

**CW 3520 – SEEDING**

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## **CW 3520 - SEEDING**

### **1. GENERAL CONDITIONS**

The General Conditions and Standard Provisions attached hereto shall apply to and be a part of this Specification.

### **3. DESCRIPTION**

This Specification shall cover the supply and placement of grass seed for athletic grounds, golf course fairways, general park areas, boulevards, medians and interchange areas.

The work to be done by the Contractor under this Specification shall include the supply of all materials, and 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.

### **5. MATERIALS**

#### **5.1 General**

The Contractor shall be responsible for the supply, safe storage and handling of all materials set forth in this Specification. All materials supplied under this Specification shall be subject to inspection and testing by the Contract Administrator and/or the City's designated turf inspector. There shall be no charge to the City for any materials taken by the Contract Administrator or the City's designated turf inspector for inspection purposes.

#### **5.2 Topsoil**

Topsoil shall be supplied in accordance with Clause 5.2 of CW 3540.

#### **5.3 Grass Seed**

All seed supplied by the Contractor shall be Canada Certified No. 1 or Canada Certified No. 2 and come complete with a Certificate of Analysis verifying that quality standards for Canada Certified No. 1 or Canada Certified No. 2 seed are met. The Contractor shall submit the Certificates of Analysis to the Contract Administrator.

The seed supplied shall be free of disease and mixed by percentage (%) of weight to meet the following blends **or mixtures**:

##### **5.3.1 For athletic grounds and golf course fairways a mixture composed of:**

Eighty five (85%) percent Kentucky Bluegrass (100% Class 1 cultivars, 3 cultivars in equal proportion) and fifteen (15%) percent Perennial Ryegrass.

##### **5.3.2 For general park areas, boulevards, medians and interchange areas a mixture composed of:**

Sixty (60%) percent Kentucky Bluegrass (100% Class 1 or Class 2 cultivars, 3 cultivars in equal proportion), thirty (30%) percent Creeping Red Fescue and ten percent (10%) Perennial Ryegrass.

**5.3.3 Wherever Kentucky Bluegrass is specified, the proportion of the cultivars to be included in the blend shall adhere to the following:**

**Class 1 Cultivars** - specified blend of Class 1 cultivars shall consist of equal proportions of any three of the following:

Able 1	Absolute	Allure	Award	Baron
Bartitia	Blacksburg	Blackstone	Caliber	Challengedr
Chateau	Estate	Explorer	Kelly	Liberator
Limousine	Midnight	Misty	Northstar	NuGlade
Pick 151	Pick 8	Platini	Quantum Leap	Rambo
Rugby II	Serene	Shamrock	SR 2000	Total Eclipse
Touchdown	Unique	VB 16015	Wildwood	

**Class 2 Cultivars** - specified blend of Class 2 cultivars shall consist of equal proportions of any three of the following:

A 34	Abbey	Alpine	America	Apollo
Arcadia	Ascot	ASP 200	Banff	Baronie
Baruzo	Bluechip	Cardiff	Champagne	Chicago
Classic	Compact	Conni	Coventry	Crest
Cynthia	Dragon	Eclipse	Fortuna	Glade
Goldrush	Haga	Huntsville	Impact	Indigo
Jefferson	Kenblue	Langara	Lipoa	Livingston
Marquis	Mercury	Moonlight	Nimbus	NuBlue
NuStar	Odyssey	Park	Pepaya	Pick 3
Pick 4	Pick 855	Princeton 105	Raven	Rugby
Seabring	Sodnet	SR 2100	SR 2109	Washington

**5.3.4 Wherever Perennial Ryegrass is specified, the entire proportion of the blend specified shall consist of any one of the following:**

Admire	Charger II	Jet	Panther	Quest II
Affinity	Charismatic	Inspire	Paradigm	Racer
Advent	Churchill	IQ	Paragon	Racer II
Affirmed	Citation Fore	Kokomo	Passport	Radiant
All Star 2	Courage	Koos R-71	Pearl II	Renaissance
Allsport	Cruiser	Lp 1	Pennant	Salinas
Amazing	Dazzle	Line Drive	Pennant II	Secretariat
Applaud	Divine	Linn	Pentium	Seville II
Arrival	Edge	LS 2100	Phantom	Skyhawk
Ascend	Elka	Mach 1	Pick EX2	Splendid
Barlennium	Elfkin	Majesty	Pick PRNGS	Stellar
Blazer IV	Exacta	Manhattan 2	Pinnacle II	Summerset
Brightstar	Extreme	Manhattan 3	Pizzazz	Sunkissed
Brightstar II	Fiesta 3	Manhattan 4	Pleasure XL	Superstar
Buccaneer	Gallery	Mepy	PR 1-94	Terradyne
BY-100	Gator	Monterey II	Premier	Wilmington
Cabo	Gator 3	MP 103	Premier II	Yatsugreen
Calypso II	Grand Slam	Nighthawk	Promise	
Catalina	Hawkeye	Nexus	Prosport	
Catalina II	Headstart	Pacesetter	Protyme	
Cathedral II	Icon	Palmer II	Prowler	

**5.3.5** Prior to payment for the seeding operation the Contractor shall provide the Contract Administrator with a copy of an invoice or a shipping bill received from the seed distributor specifying the quantities of each type of seed supplied for the Work Site and the delivery date.

**5.3.6** Any variations to the above referenced seed blends or mixtures shall be approved by the Contract Administrator prior to sowing.

**5.4** Herbicides

Herbicides shall be standard commercial products registered for sale and use in Canada under the Pest Control Products Act.

**5.5** Insecticides

Insecticides shall be standard commercial products registered for sale and use in Canada under the Pest Control Products Act.

**5.6** Hydro Mulching

**5.6.1** Mulch

Mulch shall be wood cellulose fibre product free of germination or growth-inhibiting ingredients and shall form, after application, a blotter-like ground cover, which will allow absorption and percolation of water.

Mulch shall be dry, free of weeds and all foreign matter.

**5.6.2** Water

Water used for hydro mulching shall be free of any impurities, which would inhibit germination, or otherwise adversely affect grass growth.

**5.6.3** Tackifier

All wood cellulose fibre mulch shall be applied in slurry containing a tackifier at a rate as directed by the manufacturer.

**9. CONSTRUCTION METHODS**

**9.1** Site Safety and Traffic Control

Where work is to be done in boulevard and median areas adjacent to roadways, the Contractor shall maintain traffic and ensure that protection is afforded to the road user and that the Contractors operations in no way interfere with the safe operation of traffic.

The Contractor shall supply, erect and maintain all applicable traffic control devices in accordance with the provisions of the latest edition of the Manual of Temporary Traffic Control in Work Areas on City Streets issued by the Public Works Department of the City of Winnipeg.

**9.2** Site Grading

Site grading will be done and paid for in accordance with Specification CW 3110.

**9.3 General**

The Contractor shall not commence seeding operations until the finished topsoil surface is inspected and approved by the Contract Administrator.

The Contractor shall provide the Contract Administrator with a minimum of two working days notice for inspection of the finished topsoil surface.

**9.4 Topsoil and Finish Grading**

Preparation of the finished topsoil surface shall be completed in accordance with Specification of CW 3540.

To prevent the formation of depressions or water pockets, the Contractor shall smooth out any undulations or irregularities in the topsoil surface resulting from fertilizing, seeding, rolling or other operations.

**9.5 Seeding**

Grass seed shall be sown at a rate of 1.0 kilogram per 100 square metres.

The Contractor shall sow the seed into the approved seed bed by using seeding equipment suitable for the area involved and to the satisfaction of the Contract Administrator. Seed shall be embedded into soil to a depth of 5mm within 1 hour of sowing.

All seeded areas shall be rolled with a mechanical roller of a minimum weight of 220kg and minimum width of 760mm to form a uniform even surface, level with adjoining curbs, sidewalks or sod.

Water shall be applied in sufficient quantities and frequencies to obtain seed germination and growth. Watering shall be controlled to prevent seed washout. All costs to provide water for seeded areas shall be borne by the Contractor. These costs may include hydrant permit and meter rental fees.

Seeding operations shall be completed within two working days after the commencement of sowing operation. This shall include the application of seed, hydro mulching, rolling and watering.

No seeding shall be done on frozen soil, or when any other conditions unfavourable to successful seed germination exist.

Where the Contractor sows seed, and termination of the Maintenance Period is not achieved in accordance with Clause 9.10 in the same year that the seed was sowed, the Contractor shall be responsible for spring replacement of any seeded areas damaged over the winter due to winter-kill, ice damage, sand/salt applications on adjacent streets, or from snow removal or spring clean-up equipment.

**9.6 Hydro Mulching**

The Contractor shall not commence the hydro mulch application until the seeded area has been inspected and approved by the Contract Administrator.

The Contractor shall provide the Contract Administrator with a minimum of two working days notice for inspection of the seeded area.

The slurry mixture shall be mixed as per manufacturers recommendations and applied evenly over the prepared surface using equipment approved by the Contract Administrator. Apply slurry mixture within 24 hours of seeding at a rate of not less than 200 kilograms per 1000 square metres.

### 9.7 Commencement of Maintenance Period

Immediately after the completion of the seeding operation, to the satisfaction of the Contract Administrator, the Contractor shall commence and pay for continuous maintenance of the seeded area until the criteria specified for Termination of the Maintenance Period in Clause 9.10 has been met.

Any deficient, damaged or vandalized areas shall be reseeded by the Contractor within three working days after receiving notification from the Contract Administrator and the area so reseeded, shall be further maintained until it meets the criteria specified in Clause 9.10.

In situations where commencement of the Maintenance Period is not granted by the Contract Administrator before the end of a growing season, the Maintenance Period will commence on May 15 of the following year or such date as is mutually agreed upon by all parties.

### 9.8 Maintenance of Seeded Area

The Contractor shall mow the turf area at regular intervals to a height of 50 - 60 mm. Do not cut more than thirty (30%) percent of the grass height at any one mowing. Remove clippings that will smother grassed areas.

The Contractor shall water all seeded areas in sufficient quantities and **frequencies to maintain seed germination and grass growth**. Any damage, which may occur through washout of the soil during the maintenance period shall be repaired and maintained until it meets the criteria specified in Clause 9.10. All costs to provide water for seeded areas shall be borne by the Contractor. These costs may include hydrant permit and meter rental fees.

The Contractor shall clean and remove all dead vegetation, leaves, debris and snowmold from turf areas to encourage healthy and uniform grass growth.

Given the need for weed control, the Contractor shall have in his possession a Pesticide Applicator's License and a Pesticide Use Permit for pesticide applications related to this Specification.

The Contractor shall apply herbicide when broadleaf weeds start developing in competition with grass. Apply herbicide in accordance with the City of Winnipeg Weed Control Standards and Procedures, manufacturer's instructions and the Manitoba Agriculture Guide to Crop Protection and Herbicide Recommendations for Landscape Applicators, latest editions and the following criteria:

- i. Use 2,4-D Amine or MCPA Amine herbicide for susceptible broadleaf weeds.
- ii. Use a mixture containing 2,4-D Amine or MCPA Amine, Mecoprop and Dicamba for 2,4-D resistant plants.
- iii. Do not apply to newly seeded turf until after the second or third mowing.
- iv. Do not water within one working day after application.
- v. Apply when winds are less than 20 km/h and air temperature is above 10° (degrees) Celsius.
- vi. Avoid use of pure Dicamba solutions near trees and shrubs.

Given the need for insect control, the Contractor shall have in his possession a Pesticide Applicator's License and a Pesticide Use Permit for pesticide applications related to this Specification. Use standard commercial products in accordance with the manufacturer's instructions and the Manitoba Agriculture Guide to Crop Protection (latest edition) for the particular insect/insects involved.

Copies of the Pesticide Applicator's License and the Pesticide Use Permit must be submitted to the Contract Administrator prior to commencement of pesticide application.

All persons handling pesticides shall be fully aware of toxicological rules and regulations governing their use.

The Contractor shall inform the Contract Administrator immediately of any dangerous occurrence.

### **9.9 Spring Clean Up**

Where termination of the maintenance period has not been achieved in accordance with Clause 9.10 prior to the end of a growing season, the Contractor shall complete all operations related to the clean up of the Work Site in the following spring. This shall include the cleaning and removal of all dead vegetation, leaves, debris, snowmold and any sand or gravel resulting from winter sanding/de-icing operations from turf areas to encourage healthy and uniform grass growth.

All costs for spring clean up operations, including reseeding of areas damaged over the winter shall be borne by the Contractor if in the previous year, seed was sowed, and the termination of the maintenance period in accordance with Clause 9.10, was not achieved in that same year or where the damage was due to defective seed or maintenance not conforming to this Specification.

### **9.10 Termination of Maintenance Period**

The Contract Administrator will terminate the maintenance period after the following criteria has been met:

- i. The certified seed sowed meets the requirements specified in Clause 5.3.
- ii. The seeded area is free of any visual obstructions such as leaves.
- iii. The seeded area has been rolled and has a firm, uniform even surface.
- iv. The seeded area has established into a healthy, vigorously growing condition.
- v. The seeded area is free of bare and dead spots and without more than ten (10) broadleaf weeds per fifty (50) square metres.
- vi. The seeded area has sufficient shoot growth density that no surface soil is visible when the grass has been cut to a height of 50 - 60 mm.
- vii. Seeded area is cut to a height of 50 - 60 mm within one working day before the final inspection.
- viii. Edges of established seeded areas adjacent to shrub and flower beds are well defined.
- ix. Seeded area is free of any turf damaging insects.

When the Contractor considers that the seeded area meets the criteria listed above, he shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying whether the Maintenance Period can be terminated. Any deficient, damaged or vandalized areas may have to be reseeded within three working days after receiving notification from the Contract Administrator and the area so reseeded, shall be further maintained by and at the expense of the Contractor in accordance with Clauses 9.7 and 9.8 herein.

In situations where the termination of the maintenance period is not granted by the Contract Administrator before the end of a growing season, the maintenance period will commence as described in Clause 9.7.

### **9.11 Site Clean Up**

During both seeding and maintenance operations, all sidewalks, streets, approaches, driveways and properties near the seeding operations shall be kept clean at all times by the Contractor.

Upon completion of the project, the Contractor shall immediately remove all excess material and debris from the Work Site.

**12. METHOD OF MEASUREMENT****12.1 Seeding**

Supply, placement and maintenance of seed will be measured on an area basis. The area to be paid for shall be the total number of square metres seeded and maintained in accordance with this Specification and accepted by the Contract Administrator, as computed from measurements made by the Contract Administrator. No payment will be made for seeding placed outside of the limits of placement as directed by the Contract Administrator.

**13. BASIS OF PAYMENT****13.1 Seeding**

Supply, placement and maintenance of seed will be paid for at the Contract Unit Price per square metre for "Seeding", measured as specified herein, which price shall be payment in full for supplying all materials and for completing all operations herein described and all other items incidental to the work included in this Specification. Payment for seeding shall be in accordance with the following:

- Sixty five (65%) percent of quantity following supply and placement.
- Remaining thirty five (35%) percent of quantity following termination of the maintenance Period.