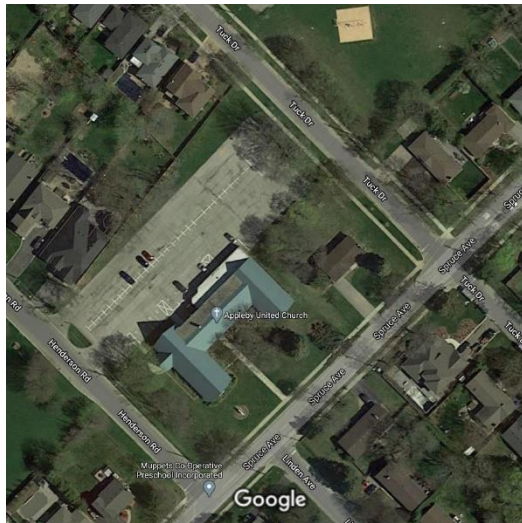


# SCOPED ARBORIST REPORT

Concerning the Tuck Drive Right-of-Way Trees Adjacent to:  
4417 Spruce Avenue  
City of Burlington, Ontario



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## Introduction

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Due to the need for the Council of the City of Burlington to regulate and approve tree protection and removals within city right-of-ways according to City of Burlington By-law 68-2013, Adesso Design Inc., the project landscape architect, has requested the preparation of this scoped arborist report for the planned site alterations at the site at 4417 Spruce Avenue in Burlington, Ontario. The intention of the development proposal is to build new residential buildings on the site.

This report provides an inventory and assessment of the 8 trees along the Tuck Drive right-of-way relating to the subject site and outlines their removal and preservation requirements based on the site plans provided by Adesso Design Inc and in accordance with the current City of Burlington tree By-law.

This report is supplemental and should be understood in conjunction with related project plans prepared by Adesso Design Inc.

## Method of Evaluation

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Site observations were made on December 14, 2017 to evaluate and inventory all trees adjacent to the site along the Tuck Drive right-of-way. The trees were visually assessed in this evaluation for overall health, structure and vigor, as well as confirming their locations in relation to planned site alterations and ownership.

Tree inventory, as included in **Appendix 1** is outlined according to the following categories:

- **Tree #** - corresponding to Adesso Design's vegetation identification table.
- **Ownership** – indicates whether the tree is public, private, or shared ownership.
- **Species** – botanical and common names are provided for each tree.
- **DBH** – 'diameter at breast height' (1.37 m above grade) for each tree in centimeters.
- **Condition** – an assessment of the overall health and quality of the tree rated on an ascending scale of poor-fair-good.
- **Comments** – Preserve or remove relative to planned site alterations, and width of the Tree Protection Zone, in meters for the protection of trees during construction. TPZ is based on DBH and may vary according to existing site conditions.

**Table 1, Tree Inventory**

Tree/Unit #	Owner	Common Name	Botanical Name	DBH (cm)	Condition	Comments
15	City ROW	Norway Maple	<i>Acer platanoides</i>	46	Good	Preserve with 3.0m TPZ
16	City ROW	Callery Pear	<i>Pyrus calleryana</i>	6	Good	In conflict with proposed driveway.
17	City ROW	Callery Pear	<i>Pyrus calleryana</i>	6	Good	Preserve with 1.2m TPZ
18	City ROW	Callery Pear	<i>Pyrus calleryana</i>	6	Good	In conflict with proposed driveway.
19	City ROW	Callery Pear	<i>Pyrus calleryana</i>	6	Good	In conflict with proposed servicing.
20	City ROW	Norway Maple	<i>Acer platanoides</i>	44	Good	Preserve with 3.0m TPZ
21	City ROW	Callery Pear	<i>Pyrus calleryana</i>	6	Good	Preserve with 1.2m TPZ
22	City ROW	Callery Pear	<i>Pyrus calleryana</i>	6	Good	In conflict with proposed servicing.

## Discussion

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### Proposed Works

The intention of the development proposal is to build new residential buildings on the site. Trees along the Tuck Drive right-of-way adjacent to the site will be affected by the proposed site alterations and will require either removal or protection measures for the proposed development to occur.

### Tree Ownership

All trees discussed in this report are located in the City right-of-way and are owned by the City of Burlington.

- **Trees 15 - 22** are located in the City ROW along Tuck Drive.

### Tree Removals

Due to conflicts with the proposed site plan, 4 trees should be removed prior to the beginning of on-site construction.

- **Tree 16:** Is in conflict with the proposed driveway for building #1.
- **Tree 18:** Is in conflict with the proposed driveway for building #2.
- **Tree 19:** Is in conflict with a proposed service lateral required for building #2.
- **Tree 22:** Is in conflict with a proposed service lateral required for building #4.

## Tree Preservation

Four (4) trees in the Tuck Drive ROW should be preserved. Due to their proximity to the planned site alterations the following trees require TPZ measures according to the City of Burlington's Tree Protection and Preservation Specifications (SPEC NO. SS12A):

- **Tree 15: Preserve with a minimum Tree Protection Zone of 3.0 meters.**
- **Tree 17: Preserve with a minimum Tree Protection Zone of 1.8 meters.**
- **Tree 20: Preserve with a minimum Tree Protection Zone of 3.0 meters.**

Permission to injure this tree will be required as work for the proposed driveway construction will need to occur within the minimum TPZ. Excavation to depths of approximately 30cm will be required wherein some root severance may be necessary. Root damage should be treated as follows, according to the City of Burlington's standards:

- Root pruning within the **Minimum Tree Protection Zone** of any tree requires root exploration via supersonic air tool or hydro vacuum unit to first remove the soil and expose the roots.
- Roots under 2 cm in diameter can be pruned using a sharpened tool such as hand pruners or a sharpened spade under the supervision of the Construction Inspector.
- Roots between 2 and 8 cm in diameter can be pruned by the arborist using a sharp tool, such as a handsaw, hand pruner or loppers and under the supervision of the Construction Inspector and the advisement of the Project Arborist.
- All roots over 8 cm in diameter must be assessed by the Project Arborist prior to pruning unless the arborist on-site can confidently assess the effect of the removal of the root as not detrimental to the tree.
- Root pruning within the Critical Root Zone and outside of the MTPZ, typically requires the use of a sharpened garden spade, cutting a line to a depth of about 30 cm by the on-site arborist under the advisement of the Project Arborist if needed. However, the same pruning protocol for the size of roots encountered (in the MTPZ) applies to the roots found within this area.
- The trenches are typically backfilled with the same excavated soil or new topsoil or compost and hoarding should be installed along this trench to protect the remaining roots.

Overall, by minimizing these impacts using the mitigation measures described herein, and considering the minor encroachment, it is anticipated that this tree will tolerate the proposed injuries and recover.

- **Tree 21: Preserve with a minimum Tree Protection Zone of 1.8 meters.**

## Tree Risk

No trees on the site posed any unacceptable level of risk at time of assessment.

## Permit Requirements

Pursuant to City of Burlington By-law 68-2013, tree removals in the right-of-way of this site are subject to the approval by the Council of the City of Burlington.

## Tree Protection Zones (TPZ's) (SPEC NO. SS12A)

Prior to issuance of the Tree Permit and Site Alteration Permit, tree protection measures for all retained trees must be in place and must remain in place during the entire construction period. These protection measures must be in accordance with City standards.

Trees within or adjacent to a construction site must be protected during construction by means of a barrier installed in accordance with City standards and meet the following specifications:

- No unauthorized activities may take place within the TPZ of a tree covered under any municipal permit process or agreement.
- If fill or excavated material must be temporarily located near the TPZ, a wooden barrier shall be used to ensure no material enters the TPZ.
- TPZ fencing shall consist of framed construction or snow fencing and be supported by solid wood framing.
- All TPZ locations should be clearly marked on site project plans.
- An informational sign should be mounted on TPZ hoarding and remain throughout the duration of the project. Example below.

Trees and TPZs should be monitored regularly by a consulting arborist throughout the duration of the project.

### Figure 2, Tree Protection Signage

<p style="text-align: center;"><b>TREE PROTECTION ZONE</b></p> <p>No grade change, storage of materials or equipment is permitted within this area.</p> <p>This tree protection barrier must not be removed without the written authorization of the Town of Oakville.</p> <p>Report any contraventions to;</p> <p>Contact: _____</p> <p>Tel No.: _____</p> <p>Unauthorized removal of the tree protection barrier or other contraventions may result in prosecution.</p>
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## Recommendations

Included here are general recommendations and suggested measures that will help ensure the health and survival of the preserved trees during and, most importantly, after the construction process is complete;

- TPZ's are suggested minimums, and as such it is recommended to keep all equipment and vehicular movement as far away from existing trees as possible;
- Any tree work such as trimming and branch removals should be carried out according to sound arboricultural practices, and should be performed by a certified arborist;
- All excavation near existing trees should be carried out in a sensitive manner – that is with keen attention to tree roots and soil movement. Large roots should be removed with a saw and by a certified arborist to minimize the damage to the tree as much as possible.

## General Limitations of Tree Assessment

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The assessment presented in this report is only valid at the time of inspection.

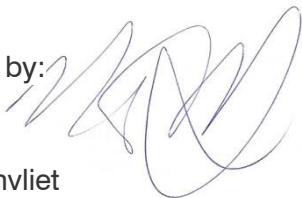
Tree risk assessments rely on identifying and assessing the structural condition of trees to determine weak points and failure potential. Assessment and management of tree risk is based on the science of biomechanics — the way trees grow for structural support and biological function. It must be understood that trees are dynamic, living organisms that are subject to internal and external changes over time.

Similarly, tree management relies on forecasting potential construction impacts and the ability of trees to withstand stresses due to compaction, excavation, filling and mechanical damage. The success of tree protection requires adherence to minimum standards as set forth by the municipality and best management practices by the contractor. The willingness of the owner to comply is also a mitigating factor.

We have made reasonable efforts to assess the overall condition of the trees on or adjacent to the subject property. No guarantee or warranty is offered, expressed or implied, that these trees or any of their parts will remain intact or in stable condition. We cannot predict or be held responsible for the behaviour of any tree regardless of its condition at the time of assessment.

To reduce risk to trees, human life or property we recommend ongoing inspections and evaluations during construction. Post construction evaluation and remediation should also be considered to promote the long-term health of trees.

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## Appendix 1: Site Photographs



Figure 1: Tree 15



Figure 2: Trees 16 - 19



Figure 3: Trees 20 - 22