# TREE INFORMATION REPORT

Application no. D02-02-23-0016
Address: 1274 Marygrove. Circle., Ottawa, ON
Owner: Oleksandr Patsukevych
Date: November 28th 2022
Revision #1: August 19th 2023
Revision #2: December 30th 2023

Author: Ian Lawford ISA ON-1922A

URBAN TREE WORKS INC. 20 Georgian Private, Ottawa ON K2C 3P4

This tree report concerns the infill application (D02-02-23-0016) that is being proposed for 1274 Marygrove Circle. Throughout this report References to the “City” will refer to the City of Ottawa. Please refer to Appendix A, Table 1 for an inventory of existing trees over 30 cm in Diameter at Breast Height, or outside the chain of custody which will be impacted by construction. Please refer to Appendix A, Figure 1a for their corresponding location(s). Also, please refer to Appendix C for corresponding photos of inventoried tree(s)on page 11.

# Inventory

With this application, Tree no 1, located at the front centre of the property, will be impacted by construction to an extent the tree can not be retained in its current position. As shown in Fig 1a. the centre of the trunk is ≈2.4m outside the property line and no part of the trunks extends into the plane of the property line. As indicated in Table 1 the ownership lies with The City of Ottawa. Figure 1b shows the Critical Roots Zones (CRZ) for Tree No 1 falls well within the footprint of the proposed driveway. Two scenarios are proposed in Table 1. The first is to remove the tree and compensate with a new installation. The second scenario is to retain the tree and translocate using a tree spade. Under the direction of Nancy Young (Planning Forester with the City of Ottawa), the option to retain and translocate Tree no. 1 as a means of maintaining 40% canopy over 40yrs in Ottawa’s urban development was met with approval.
Manotick Tree Movers were consulted and an on-site meeting with them confirmed the viability of the tree move. Refer to APPENDIX G which includes a letter confirming the viability of relocating and a tree care guide from Manotic Tree Movers.

A security of $800 will be paid under an agreement with the City as assurance that the transplanting and follow-up maintenance and watering will be completed to guarantee the health of this tree or its replacement if it does not survive.

With the relocation of Tree No.1, tree protection measures outlined in Appendix B must be applied during all phases of construction. This condition holds true before Tree No. 1 is moved and after its relocation. After Tree No. 1 has been relocated, tree care practices outlined in Appendix G will be ensured.

The tree will also require supports, such as stakes and guying, before root development provides significant anchorage. In consultation with Nancy Young, Planning Forester at the City of Ottawa it is agreed that the tree moving work will be ideal over the Fall period and this is when the tree must be moved to it's new location.

In consultation with the "tree moving company" its important to provide the specifications of the tree such as the trunk caliper, canopy spread and height in order that the proper tree spade is used. Capturing a sufficient root ball will minimize root pruning and minimize shock to the tree.

Please refer to Figure (i) below to see the proposed relocation of Tree no.1 and its Critical Root Zone. Refer to Figure 1b Appendix A for CRZ determination. Given a DBH of 16cm the CRZ was determined to be 1.6m (10xDBH) or an overall diameter of 3.2 m. City of Ottawa Tree protections measures are clearly outlined in Appendix B and should be in place during all phases of construction. The outline of the tree protection fencing to be in place is clearly indicated in in Fig (i) below.

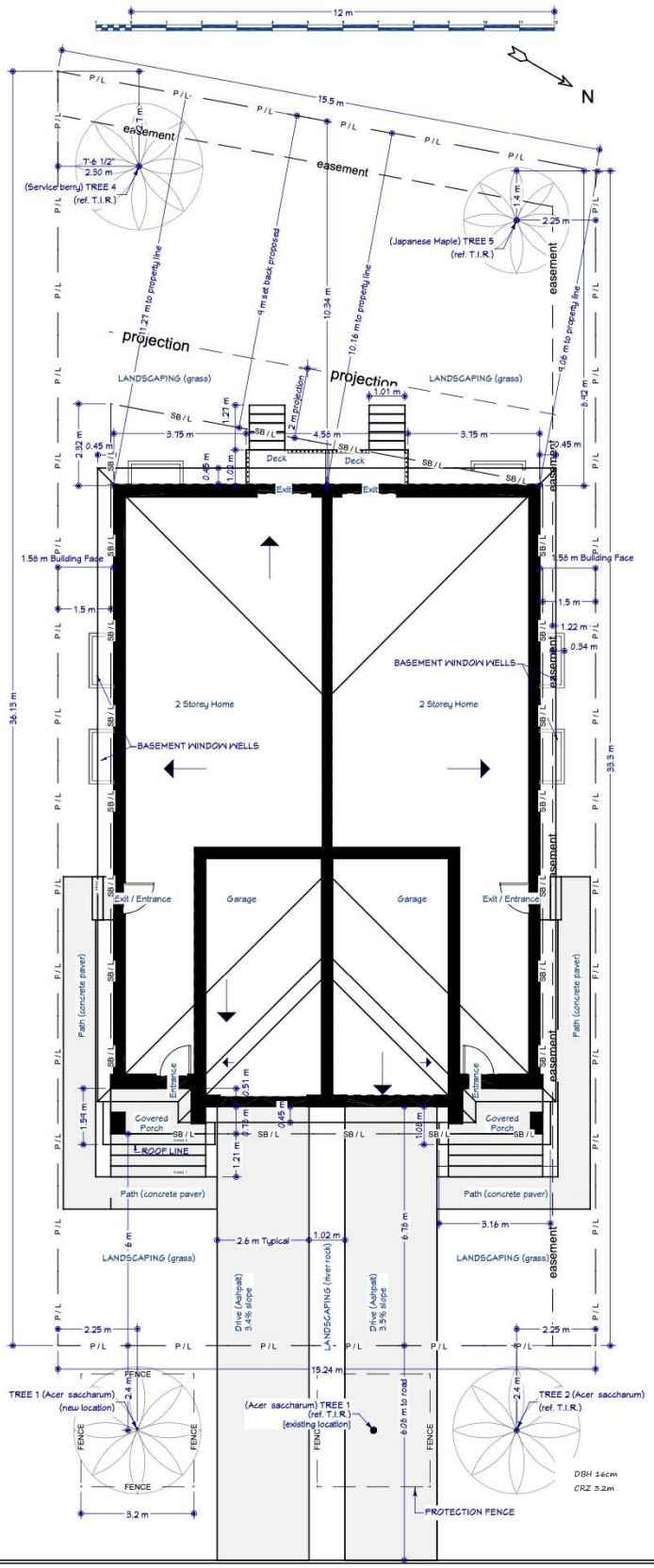


Figure (i) – Shows the location of new trees to be planted in relation to the building plan, along with the translocation of Tree no. 1 (CRZ 1.6 m) (Site plan supplied by Catalli Inshaw Design 2023-12-24.)

There are no other trees located within or beyond the lot bounding 1274 Marygrove Cir. which will be impacted by this construction application.

# Planting

Broad leafed species were chosen to maximize canopy cover. Table 2 in Appendix D provides a list of new trees and the location of where they would be suitably planted.

The caliper size shall be a minimum of 5cm and the caged root balls are approximately 2-3 feet in diameter. The excavation should be twice the diameter of the root ball and back fill should be unamended native soil in order to prevent a "perched water table". Backfilling the planting hole with soil that is highly permeable compared to the soil beneath the hole will result is an inconsistent rate of water percolation causing water to pool at the bottom of the hole creating anoxic conditions.

It is vital that the root ball cage be removed and the root ball scored in order to prevent "root girdling" (refer to Appendix E). Moreover, it is essential that the root collar be planted at grade and a 1" layer of clean mulch be applied throughout the root zone of the saplings, forming a berm around the drip line. Sourcing these samplings should be acquired from reputable nurseries that guarantee their samplings for at least one year. Given urban soils, particularly street side soils, are depleted or devoid of nutrients and natural floral within the rhizosphere it is recommended in the first few seasons that deep root fertilization and inoculation with mycorrhizae (Refer to Appendix E) be practiced.

Looking at Figure (i) above, Tree no. 2, is a S. maple and located on city property. The tree selection and location was made at the request of the City of Ottawa.

In the back yard left, Tree No. 4 is a Service berry and back yard right, Tree No. 5 is a Japanese maple. These trees were are an ideal choice in order to easily maintain hydro clearance as outlined in Appendix F.

It is reasonable to say that the root zone of the mature trees will be as extensive as the drip line of the mature canopy. Therefore, to guarantee a minimum of $20m^3$ of soil, as recommended for small trees with root zones ranging from $7m^2$ to $10m^2$, it is essential that 2-3m of soil aggregate exists below the trees and not stratified or impeded by building aggregate or mechanical.

Best arboriculture practices are set out by the International Society of Arboriculture and form the basis of Ottawa's Tree Protection Bylaw and the measures outlined in this report. If these measures are taken seriously and upheld, then the trees proposed in this report will continue to thrive and continue to be a benefit to society for many decades.

Ian Lawford

President: Urban Tree Works Inc.

B.Ed., Hon B.Sc. Environmental Science/Biochemistry
ISA Certified Arborist®
ON-1922A

# Appendix A

| Tree no. | Species | DBH(cm) | Location | Ownership | Condition | Arborist Rcommendaiton |
|---|---|---|---|---|---|---|
| 1 | *Acer saccharum* | 16 | Street side 1234 Marygrove Circle | City of Ottawa | Good vigour | Removal or Translocation |

Table 1: Inventory of trees over 30cm DBH or outside the chain of custody which will be impacted by construction

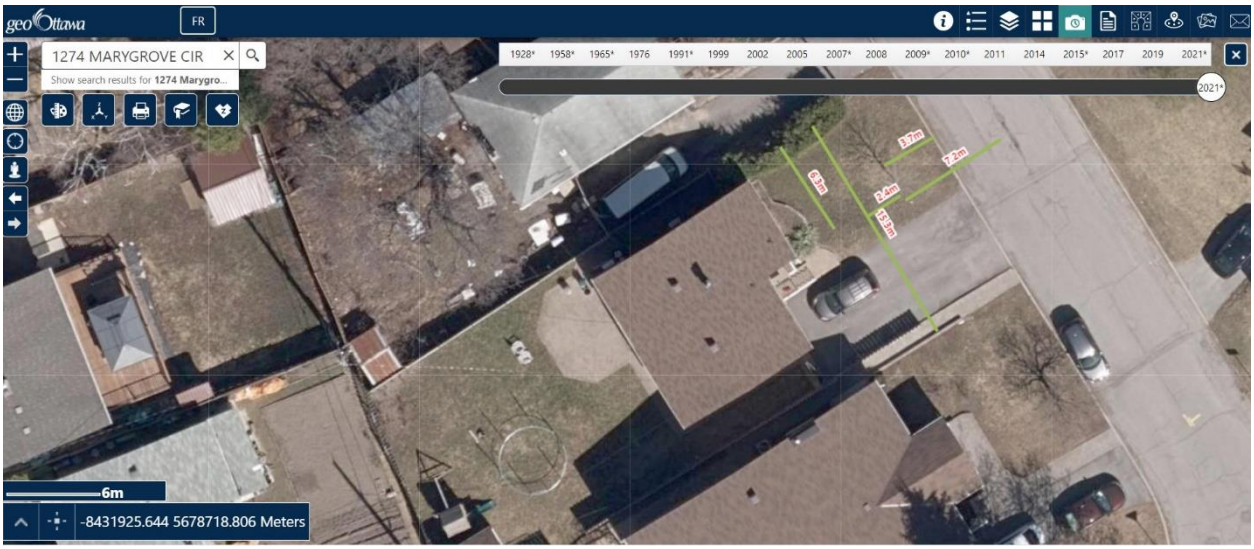


Figure 1a. Shows Parcel Based Map and Satellite Based Map respectively with existing dwelling for 1274 Marygrove Cir. The existing location for Tree No.1 is 2.4 m outside the property line and 3.7m to the edge of the asphalt. (Source geoOttawa 2021)

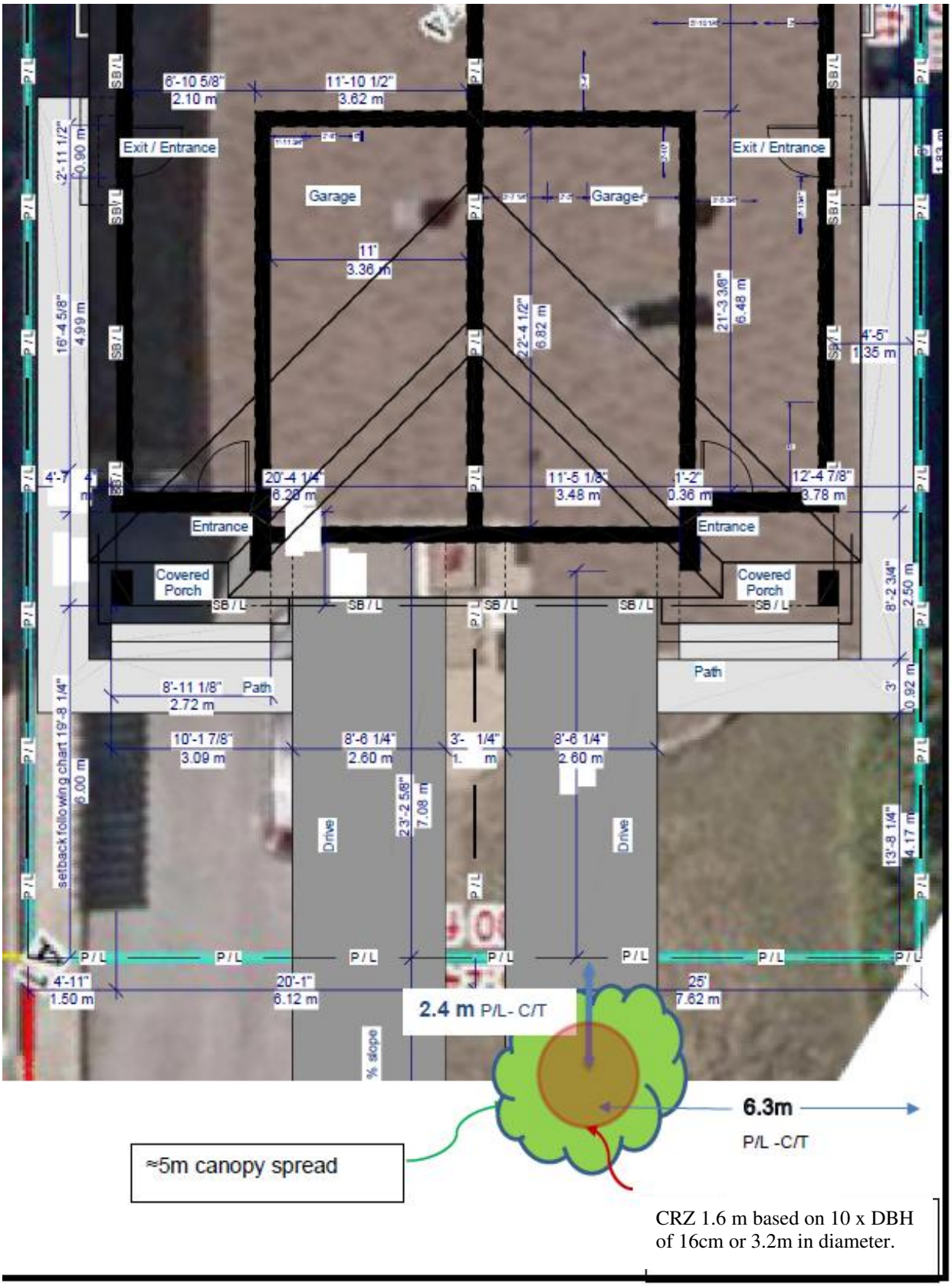


Figure 1b. Shows Tree No. 1 C/T (Centre of Trunk) in relation to the P/L (Property Line). CRZ is highlighted in red. New construction foot print superimposed over existing building foot print supplied by Catalli Inshaw Design.

# Appendix B-Determining Tee Protection Measures

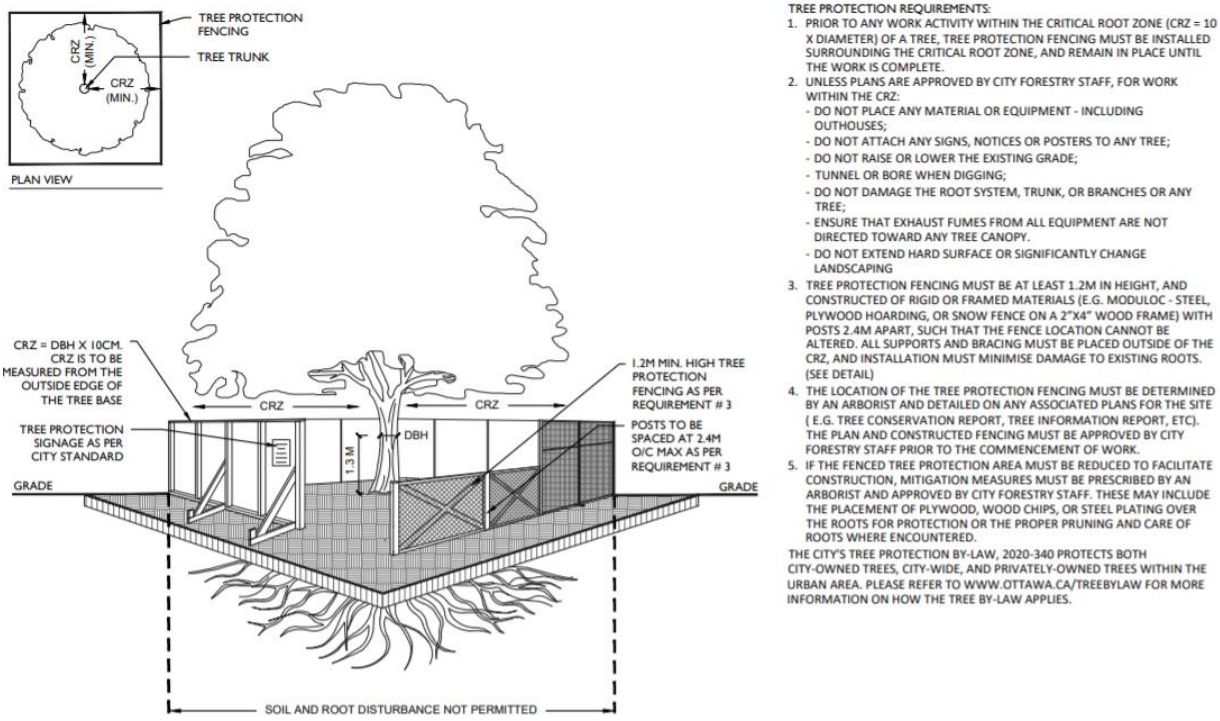


*Figure 3: Tree protection guidelines set out by the City of Ottawa's "Tree Protection Bylaw"*

# Appendix C- Tree Photos

Tree No. 1 *Acer Saccharum in its existing location.* Approximately 3.7m from the edge of the asphalt on Marygrove Circle and 2.4m from the PL. According to Geo-Ottawa, the tree appears to be owned by the City of Ottawa. Tree has good vigour and good structure. DBH 16cm.

# Appendix D – New Plantation

Table 2: Inventory of new tree installations post construction of two-story semidetached infill on the parcel located at 1274 Marygrove Cir. to compensate and satisfy the goal of 40% canopy cover in Ottawa's urban area.

| Tree # | Common Name | Species | Caliper | Root ball | Mature Canopy Spread | Location | Image |
|---|---|---|---|---|---|---|---|
| 2 | Sugar maple | *Acer Saccharum* | ≈10cm | Caged | 10 m | Front Right |  |
| 4 | Service berry | Amelanchier spp. | ≈5cm | Caged | 3.6 m | Back Left |  |
| 5 | Japanese maple | *Acer palmatum*, | ≈5cm | Caged | 3 m | Back Right |  |

# Appendix E- Definitions

"**boundary tree**" means a tree, of which any part of the trunk is growing across one or more property lines;
**"DBH"** or **"diameter at breast height"** means the measurement of a trunk of a tree at a height of one hundred and thirty (130) cm from the ground;
"**infill development**" means low rise residential development that is not subject to site plan control, plan of subdivision, or plan of condominium;
**"Critical Root Zone" CRZ** The critical root zone (CRZ) is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk diameter. The trunk

diameter is measured at a height of 1.3 metres for trees of 15 centimetres diameter and greater and at a height of 0.3 metres for trees of less than 15 centimetres diameter.

**Mycorrhizae**The associations between roots and fungi are called mycorrhizae. These symbiotic arrangements have been found in about 90% of all land plants, and have been around for approximately 400 million years. Plant roots are hospitable sites for the fungi to anchor and produce their threads (hyphae). The roots provide essential nutrients for the growth of the fungi. In return, the large mass of fungal hyphae acts as a virtual root system for the plants, increasing the amount of water and nutrients that the plant may obtain from the surrounding soil. A plant that forms an association benefiting both the fungus and the plant is a "host."

**(Angela M. O'Callaghan, Ph.D., University of Nevada)**

**Root Girdling -** A girdling root is a root that grows in a circular or spiral pattern around the trunk or at or below the soil line, gradually strangling the trunk. Trees and shrubs that are container-grown and pot-bound frequently develop girdling roots.

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# Tree Protection (By-law No. 2020-340)

**Section 74**

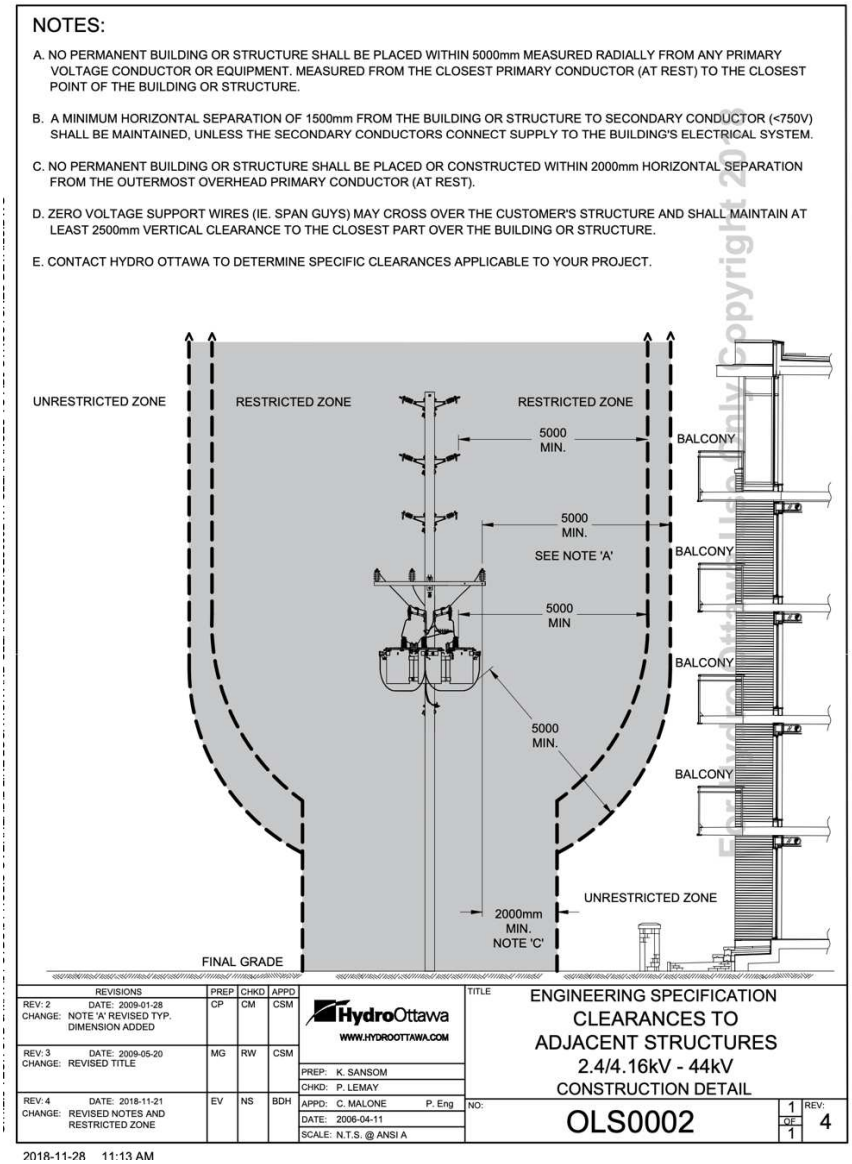
Where a tree is a protected tree, no person shall fail to implement the following tree protection measures, unless otherwise authorized by the General Manager:

1.
    1. prior to any work activity, tree protection fencing must be installed around the outer edge of the critical root zone, or as per the approved Tree Conservation Report or Tree Information Report, as applicable, and remain in place until the work is complete;

2. tree protection fencing shall be at least 1.2 metres in height and installed in such a way that the fence cannot be altered; and

3. such other measures as required by the General Manager to protect the tree.

# Appendix F- Hydro Clearance



# Appendix G- Tree Movers

Manotick Tree Movers Inc.
Serving Ottawa Since 1991
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(FULLY INSURED)

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North Gower, ON K0A 2T0
Phone: (613) 489-1116
Fax: (613) 489-1117
Email: info@manoticktree.com
www.manoticktree.com

**November 13, 2023**

**RE: City-owned Sugar Maple transplanting at 1274 Marygrove Circle, Kanata, ON**

To whom it may concern,

On Thursday, November 2nd, 2023, I visited the property 1274 Marygrove Circle for a tree-moving consultation and quotation. The homeowner requires relocating a Sugar Maple to allow site re-development. The goal is to proceed with demolition and new dwelling construction while preserving the Sugar Maple as it is currently located in the front yard, on City property.

It was concluded that the tree moving is viable as the caliper of the tree (16cm diameter) is well within our spade capabilities for successful transplanting. The tree would be relocated using our 94" tandem-axle truck-mounted spade (capable of relocating up to 25cm diameter trees).

To ensure higher success, we routinely use oversized spades on the trees we move. After the relocation, we will provide the homeowner with our tree care brochure and our recommended watering guide based on the homeowner's soil type.

I expect high success in relocating this tree, subject to good digging conditions.

Regards,

Fred Stevens
ISA Certified Arborist

ISA #0320-A & TRAQ
32 years of experience (certified for 30 years)

Part-Owner
Manotick Tree Movers

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***TODAY'S INVESTMENT...TOMORROW'S FUTURE***

Dear Customer,

**Manotick Tree Movers** would like to thank you for the opportunity to be of service to you. It is our goal to serve you, the customer in the provision of quality trees and service to your satisfaction.

We believe that your investment in trees not only beautifies and benefits your property today, but also will provide enjoyment for future generations to come.

Please take the time to review the following information and survival guide to help you care for your new (or relocated) trees. Remember, trees are living things - they require air, water, and proper nutrition just like we do to remain healthy and survive.

Should you have any other questions or concerns, please call us at any time.

**Visit our web site @ www.manotticktree.com**

## HOW TO CARE FOR YOUR NEW TREES

**WATERING**
A newly transplanted tree has lost a large percentage of its fibrous root system, and as a result has a diminished water absorbing capacity. It is therefore crucial that an adequate supply of water is maintained around the remaining root system to facilitate carrying on the vital life process.

**Frequency** -The following recommendations will vary depending upon the planting season and the amount of natural rainfall. Water absorption varies greatly depending on the soil type, its aeration and drainage factors. **Based on your soil type we suggest watering once every 2-10 days as follows:**

| □ | □ | □ | □ |
|---|---|---|---|
| heavy clay | clay/silt | loam | sand |
| 7-10 days | 5-7 day | 3-5 days | 2-3 days |

Care must be taken **not to over-water** as tree roots can actually **drown and rot**. They require time between watering's to drain out and breathe. **Clay soil requires extra time to drain, take care not to overwater**. Never allow the soil to dry up completely especially during hot dry periods in the summer. Test the soil (10cm deep) for dampness near the tree, and water if dry. Continue watering on a declining frequency until fall, **except for evergreens which require a thorough watering just prior to freeze up** (to prevent winter dehydration).

**Method** - The best method of watering your tree(s) is by: setting up an **oscillating sprinkler** beside the tree to thoroughly soak a minimum area twice the size of the root ball. This method is preferred because it will stimulate the new root growth to seek moisture out and beyond the confined ball area. A deep soaking with a water sprinkler may take several hours. **Avoid short frequent (daily) watering.** A soil dish is also acceptable when a sprinkler is not feasible. Watering is normally needed for the first two growing seasons only, and thereafter only in severe cases of drought.

**FERTILIZING**
Trees purchased and planted by Manotick Tree Movers receive an initial application of slow-release fertilizer (Plant Products 30-8-8) that is sufficient for the first year. **Early next spring we recommend** any of the following options for fertilizing your trees:

- Liquid Applications (ie Plant Products) use any ratio of ~3-1-1 as directed (ie. 30-10-10, 21-7-7 or similar)
- General purpose granular fertilizers - ratio of 3-1-1, (slow release preferred) in pellet form may be poured into drilled holes or surface sprinkled around the root ball area (ie. Any Tree/Shrub Fertilizer)
- Effective top dress fertilizers include mulching with mushroom compost, decomposed manure, etc.

Do not fertilize during July, August or September.

**PRUNING**
A newly transplanted tree should be pruned sparingly. We recommend corrective pruning (double leaders, etc.) every 3-4 years to properly develop your tree's shape.

**BRACING**
Some newly transplanted trees may require some form of bracing (by Manotick Tree Movers) to help anchor and stabilize the tree, enabling the root system to re-establish itself. Stakes should be removed within one year. **Inspect the arbor-tie on a routine basis to avoid bark damage;** reposition or remove if necessary (some slack is fine to allow sway).

**MULCHES**
Mulches are very beneficial as they help retain soil moisture, improve weed control, stabilize root zone temperatures and protect the trunk from mower damage. We recommend a medium grade wood mulch (10 cm) for your newly planted trees (eg. shredded cedar). Do not pile mulch against the trunk. Flowers or grass are competition for the tree. **Never allow a trimmer or mower deck to damage the trunk of the tree.**

**INSECTS AND DISEASE**
The best insect and disease control is to inspect your trees on a routine basis for early detection and to become familiar with some of the common pests encountered in each species. **Frequently, minor problems (tent caterpillars, over wintering eggs, etc.) can be spotted and removed by the home-owner.** Control measures can be complex and vary greatly depending on the problem.

**TREE WRAPPING** (deciduous only)
To help prevent winter frost cracking or sun scald (maples) wrap the trunk with burlap up to the branches or stand a board up against the south west side of the trunk. Use plastic wrap around the bottom 3 feet to prevent rodent damage or leave bait. Keep vegetation short as winter approaches.

**TREE SHOCK**
It is important to realize that most trees will experience some degree of shock or stress when transplanted. The tree will lose some of its luster and leaves are usually small as it concentrates on developing new roots below. By the third or fourth year your tree should be growing at a near normal pace.

**WARRANTY TERMS:**
All trees purchased from and planted by **Manotick Tree Movers Inc.** are **guaranteed for 2 years** from date of invoice. The warranty covers replacement and planting of the tree. Delivery is not included. Additional planting charges or smaller sizing may be required if conditions have changed from original installation (i.e. limited or no access due to fences, retaining walls, buildings and other obstructions). In no case shall Manotick Tree Movers Inc. be liable in respect of loss or damage to trees caused by wind storm, winter desiccation, hail, lightening, fire, insect damage, lack of water, excessive water, vandalism, or malicious acts.
We will replace any tree only once.

**MANOTICK TREE MOVERS INC. - SERVICES:**
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