top of the sod, spacing stakes shall not exceed 600 mm across the face of slopes.
- .4 If rainfall is insufficient during the period of sodding and initial grass growth, then water shall be applied immediately before and after sodding and subsequently thereafter until the grass is established, as directed by the Engineer.

**3.5 MAINTENANCE**

- .1 Ensure maintenance equipment suitable to Engineer.
- .2 Keep soil moist during germination period and adequately water grassed areas until accepted by Engineer.
- .3 Apply water to ensure moisture penetration of 75 to 100 mm. Control watering to prevent wash-outs.

**3.6 PROTECTION AND REPAIR**

- .1 The area shall be protected against traffic or other use by erecting barricades immediately after seeding is completed and by placing warning signs of an approved type on the various areas.
- .2 If at any time before completion and acceptance of the entire work covered by this contract any portion of the surface becomes gullied or otherwise damaged following seeding, or the seedings have been winter-killed or otherwise destroyed the affected portion shall be repaired to re-establish the condition and grade of the soil prior to seeding and shall then be re-seeded as specified in previous sections.