

2ND REPORT OF THE
TREES AND FORESTS ADVISORY COMMITTEE

Meeting held on October 24, 2012, commencing at 12:15 p.m.

PRESENT: B. Shiell (Chair), A. Cantel, S. Curtis-Norcross, I. Kalsi, C. Linton, C. McCallum, B. Sandler and J. Winkler and B. Mercier (Committee Secretary).

ALSO PRESENT: D. Clark, I. Listar, S. Rowland and B. Williamson.

REGRETS: C. Neilans.

I YOUR COMMITTEE REPORTS:

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| 1st Report of the TFAC | 1. (1) That the Trees and Forests Advisory Committee (TFAC) reviewed and received the 1st Report of the TFAC from its meeting held on September 26, 2012. |
| Communications Support for Advisory Committees | 2. (2) That the Trees and Forests Advisory Committee (TFAC) reviewed and received a Report dated July 16, 2012, from T. Dobbie, Interim City Manager, with respect to communications support for advisory committees. |
| CUFC Update | 3. (3) That the Trees and Forests Advisory Committee (TFAC) heard a verbal update from I. Listar, Manager, Urban Forestry, with respect to the Canadian Urban Forest Conference, held on October 2 to 4, 2012 in London, Ontario. The TFAC was advised that the conference was a success, with approximately 400 participants and speakers in attendance. |
| New Standards for Tree Protection on Construction Projects | 4. (4) That the Trees and Forests Advisory Committee (TFAC) heard a verbal update and received the <u>attached</u> current City of London Tree Protection Standards, dated September 2012, and the Construction Specification for the Protection of Trees, dated November 2007, from I. Listar, Manager, Urban Forestry. The TFAC was advised that it will be given the opportunity to review the new standards when they have been revised. |
| Current Process and Information System Related to the Recommendations of the Forestry Services Strategic Review | 5. (5) That the Trees and Forests Advisory Committee (TFAC) heard a verbal update from I. Listar, Manager, Urban Forestry, with respect to the current process and information system related to the recommendations of the Forestry Services Strategic Review. The TFAC was advised that the purchase of the hardware and the software for the "Tree Management System" is not expected until the Fall 2013. |
| Stanley Street Tree Damage | 6. (6) That the Trees and Forests Advisory Committee (TFAC) heard a verbal report from S. Curtis-Norcross, with respect to the Stanley Street tree damage during road construction. |
| Forestry Services Strategic Review Recommendations Timetable – January 2012 | 7. (Added) That the Trees and Forests Advisory Committee (TFAC) heard a verbal update from S. Rowland, Urban Forestry Planner, with respect to a TFAC recommendation from its meeting held on February 22, 2012, that "item 63 of the Forestry Services Strategic Review recommendations timetable which states, 'Management should conduct a financial analysis to determine the adequacy of the annual budget amount received from London Hydro' to be accomplished as soon as possible, recognizing there is a potential income source for the tree programs". The TFAC was advised that the City will receive \$12,000 this year and \$15,000 for 2013 from London Hydro. |
| EAB/Buckthorn Stakeholder Meeting | 8. (Added) That the Trees and Forests Advisory Committee (TFAC) heard a verbal update from I. Listar, Manager, Urban Forestry, with respect to an upcoming Emerald Ash Borer and Buckthorn Stakeholder meeting; it being noted that the TFAC appointed C. McCallum and B. Sandler to represent the TFAC at the above-noted meeting. |
| Next Meeting | 9. That the Trees and Forests Advisory Committee (TFAC) will hold its next meeting on November 28, 2012. |

The meeting adjourned at 2:25 p.m.



**ONTARIO
PROVINCIAL
STANDARD
SPECIFICATION**

**METRIC
OPSS 565
NOVEMBER 2007**

**CONSTRUCTION SPECIFICATION FOR
THE PROTECTION OF TREES**

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565.01 SCOPE

This specification describes the measures required to protect trees not designated for removal.

565.01.01 Specification Significance and Use

This specification has been developed for use in provincial- and municipal-oriented Contracts. The administration, testing, and payment policies, procedures, and practices reflected in this specification correspond to those used by many municipalities and the Ontario Ministry of Transportation.

Use of this specification or any other specification shall be according to the Contract Documents.

565.01.02 Appendices Significance and Use

Appendices are not for use in provincial contracts as they are developed for municipal use, and then, only when invoked by the Owner.

Appendices are developed for the Owner's use only.

Inclusion of an appendix as part of the Contract Documents is solely at the discretion of the Owner. Appendices are not a mandatory part of this specification and only become part of the Contract Documents as the Owner invokes them.

Invoking a particular appendix does not obligate an Owner to use all available appendices. Only invoked appendices form part of the Contract Documents.

The decision to use any appendix is determined by an Owner after considering their contract requirements and their administrative, payment, and testing procedures, policies, and practices. Depending on these considerations, an Owner may not wish to invoke some or any of the available appendices.

565.03 DEFINITIONS

For the purpose of this specification, the following definitions apply:

Barrier means a fence placed around a single tree or group of trees to protect them from removal and injury.

Dripline means the location on the ground surface directly beneath the theoretical vertical line from the tips of the outermost branches of the trees.

565.07 CONSTRUCTION

565.07.01 Operational Constraints

Trees not designated for removal shall not be damaged and shall be protected from flooding and sediment deposits from construction operations.

Equipment and vehicles shall not be operated within the dripline of trees not designated for removal unless specified in the Contract Documents. In such cases, operation of equipment shall be kept to the minimum necessary to perform the work required.

Equipment or vehicles shall not be parked, repaired, or fuelled within the dripline of any tree not designated for removal.

Construction materials and earth shall not be stockpiled within the dripline of any tree not designated for removal.

565.07.02 Barrier for Tree Protection

Barriers for tree protection shall be a minimum height of 1.2 m consisting of material approved by the Contract Administrator, supported by steel posts. The number of steel posts shall be enough to keep the material from sagging and the fence erect.

The barriers shall be erected at the dripline of trees or woodlot edges within the Working Area, prior to commencement of construction operations at locations specified in the Contract Documents. Where a clearance zone of 1.5 m cannot be established between the barrier at the dripline and the limit of grading, the barrier may be placed within the dripline, subject to the approval of the Contract Administrator. When the barrier is placed within the dripline,

- a) a minimum distance of 0.75 m shall be maintained between the trunk of the tree and the barrier, and
- b) a distance of 1.5 m shall be maintained between the barrier and the limit of grading.

When the trunks of trees are less than 4.5 m apart, the trees shall be considered a woodlot and the barrier shall be placed so it forms a continuous barricade around the woodlot as specified in the Contract Documents.

A barrier is not required where an existing fence serves the same purpose. At such locations, the barrier shall terminate at the existing fence so that a continuous barricade is provided between the trees and the area of work.

The barriers shall be maintained erect and in good repair throughout the duration of construction operations without breaks and unsupported sections and shall be removed upon completion of the work.

565.07.03 Tree Repair

Trees not designated for removal that are damaged by construction operations shall be repaired as follows, within 5 Days of the damage:

- a) Branches 25 mm or greater in diameter that are broken shall be cut back cleanly on the tree side of the break or to within 10 mm of their base, if a substantial portion of the branch is damaged.
- b) Roots 25 mm or larger in diameter that are exposed shall be cut back cleanly to the soil surface.
- c) Bark that is damaged shall be neatly trimmed back to uninjured bark without causing further injury to the tree.

565.07.04 Management of Excess Material

Management of excess material shall be as specified in the Contract Documents.

565.09 MEASUREMENT FOR PAYMENT

565.09.01 Actual Measurement

565.09.01.01 Barrier for Tree Protection

Measurement shall be in linear metres measured along the length of the barrier. Overlaps shall not be measured.

565.09.02 Plan Quantity Measurement

When measurement is by Plan Quantity, such measurement shall be based on the units shown in the clause under Actual Measurement.

565.10 BASIS FOR PAYMENT

565.10.01 Barrier for Tree Protection - Item

Payment at the Contract price for the above item shall be full compensation for all labour, Equipment, and Material required to do the work.

Progress payments shall be based on the following percentage of the Contract price:

- 60% for supply and erection
- 25% for maintenance
- 15% for removal

When there is not a separate item for Barrier for Tree Protection, payment at the Contract price for the applicable tender items of the Contract that necessitate the placing of barriers for tree protection shall include full compensation for all labour, Equipment, and Material to do the work of protecting and repairing trees not designated for removal.

**Appendix 565-A, November 2007
FOR USE WHILE DESIGNING MUNICIPAL CONTRACTS**

Note: This is a non-mandatory Commentary Appendix intended to provide information to a designer, during the design stage of a contract, on the use of the OPS specification in a municipal contract. This appendix does not form part of the standard specification. Actions and considerations discussed in this appendix are for information purposes only and do not supersede an Owner's design decisions and methodology.

Designer Action/Considerations

The designer should specify the following in the Contract Documents:

- Locations of barriers for tree protection at trees or woodlot edges. (565.07.02)

The designer should determine the following are required and, if so, the requirements should be included in the Contract Documents:

- The need to operate equipment and vehicles within the dripline of trees not designated for removal. (565.07.01)

The designer should ensure that the General Conditions of Contract and the 100 Series General Specifications are included in the Contract Documents.

Related Ontario Provincial Standard Drawings

OPSD 220.010 Barrier for Tree Protection

12 TREE PROTECTION & TREE PLANTING

12.1.1 TREE PROTECTION

This Section describes the requirements and measures required to ensure adequate protection for trees identified for retention under the contract. The requirements and measures include a tree protection plan, identification of Tree Protection Zones, installation of tree protection barriers, pruning of branches and roots and remediation measures to mitigate the impact of damage to retained trees.

The City will consider the protection of trees throughout the acceptance and construction processes and adopt reasonable precautions for the protection of trees.

All new subdivisions require an accepted Tree Protection Plan.

For site plans, the City will recommend at the site plan pre-consultation meeting whether a Tree Protection Plan is warranted for the specific site.

The City will assess each Capital Works project to determine whether a Tree Protection Plan is warranted.

12.1.2 Requirement for Approved Tree Protection Plan

12.1.3 A tree protection plan shall be completed by a certified arborist or approved professional, such as a Landscape Architect, and submitted to the Urban Forester or designate for approval prior to the start of the construction or other works.

12.1.4 No on-site construction or other works that may cause damage to trees is permitted without an accepted tree protection plan.

12.1.5 The tree protection plan shall include, but is not limited to:

- a) Identification of specific trees (species, size and health) that are to be removed for safety, tree health, operational requirements or aesthetics. A detailed description of the condition of the trees and factors on which the recommendation to remove were based must be included in the report. Pictures of the trees showing pertinent condition are recommended;
- b) Identification of specific trees (species, size and health) that will be retained and protected during the operations as future forest cover. Pictures of the trees showing pertinent conditions are recommended;
- c) Identification of specific trees that will be dug up and relocated prior to the start of the operations and the locations where they will be replanted;
- d) Foreseeable remedial actions to ensure the health of the remaining trees such as but not limited to branch pruning, deep root fertilization, tree watering, soil replacement or amelioration, planting;

- e) Specification of good arboriculture practices for root and branch pruning;
- f) A map showing:
 - i) the location of all existing trees and the extent of their crowns;
 - ii) the location of all trees to be retained, removed, replaced or relocated;
 - iii) highlighted and labeled Tree Protection Zones and tree protection barriers.

12.1.6 Operational Constraints

Operational constraints as per Ontario Provincial Standards Specification (OPSS) 565.07.01 apply except during emergency situations.

12.1.7 Tree Protection Zones and Barriers

Tree Protection Zones (TPZ) shall be established surrounding all trees to be retained. The outside boundary of the TPZ shall be delineated by a tree protection barrier.

Barriers for Tree Protection Zones as per OPSS 565.07.02 apply except where;

- a) The tree is flanked by curb/sidewalk and/or an asphalt road the TPZ and barrier can be limited to furthest extent of the boulevard area; and
- b) A TPZ is not required or not feasible to establish beyond the main stem of the retained trees, banding boards shall be installed around the stems of the retained trees. The boards shall be installed in a vertical direction and remain in place for the duration of the project. Banding boards must not be nailed, or screwed onto the tree stem. Bark must not be broken or torn during the establishment of the banding boards. The banding boards must extend from ground level to a minimum height not of 1.2 metres.

12.1.8 Cutting and Repair

- 12.1.8.1 The Ontario Standard Specification (OPSS) 565.07.03 for tree cutting and repair applies except as amended as follows:

The term "Specimen "Trees" is deleted and replaced by the term "Trees to be retained"

- 12.1.8.2 All trees identified in the approved tree protection plan for pruning must be pruned before commencement of any on-site operations by a certified arborist.
- 12.1.8.3 It is recommended that when lateral services require replacement that the use of 'no dig' technology be used. Feasibility will be determined by the City's Project Manager.
- 12.1.8.4 Roots that are exposed should be covered with wet burlap or soil as soon as possible and watered regularly to prevent them from drying out. Watering is required until such time as the topsoil and sod has been replaced satisfactorily or as otherwise directed by the City's Project Manager.

All trees identified in the tree protection plan for relocation or removal must be

relocated or cut and removed prior to the commencement of the on-site operations.

12.1.9 Tree Damage and Remediation

12.1.9.1 "Damage" means to carry out any activity that may injure or kill any tree and including but not limited to:

- a) the topping or removal of branches from a tree other than in accordance with accepted arboricultural practices;
- b) the cutting or shattering of the roots of a tree within the drip line other than in accordance with accepted arboricultural practice;
- c) the scraping, gouging or denting of a tree's drip line
- d) the compaction of the soil within the Tree Protection Zone by the placement of soil, fill, heavy equipment, vehicles, building or other materials thereon or by the movement of vehicles or equipment thereover;
- e) depositing within the tree's drip line any toxic or harmful substance;
- f) the removal of soil from within a tree's drip line.

12.1.9.2 No objects except approved tree protection barriers are permitted to be attached to trees protected by City by-laws.

12.1.9.3 Costs associated with any remediation actions required as a result of damage to retained trees, as ordered by the City, shall be borne solely by the contractor.

12.1.10 Requirements for Post Construction Measures

12.1.10.1 A certified arborist, or other tree professional, approved by the Urban Forester or designate, shall inspect all retained trees and their rooting area to assess if any additional remediation work is required to ensure their future health and survival.

12.1.10.2 If the inspection specified in Section 6.6.1 indicates damage to retained trees, the certified arborist or approved professional shall prepare a post construction remediation plan for approval to the City Urban Forester. The remediation plan may include but is not limited to: pruning; deep root fertilization; irrigation; aeration; tree planting either as a single activity or in combination.

12.1.10.3 A certified arborist, or other tree professional, approved by the Urban Forester or designate shall inspect the project site and certify that any and all measures specified in the tree protection plan or post construction remediation plan have been completed as per the plan. This certification is required before final acceptance and approval of the work by the City