

# TREE INFORMATION REPORT

Application no. D02-02-23-0016  
Address: 1274 Marygrove. Circle., Ottawa, ON  
Owner: Oleksandr Patsukevych

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. 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 and 1b for their corresponding locations. Also, please refer to Appendix C for corresponding photos of inventoried trees 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  $\approx 2.4\text{m}$  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 with the following conditions.

1. The applicant confirms with a reputable transplanting contractor with a tree spade that transplanting is possible here.
2. The security of \$800 is 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.

"If the tree spade company cannot guarantee this, then we would still be looking for the plan to account for the tree's retention in its existing location."

Regardless, if the tree is translocated, tree protection measures outlined in Appendix B must be followed. The tree will also require supports, such as stakes and guying, before root

development provides significant anchorage. This is particularly true if the tree is relocated while dormant and may not develop roots for several months.

In consultation with the "tree moving company" it is 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 in order to see the existing location of Tree no. 1 and the proposed location of Tree no.1.

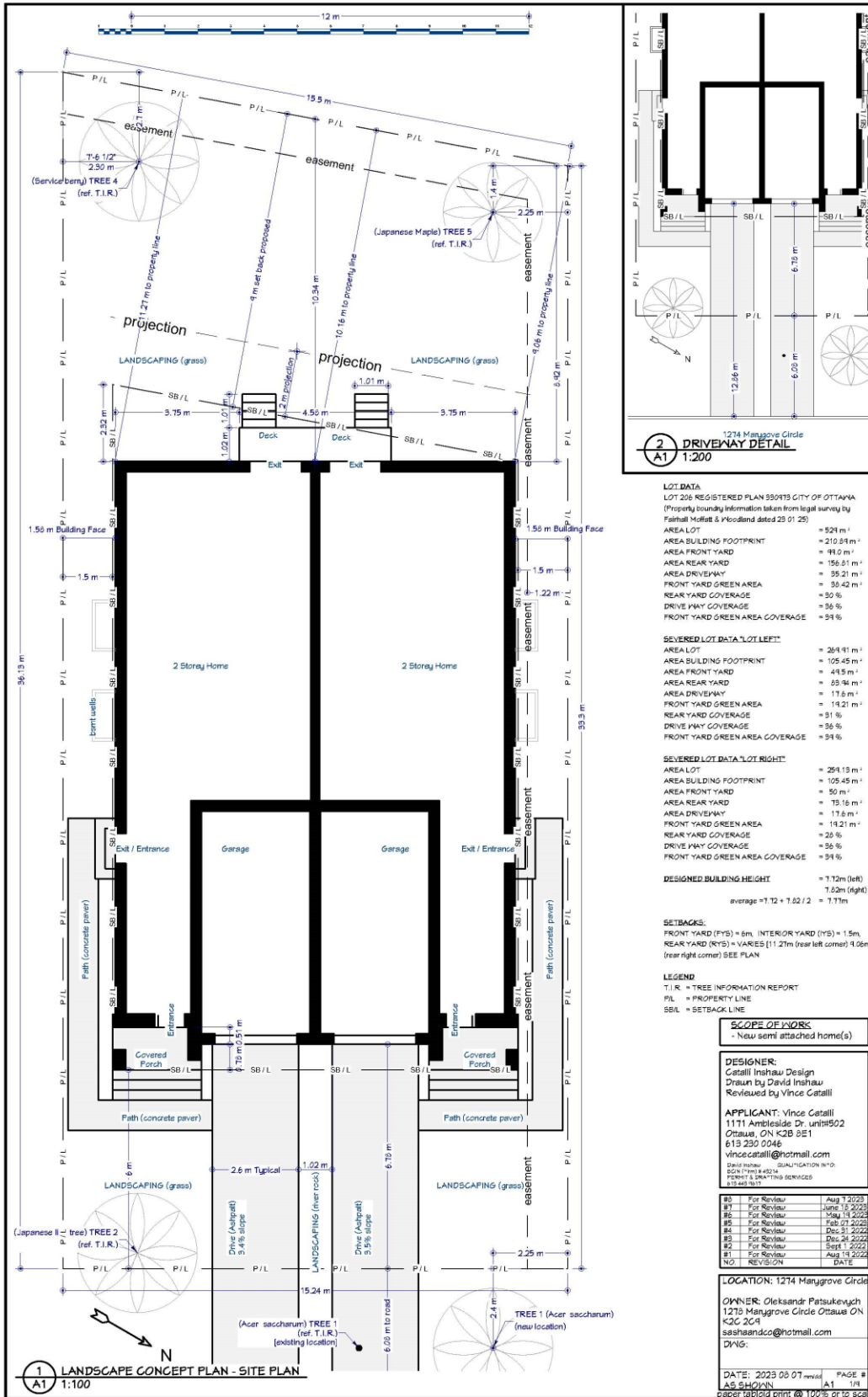


Figure (i) – Shows the location of new trees to be planted in relation to the building plan, along with the translocation of Tree no. 1 (Site plan supplied by Cattalie Inshaw Design.)

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

## Planting

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The selection of new tree installations is limited to small-medium sized trees. 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 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 in 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, Street side Tree no. 2, is a Japanese lilac and was chosen for its ability to resist street side stresses such as soil compaction and salt exposure. In the back yard

left, Tree No. 4 is a Service berry and back yard right, Tree No. 5 is a Japanese maple, which is a smaller tree given the space constraints in the back right yard.

Looking at Figure (i), above, it is proposed that Tree no. 2 be planted just inside the client's property line. This places the tree at a distance  $>2.5\text{m}$  from the curb or hard surface and approximately  $4\text{m}$  away from the foundation.

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  $20\text{m}^3$  of soil, as recommended for small trees with root zones ranging from  $7\text{m}^2$  to  $10\text{m}^2$ , it is essential that  $2\text{-}3\text{m}$  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

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## Appendix A

| Tree no. | Species               | DBH(cm) | Location                                   | Ownership      | Condition   | Arborist Rcommendaiton      |
|----------|-----------------------|---------|--|----------------|-------------|-----------------------------|
| 1        | <i>Acer saccharum</i> | 12      | Street side<br>1234<br>Marygrove<br>Circle | City of Ottawa | Good vigour | Removal or<br>Translocation |

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



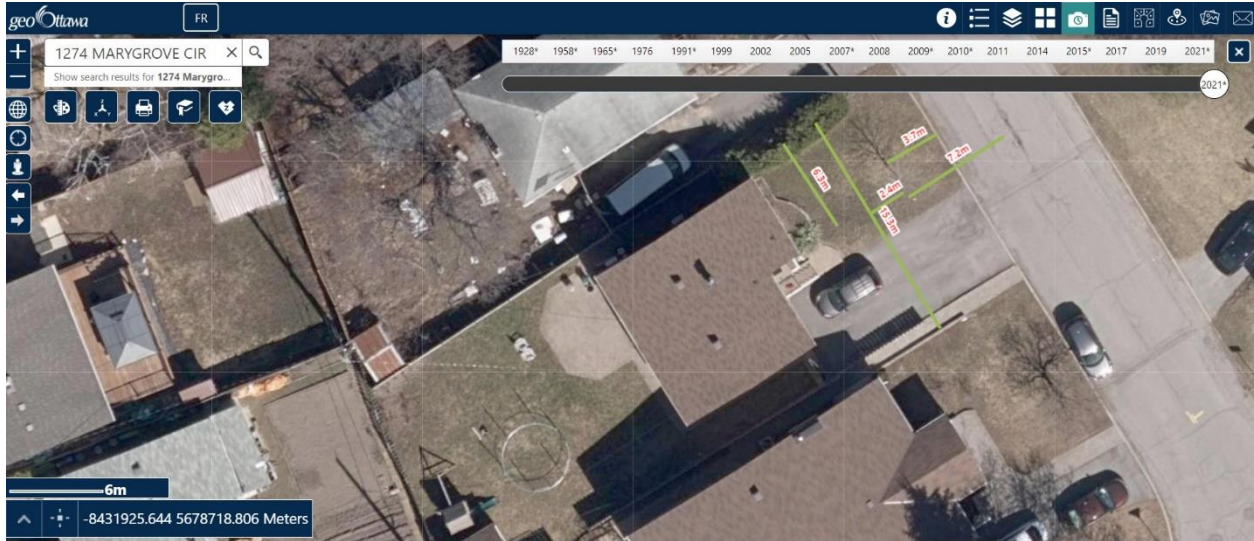


Figure 1a. Shows Parcel Base Map and Satellite Base Map respectively with existing dwelling for 1274 Marygrove Cir. Tree No.1 is 2.4 m outside the property line and 3.7m to the edge of the asphalt. (Source geoOttawa 2021)



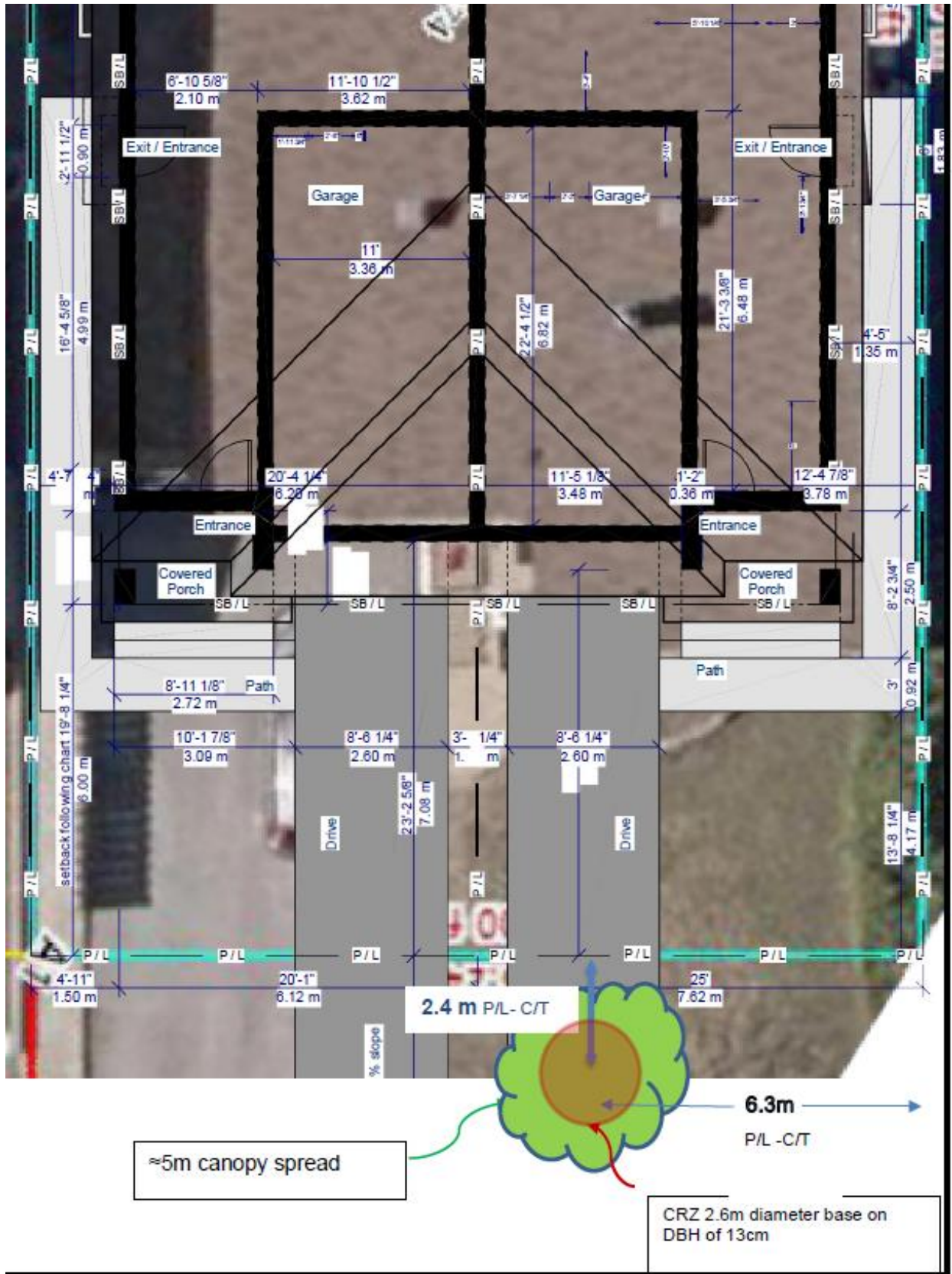
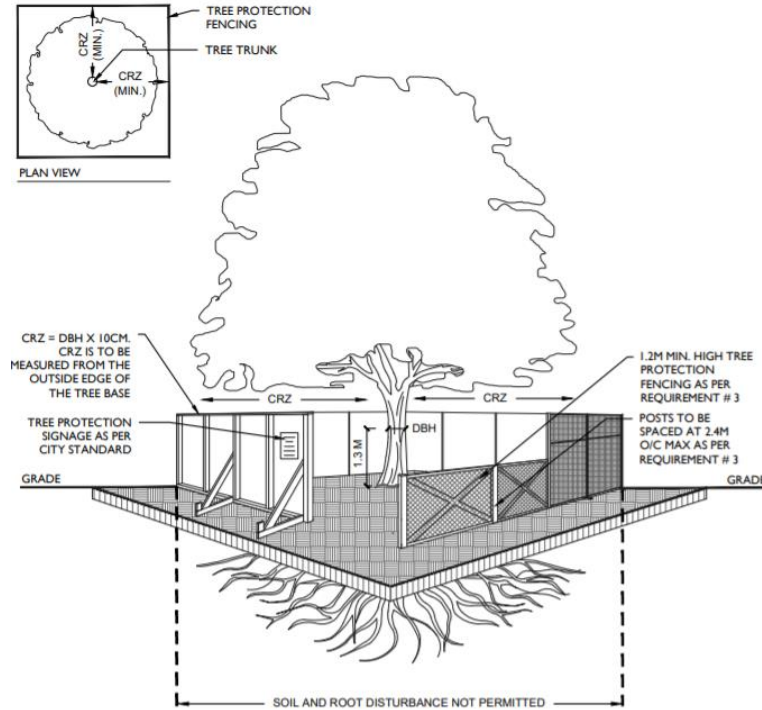


Figure 1b. Shows Tree No. 1 C/T (Centre of Trunk) in relation to the P/L (Property Line). CRZ is highlighted in red. New construction foot print superimposed over existing building foot print supplied by Catalli Inshaw Design.

# Appendix B-Determining Tree Protection Measures



## TREE PROTECTION REQUIREMENTS:

1. PRIOR TO ANY WORK ACTIVITY WITHIN THE CRITICAL ROOT ZONE (CRZ = 10 X DIAMETER) OF A TREE, TREE PROTECTION FENCING MUST BE INSTALLED SURROUNDING THE CRITICAL ROOT ZONE, AND REMAIN IN PLACE UNTIL THE WORK IS COMPLETE.
2. UNLESS PLANS ARE APPROVED BY CITY FORESTRY STAFF, FOR WORK WITHIN THE CRZ:
  - DO NOT PLACE ANY MATERIAL OR EQUIPMENT - INCLUDING OUTHOUSES;
  - DO NOT ATTACH ANY SIGNS, NOTICES OR POSTERS TO ANY TREE;
  - DO NOT RAISE OR LOWER THE EXISTING GRADE;
  - TUNNEL OR BORE WHEN DIGGING;
  - DO NOT DAMAGE THE ROOT SYSTEM, TRUNK, OR BRANCHES OR ANY TREE;
  - ENSURE THAT EXHAUST FUMES FROM ALL EQUIPMENT ARE NOT DIRECTED TOWARD ANY TREE CANOPY.
  - DO NOT EXTEND HARD SURFACE OR SIGNIFICANTLY CHANGE LANDSCAPING
3. TREE PROTECTION FENCING MUST BE AT LEAST 1.2M IN HEIGHT, AND CONSTRUCTED OF RIGID OR FRAMED MATERIALS (E.G. MODULOC - STEEL, PLYWOOD HOARDING, OR SNOW FENCE ON A 2"x4" WOOD FRAME) WITH POSTS 2.4M APART, SUCH THAT THE FENCE LOCATION CANNOT BE ALTERED. ALL SUPPORTS AND BRACING MUST BE PLACED OUTSIDE OF THE CRZ, AND INSTALLATION MUST MINIMISE DAMAGE TO EXISTING ROOTS. (SEE DETAIL)
4. THE LOCATION OF THE TREE PROTECTION FENCING MUST BE DETERMINED BY AN ARBORIST AND DETAILED ON ANY ASSOCIATED PLANS FOR THE SITE (E.G. TREE CONSERVATION REPORT, TREE INFORMATION REPORT, ETC). THE PLAN AND CONSTRUCTED FENCING MUST BE APPROVED BY CITY FORESTRY STAFF PRIOR TO THE COMMENCEMENT OF WORK.
5. IF THE FENCED TREE PROTECTION AREA MUST BE REDUCED TO FACILITATE CONSTRUCTION, MITIGATION MEASURES MUST BE PRESCRIBED BY AN ARBORIST AND APPROVED BY CITY FORESTRY STAFF. THESE MAY INCLUDE THE PLACEMENT OF PLYWOOD, WOOD CHIPS, OR STEEL PLATING OVER THE ROOTS FOR PROTECTION OR THE PROPER PRUNING AND CARE OF ROOTS WHERE ENCOUNTERED.

THE CITY'S TREE PROTECTION BY-LAW, 2020-340 PROTECTS BOTH CITY-OWNED TREES, CITY-WIDE, AND PRIVATELY-OWNED TREES WITHIN THE URBAN AREA. PLEASE REFER TO [WWW.OTTAWA.CA/TREEBYLAW](http://WWW.OTTAWA.CA/TREEBYLAW) FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.

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*. 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 13cm.

## 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      | Japanese lilac tree | <i>Syringa reticulata</i> | ≈5cm    | Caged     | 3.6 m (≈10 m <sup>2</sup> ) | Front Left |    |
| 4      | Service berry       | Amelanchier spp.          | ≈5cm    | Caged     | 3.6 m (≈10 m <sup>2</sup> ) | Back Left  |   |
| 5      | Japanese maple      | <i>Acer palmatum</i> ,    | ≈5cm    | Caged     | 3 m (≈7 m <sup>2</sup> )    | 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. 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.