

Section A - Topsoil and Finish Grading**PART 1 - GENERAL****1.1 Description**

- .1 Topsoil will be done in accordance with City of Winnipeg Standard Construction Specification CW 3540 – R4– “Topsoil and Finish Grading for Establishment of Turf Areas”.

1.2 Related Work

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| .1 | Environmental Protection | Section 01560 |
| .2 | Site Grading | Section 02210 |
| .3 | Sodding | Section 02938 |

1.3 Protection of Existing Facilities

- .1 Protect elements surrounding the work of this section from damage or disfiguration.
- .2 Protect all natural features remaining as final work.
- .3 Protect structures, fences, paths, paving and golf course features (as may exist).

1.4 Scheduling of Work

- .1 In consultation with the Contract Administrator, schedule placing of topsoil to prevent delays to completion of work.

PART 2 - PRODUCTS**2.1 Materials**

- .1 Off-site blended topsoil, consisting of 60% soil, 20% peat and 20% sand.
- .2 Topsoil will conform to the materials as outlined in CW 3540- item 5.2 “Topsoil”.
- .3 Sod will conform to the materials as outlined in CW 3510 – item 5.0 “Materials”.

PART 3 - CONSTRUCTION METHODS**3.1 Preparation**

- .1 Fine grade subgrade, eliminating uneven areas and low spots. Remove all debris, roots, branches, stones in excess of 50 mm (2”) diameter. Remove subsoil that has been contaminated.
- .2 Cultivate entire area which is to receive topsoil to depth of 100 mm (4”). Repeat cultivation in those areas where equipment used for hauling and spreading has compacted soil.

3.2 Spreading of Topsoil

- .1 Do not spread topsoil until the Contract Administrator has inspected and approved subgrade.
- .2 Spread topsoil in a layer of uniform depth during dry weather over approved, dry, unfrozen subgrade, on all areas where earth moving has occurred.
- .3 Spreading of topsoil shall be to a minimum depth of 100 mm (4") on all excavated or filled areas unless advised by the Contract Administrator otherwise. Advise the Contract Administrator immediately of any shortfall in materials.
- .4 Remove stones, roots, grass, weeds, construction materials, debris and foreign non-organic objects from topsoil prior to adding topsoil amendments (if required).
- .5 Note: Topsoil and Sod will be supplied and installed in accordance with City of Winnipeg Standard Construction Specification CW 3540 and CW 3510 respectively.

3.3 Finish Grading

- .1 Fine grade entire topsoiled area to contours and elevations matching the subgrade contours. Eliminate rough spots, vehicle ruts, settlement over irrigation trenches as required, and low areas to ensure positive surface drainage.
- .2 Prepare loose friable bed by means of soil conditioning or light disking and subsequent harrowing. Roll lightly and rake wherever topsoil is too loose.
- .3 Roll or compact surface to provide a smooth, uniform and firm against deep foot printing, with a fine loose texture.

Section B - PLANTING BED w / WOOD CHIP MULCH

PART 1 - GENERAL

1.1 Description

- .1 This Specification will cover the supply and installation of planting beds with wood mulch as shown on the drawings. This specification will cover supply and installation of all labour, materials, equipment and services necessary for the supply and installation of planting beds as shown on the drawings.
- .2 The following list generally describes the scope of this Section
 - .1 Excavate planting beds – 300 mm depth
 - .2 Cultivate subsoil
 - .3 Supply and install planting soil mixture in planting bed
 - .4 Supply and install wood chip mulchSubmit to the Contract Administrator samples of the following materials;
 - (i) Planting Soil Mixture: 1 kg
 - (ii) Wood chip mulch: 500g

1.2 Delivery and Storage

- .1 Deliver and store fertilizer in waterproof bags showing weight, analysis and name of manufacturer.

PART 2 - PRODUCTS**2.1 Materials**

- .1 Soil Mixture for Planting Beds: 30% coarse sand, 30% composted manure, 30% peat moss.
- .2 Sand: hard, granular natural beach sand, washed free of impurities, chemical or organic matter.
- .3 Fertilizer: commercial type with 50% of the elements derived from organic sources.
- .4 Wood chip mulch: varying in size from 25-50 mm and 5-20 mm thick, from coniferous trees.

PART 3 - CONSTRUCTION METHODS**3.1 Preparation**

- .1 Remove debris, broken roots, branches, stones in excess of 50mm diameter and other deleterious materials. Remove subsoil that has been contaminated with oil, gasoline or calcium chloride. Dispose of removed materials as directed.
- .2 Excavate bed to a depth of 300mm as per details on the Drawings.
- .3 Cultivate entire area of bed bottom to 100mm depth.
- .4 Do not spread planting soil mixture until Contract Administrator has inspected sub-grade.
- .5 Spread planting soil mixture with adequate moisture in uniform layers during dry weather over approved, dry, unfrozen sub-grade, where planting is indicated.
- .6 Bring planting soil mixture up to 75 mm below top of retaining wall cap.
- .7 Remove stones, roots, grass, weeds, construction materials, debris and foreign non-organic objects from soil mixture.
- .8 Spread fertilizer at manufacturer's recommended rate of application. Mix fertilizer thoroughly into upper 50mm of planting soil.
- .9 Compact planting soil to leave surface smooth, uniform, firm against deep foot printing, with a fine, loose texture. Tolerance: plus or minus 15mm of design grade.
- .10 Supply and install 50mm wood chip mulch in beds.

Section C - PLANT MATERIAL**PART 1 - GENERAL****1.1 Description**

- .1 This Specification shall cover the supply and installation of plant material as specified herein and as indicated on the Drawings.
- .2 The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all other things necessary for and incidental to the satisfactory performance and completion of all Work as hereinafter specified and in accordance with CW 3540-R3.

1.2 General

- .1 Obtain approval of plant material at source.
- .3 Acceptance of plant material at Site prior to or after planting operations is subject to approval by Contract Administrator.
- .4 Cover plant foliage with tarpaulin, and protect bare roots by means of dampened straw, peatmoss, sawdust or other acceptable material to prevent loss of moisture during transit and storage.

PART 2 - PRODUCTS**2.1 Materials**

- .1 Water should be potable and free of minerals, which may be detrimental to plant growth.
- .2 All plant material supplied shall be Canadian prairie nursery grown, of the species and sizes indicated on the drawings. Quality shall be in accordance with the latest "Guide Specification for Nursery Stock of the Canadian Nursery Trades Association".
- .3 The Contract Administrator reserves the right to inspect the plant material at their original source, and to instruct the supplier on root and branch pruning requirements.
- .4 Nomenclature of specified plant material shall conform to the International Code of Nomenclature for Cultivated Plants and shall be in accordance with the approved scientific names given in the latest edition of standardized Plant Names. The names of varieties not named therein are generally in conformity with the names accepted in the nursery trades.
- .5 Plants larger than specified may be used if approved by the Contract Administrator. The use of such plants shall not increase the Contract price.
- .6 All plant material shall be well formed, true to type, structurally sound, possess a well developed, undamaged root system and shall be free of disease, insect infestations, rodent damage and abrasion. All parts of the plant shall be moist and show live bud and leaf growth.

- .7 At least one plant of each variety supplied shall bear a tag showing both the botanical and common name of the plant. The following list of plant species are to be provided (refer to Bid OP: Form B);

<u>Common Name</u>		<u>Qty.</u>
Silver Frost Artemesia	<i>Artemisia ludoviciana 'Silver Frost'</i>	13
Rocket City Daylily	<i>Hemerocallis 'Rocket City'</i>	5
Switch Grass	<i>Panicum virgatum</i>	3
Karl Foerster Reed Grass	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	5
Purple Emperor Stonecrop	<i>Sedum 'Purple Emperor'</i>	38

2.2 Protection of Stock

- .1 All plant material shall be well protected from damage and drying out from the time of delivery until the time of planting on site.
- .2 Plant material shall be transplanted with care to prevent damage. Branches shall be carefully tied in such a manner so as not to break or damage trunks. Points of contact with equipment shall be padded. All plant material, which cannot be planted immediately upon arrival at the site, shall be well protected to prevent drying out and shall be kept moist until commencement of planting.

2.3 Wound Dressing

- .1 Horticulturally accepted non-toxic, non-hardening emulsion. Wound Dressing must be approved by Contract Administrator.

PART 3 - CONSTRUCTION METHODS

3.1 Preparation

- .1 Layout planting area for review and approval by Contract Administrator prior to planting.
- .2 Plant only under conditions that are conducive to health and physical conditions of plants.
- .3 Remove water, which enters excavations prior to planting. Ensure source of water is not ground water.
- .4 Place plant material to depth equal to depth they were originally growing in nursery.
- .5 Tamp planting soil around root system in layers of 75mm eliminating air voids. Frozen or saturated planting soil is unacceptable.
- .6 Planting to be completed prior to June 30 to ensure rooting as per grower's recommendation. Planting done after June 30 will not be accepted until the following spring to ensure that roots have not heaved above soil level.
- .7 Planting shall be done during periods suitable to weather conditions and locally accepted practice. All plant material shall be set plumb and at levels as shown on the planting details after settlement has taken place.
- .8 Plant material shall be faced to give the best appearance or relationship to adjacent structures and to the approval of the Contract Administrator.