

CITY OF TORONTO TRANSPORTATION SERVICES STANDARD CONSTRUCTION SPECIFICATIONS TS 5.00

June 2001

CONSTRUCTION SPECIFICATION FOR SODDING

INDEX

TS 5.00.01	SCOPE
TS 5.00.02	REFERENCES3
TS 5.00.03	DEFINITIONS - Not Used
TS 5.00.04	SUBMISSION AND DESIGN REQUIREMENTS - Not Used3
TS 5.00.05	MATERIALS
TS 5.00.05.01	Nursery Sod3
TS 5.00.05.02	Sod Stakes4
TS 5.00.05.03	Mesh4
TS 5.00.05.04	Water4
TS 5.00.05.05	Fertilizer4
TS 5.00.06	EQUIPMENT - Not Used4
TS 5.00.07	CONSTRUCTION4
TS 5.00.07.01	Time Constraints4
TS 5.00.07.02	Surface Preparation5
TS 5.00.07.03	Sod Delivery
TS 5.00.07.04	Sod Placement
TS 5.00.07.05	Sod Maintenance5
TS 5.00.07.05.	01 Watering6
TS 5.00.07.05.0	02 Weed Removal6
TS 5.00.07.05.	03 Fertilizer
TS 5.00.07.06	Clean-Up6
TS 5.00.08	QUALITY ASSURANCE6
TS 5.00.08.01	Final Acceptance6
TS 5.00.09	MEASUREMENT FOR PAYMENT7
TS 5.00.09.01	Nursery Sod7

TS 5.00.09.02 TS 5.00.09.03	Nursery Sod and Stakes Nursery Sod, Stakes and Mesh	
TS 5.00.10	METHOD OF PAYMENT	.7
TS 5.00.10.01	Nursery Sod - Item Nursery Sod and Stakes - Item Nursery Sod, Stakes and Mesh - Item	.7

TS 5.00.01 SCOPE

This specification describes the requirements for supplying, placing, and maintaining sod in areas designated by the Commissioner.

TS 5.00.02 REFERENCES

The specification refers to the following specifications and publications:

Ontario Provincial Standard Specifications - Construction

OPSS 572	-	Seeding and Mulching, Temporary Cover, and Erosion Control Blanket
		(Aug. 1990)

City of Toronto Specifications

TS 5.10 - Construction Specification for Topsoil and Fine Grading (June 2001)

Canadian Nursery Trades Association

Canadian Standards for Nursery Stock

TS 5.00.03 DEFINITIONS – Not Used

TS 5.00.04 SUBMISSION AND DESIGN REQUIREMENTS – Not Used

TS 5.00.05 MATERIALS

All materials shall be approved by the Commissioner.

TS 5.00.05.01 Nursery Sod

Quality and source of nursery sod shall comply with the specifications for number one grade turf gross 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 minimum 70% Kentucky Bluegrass, 30% Creeping Red Fescue. The contractor is encouraged to propose alternate turf sod seed mixtures having drought resistance and minimal mowing characteristics.

Obtain approval from the Commissioner for the sod at the source. When proposed source of sod is approved, use no other source without written authorization. Submit one metre of sod to project site for approval prior to delivery. Submit sod seed mixture information to the Commissioner for approval before installation commences.

Alternate sod seed mixture for nursery sod shall be submitted with sod sample, growth rate, salt and drought tolerance and maintenance requirements to the Commissioner for approval prior to delivery.

(Current Edition)

All sod shall be uniform in texture, and be 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.

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 Mesh

Mesh shall be jute or synthetic plastic.

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 Fertilizer

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

- TS 5.00.06 EQUIPMENT Not Used
- TS 5.00.07 CONSTRUCTION

TS 5.00.07.01 Time Constraints

Sod shall be applied no sooner than May 1st and no later than October 31st. Should the contract schedule preclude being able to apply sod by October 31st, 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.

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. The sod shall be placed on a topsoil base prepared in accordance with Specification TS 5.10.

Should the topsoil exhibit weed growth or growth of other unwanted vegetation the contractor shall remove this growth by chemical or mechanical means. All methods of weed removal shall be approved, by the Commissioner, 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 Commissioner. If additional growth is observed, the contractor shall remove this growth by method approved by the Commissioner.

TS 5.00.07.03 Sod Delivery

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 shall 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.

TS 5.00.07.04 Sod Placement

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 Sod Maintenance

Maintain sodded areas from the start of installation until final acceptance.

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.

TS 5.00.07.05.02 Weed Removal

The Contractor is responsible for removing all weeds until final acceptance.

TS 5.00.07.05.03 Fertilizer

Fertilize sodded areas one month after sodding with fertilizer at a rate per soil analysis. 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 Final Acceptance

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 shall be replaced by the Contractor and subject to a further sixty-day maintenance period. All costs associated with replacing rejected sod shall be borne by the Contractor.

Sodded areas will be considered for final acceptance 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.

Areas sodded in fall will be accepted in the following spring one month after the start of the growing season, provided acceptance conditions are fulfilled.

TS 5.00.09 MEASUREMENT FOR PAYMENT

TS 5.00.09.01 Nursery Sod

Nursery sod will be measured in m², 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 m².

TS 5.00.09.03 Nursery Sod, Stakes and Mesh

The areas of Nursery sod, stakes and mesh successfully completed will be measured in m².

- 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.