

**CONSTRUCTION SPECIFICATION FOR SODDING**

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**TS 5.00.01                    SCOPE**

This specification describes the requirements for supplying, placing, and maintaining sod in areas designated by the City of Toronto (City).

**TS 5.00.02                    REFERENCES**

The specification refers to the following, standards, specifications and publications:

**Ontario Provincial Standard Specifications – Construction**

OPSS 572                    Construction Specification for Seed and Cover

**City of Toronto Specifications**

TS 5.10                    Construction Specification for Topsoil

**Canadian Nursery Landscape Association**

CNLA                    Canadian Standards for Nursery Stock

**Nursery Sod Growers Association of Ontario**

Specifications of Turfgrass Sod for Ontario

**TS 5.00.05                    MATERIALS**

All materials shall be approved by the City.

**TS 5.00.05.01                Nursery Sod**

The quality and the source of nursery sod supplied shall comply with the specifications for number one grade turf grass nursery sod as set out in the latest edition of “Canadian Standards for Nursery Stock” by the Canadian Nursery Trades Association. All sod shall have been grown as a turf grass crop. It shall be Number One Kentucky Bluegrass/Fescue Sod grown from 60–70% Kentucky Bluegrass, 30–40% Creeping Red Fescue. The Contractor is encouraged to propose alternate turf sod seed mixtures having drought resistance and minimal mowing characteristics.

The source of sod must be approved by the City before it is used in the contract. No other source shall be used without the written authorization from the City. Contractor shall submit one metre of sod to the City for approval prior to delivery. Contractor shall also submit sod seed mixture information to the City for approval before installation commences.

If alternate sod seed mixture for nursery sod is proposed, the Contractor shall submit a sod sample, the growth rate, salt and drought tolerance and maintenance requirements of the alternate sod seed mixture to the City for approval prior to delivery. The City may request price adjustment if alternate materials are used.

All sod shall be uniform in texture and in a good healthy condition with no sign of decay. There shall be no more than two broadleaf or ten of other weeds per 40 square metres of sod. Sod shall be of sufficient density that no surface soil is visible. The grass height shall be 35 mm minimum and 65 mm maximum.

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The soil portion of the sod shall be well permeated with roots. It shall be a good mineral type soil with a thickness of 10 mm minimum and 15 mm maximum. Sod shall contain sufficient moisture to maintain its vitality during transportation and placing. All sod shall be rolled to facilitate handling and transportation.

**TS 5.00.05.02 Sod Stakes**

Sod stakes shall be Wooden Pegs 19 x 19 x 300 mm.

**TS 5.00.05.03 Fertilizer**

Fertilizer shall be a complete synthetic slow release fertilizer with maximum 35% water soluble nitrogen. Apply at rates based on soil analysis.

**TS 5.00.05.04 Water**

Water shall be potable and free of any minerals or contaminants that could adversely affect growth.

**TS 5.00.05.05 Mesh**

Mesh shall be jute or synthetic plastic.

**TS 5.00.07 CONSTRUCTION**

**TS 5.00.07.01 Constraints**

Sod shall be applied no sooner than May 1<sup>st</sup> and no later than October 31<sup>st</sup>. If the contract schedule precludes sod from being placed by October 31<sup>st</sup>, a Temporary Cover shall be applied as per OPSS 572 using a hydraulic mulch of raw wood fibre applied simultaneously with liquid polyvinyl acetate or sodium alginate powder in a water slurry via a hydraulic seeder/mulcher. Compensation for the Temporary Cover shall be at the unit price tendered.

Sodding during excessively wet conditions, at freezing temperatures or over frozen soil is not acceptable.

Sodding shall not commence until approval of surface preparation has been given by the Contract Administrator.

**TS 5.00.07.02 Surface Preparation**

All surface stones greater than 50 mm in diameter, weeds, other unwanted vegetation and all other loose surface litter shall be removed and disposed of in accordance with the contract requirements. The sod shall be uniformly cultivated to a minimum depth of 50 mm and placed on a topsoil base prepared in accordance with TS 5.10.

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Topsoil exhibit weed growth or growth of other unwanted vegetation shall be removed. All methods of weed removal shall be approved, by the City, prior to performing the work. After removing all unwanted vegetation, the soil surface shall sit undisturbed for at least 4 days prior to inspection and approval of soil conditions by the City. If additional growth is observed, the Contractor shall remove this growth by method approved by the City.

**TS 5.00.07.03                      Fertilizer Application on Topsoil**

Fertilizer shall be applied uniformly at a rate of 3.5 kg/m<sup>2</sup> or as recommended by the manufacturer. Fertilizer shall be applied a maximum of 48 hours prior to sod placement.

**TS 5.00.07.04                      Sod Placement**

Sod delivery shall be within 24 hours of being lifted and sod shall be placed within 36 hours of being lifted. Small, irregular or broken pieces of sod will be rejected. During dry weather, the Contractor shall protect sod from drying. To ensure vitality and prevent drying, the sod shall be watered as necessary during handling. Dried out sod will be rejected.

Sod shall be placed over the designated areas so that no voids are left between the soil portion of the sod and the underlying ground surface.

Sod shall be placed lengthwise across the face of slopes and parallel to the centreline of ditches. End joints of adjacent rows and adjacent pieces will be staggered. Pieces of sod shall not overlap. Pieces shall be butted up against each other so that no gaps or joints are showing. Joints in adjacent rows shall be staggered. New sod, when placed, will match the grade of existing grassed areas.

The sod shall be tamped or rolled to provide uniform contact with the topsoil base.

Place mesh on top of topsoil on slopes steeper than 2:1. Secure mesh in place with wooden pegs at maximum intervals of 600 mm. Cover mesh lightly with topsoil.

Lay sod sections perpendicular to slopes greater than 3:1 and secure with wooden pegs. Place pegs at 3 per metre, 100 mm below top edge of sod roll to prevent shifting of sod. Drive pegs flush with top of sod soil.

**TS 5.00.07.05                      Maintenance of Completed Sod**

The Contractor shall maintain the sod for 60 consecutive calendar days following completion of the sod placement. During this period, the Contractor shall ensure that all placed sod is kept healthy, actively growing and green in leaf colour. At the end of the 60-day period, City inspector or Contractor Administrator will inspect the placed sod for defects. Any defective sod shall be replaced at the expenses of the Contractor.

Maintenance of the placed sod should be suspended during the winter dormant period (November 1 to April 30) and the sixty-day maintenance period shall resume in the following spring after the winter dormant period.

The completed sod is subject to a general warranty period as stipulated in the contract documents, notwithstanding the 60-day maintenance period mentioned in this specification.

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**TS 5.00.07.05.01      Watering**

Initial watering of sod shall occur within 12 hours after laying to obtain moisture penetration into top 100 mm of topsoil. Water sodded areas in sufficient quantities and at frequency required to maintain soil under sod continuously moist to depth of 75 to 100 mm as per horticulturally accepted methods.

Watering of completed sod may also be required throughout the warranty period.

**TS 5.00.07.05.02      Weed Removal**

The Contractor is responsible for removing all weeds until final acceptance of contract during warranty period.

**TS 5.00.07.05.03      Fertilizer Application on Completed Sod**

Fertilize sodded areas one month after sodding with fertilizer at a rate per soil analysis or as recommended by the manufacturer. Postpone fertilizing until following spring if application falls within the four-week period prior to the expected end of growth season.

**TS 5.00.07.06      Clean-Up**

Clean up any soil or debris spilled on any pavement and dispose of deleterious materials off site.

**TS 5.00.08      QUALITY ASSURANCE**

**TS 5.00.08.01      Performance Measure**

Sixty days after installation, the sod shall be green and show evidence of rooting into the underlying soil. Any areas of sod which fail to meet these requirements will be rejected and the Contractor shall replace the rejected sod at their own expenses.

Sodded areas will be considered meeting the performance measure provided that:

- (1) Sodded areas are properly established.
- (2) Sod is free of bare and dead spots.
- (3) No surface soil is visible when grass has been cut to height of 40mm.
- (4) Sod is free of weeds.
- (5) All placed sod shall be in the same location as originally placed and shall not have moved, eroded, slipped or slough.

**TS 5.00.08.02      Failure to Meet Performance Measure**

If the completed work does not meet the performance measures, the Contractor shall re-apply the specified materials according to this specification. All replaced sod shall be subject to a further maintenance period of 60 consecutive days.

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If the Contractor cannot apply or re-apply the sod due to site condition of for any reason, the Contractor shall maintain the site and control erosion until conditions permit application of the sod.

**TS 5.00.09                    MEASUREMENT FOR PAYMENT**

**TS 5.00.09.01                Nursery Sod**

Nursery sod will be measured in m<sup>2</sup>, of the area acceptably completed.

**TS 5.00.09.02                Nursery Sod and Stakes**

The areas of Nursery sod and stakes successfully completed will be measured in m<sup>2</sup>.

**TS 5.00.09.03                Nursery Sod, Stakes and Mesh**

The areas of Nursery sod, stakes and mesh successfully completed will be measured in m<sup>2</sup>.

**TS 5.00.10                    METHOD OF PAYMENT**

- TS 5.00.10.01                Nursery Sod - Item**  
**Nursery Sod and Stakes - Item**  
**Nursery Sod, Stakes and Mesh - Item**

Payment at the contract price for the above tender item shall be full compensation for all labour, equipment, materials and incidentals to do the work as described above. Payment shall include, but not be limited to, the supplying and placing of sod, watering, weeding, fertilizing and maintenance until Final Acceptance and Guarantee, as well as, sod replacement and water for sod when no separate item for payment exists for such work.