



ARBORIST REPORT

Tree Conservation Report
for
2375 St. Laurent Blvd, Ottawa, Ontario



by

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for

Cornerstone House of Refuge Apostolic Church
Owner/Applicant
Ottawa, Ontario

Report 22-003

Submitted
June 6, 2022



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Summary

Arborsphere was retained to provide a Tree Conservation Report for trees affected by a proposed development in Ottawa, Ontario. Associated fieldwork included an enumerated tree inventory and assessment of 14 trees. plus comments on a further seven trees. Retainable trees can be preserved and protected with temporary barrier materials.

PROPERTY			
Legal Description(s)	Part of Lot 1, Concession 5 (Rideau Front), Geographic Township of Nepean, City of Ottawa		
Address	2375 St. Laurent Boulevard, Ottawa, Ontario		
Zoning	IL		
Area	6,589.37 m ² (70,927.32 ft ²) (0.66 ha)		
Ward	#10 (Gloucester-Southgate), Diane Deans (Councillor)		
TREES			
Provincial species-at-risk, genetically pure trees			0
Affected City-owned trees			1
Standing dead trees			0
Site trees unsuitable for preservation			7
Site trees suitable for preservation			7
Other nearby trees			7
		TOTAL:	21
CONTACTS			
Owner/Applicant	Cornerstone House of Refuge Apostolic Church (<i>Desmond Hutchison</i>)	1196 Wellington Street West Ottawa, ON, K1Y 2Z5	613-725-1432
Agent	Reinders + Law Ltd. (<i>Glenn Reinders</i>)	64 Ontario Street North Milton, ON, L9T 2T1	905-457-1618 x 1302
Arborist	Arborsphere (<i>Oliver Reichl</i>)	18 Larue Mills Rd Mallorytown, ON, K0E 1R0	613-213-6840

Tree Conservation Report for 2375 St. Laurent Blvd, Ottawa, Ontario

1.0 INTRODUCTION

1.1 Background

Cornerstone House of Refuge Apostolic Church (the “applicant”) is proposing a new worship facility at 2375 St. Laurent Boulevard in the City of Ottawa (the “site”). The site is currently zoned as IL (Ottawa 2022).



1.2 Assignment

Arborsphere was contacted by Reinders & Law Ltd. and retained to complete a tree conservation report for the site.

1.3 Limitations

This report has been prepared according to guidelines provided by the City of Ottawa (the “City”) with respect to its 2020 Tree Protection By-law 2020-340 (the “By-law”). Tree size was generally limited to on-site stems with a dbh of 10 cm or greater, plus any immediate neighbouring trees. Assessments are based on visual observations only. No invasive probing or injurious sampling was done. Appraisal of any tree’s amenity value is not included in its assessment. For preservation considerations, I relied on a drawing prepared by Reinders+Law (Reinders 2022). More tree information or protection could be required, as may be determined during any review by the City.

2.0 OBSERVATIONS

2.1 Methodology

Tree diameters (“dbh”) were measured at approximately 1.20 metres above grade using a Richter diameter tape. Multi-stemmed trees (i.e., codominant; trees that fork below breast height) were recorded as single trees. Each tree’s canopy spread was visually estimated to the nearest metre. I used a generalized assessment system to describe the overall condition of each tree. This system uses a 3-tier rating scale (good, fair, poor) and is based solely on non-invasive *in situ* observations. Each tree’s rating, along with its proximity to proposed construction, was considered when determining its retainability.

2.2 Field Notes

Arboriculture field work was completed on May 24, 2022, resulting in an inventory of 14 affected trees. Trees on adjacent properties, adding a further seven trees, were also noted. Tables 1 and 2 summarize my field observations and comments. Drawings in Appendix A show the locations and status of all surveyed trees.

ID	SPECIES	DBH (cm)	CANOPY (m)	CONDITION RATING	COMMENTS
1,321	Austrian Pine <i>Pinus nigra</i>	47	8	Good	MAINTENANCE: remove tree (conflict with proposed laneway) PRESERVATION: none
1,322	Austrian Pine <i>Pinus nigra</i>	44	8	Good	shared boundary tree? MAINTENANCE: none PRESERVATION: CRZ fencing (4.4 metres); root pruning
1,323	Austrian Pine <i>Pinus nigra</i>	39	8	Good	City tree; codominant in crown MAINTENANCE: remove tree (conflict with proposed entrance) PRESERVATION: none
1,324	White Ash <i>Fraxinus americana</i>	33	3	Poor	EAB; snag; regrowth only MAINTENANCE: remove tree PRESERVATION: none
1,325	Austrian Pine <i>Pinus nigra</i>	35	8	Good	MAINTENANCE: remove tree (conflict with proposed trenching) PRESERVATION: none
1,326	Austrian Pine <i>Pinus nigra</i>	*	9	Good	dbh = 36, 27 (45) MAINTENANCE: remove tree (conflict with proposed trenching) PRESERVATION: none
1,327	Austrian Pine <i>Pinus nigra</i>	51	8	Good	codominant in crown MAINTENANCE: remove tree (conflict with proposed sanitary) PRESERVATION: none
1,328	White Ash <i>Fraxinus americana</i>	27	4	Poor	EAB; snag; regrowth only MAINTENANCE: remove tree PRESERVATION: none
1,329	Amur Maple <i>Acer ginnala</i>	*	5	Good	dbh = 10, 9, 8, 8, 7 (19) MAINTENANCE: none PRESERVATION: CRZ fencing (2.0 metres)
1,330	Austrian Pine <i>Pinus nigra</i>	25	6	Good	MAINTENANCE: none PRESERVATION: CRZ fencing (2.5 metres)

ID	SPECIES	DBH (cm)	CANOPY (m)	CONDITION RATING	COMMENTS
1,331	Austrian Pine <i>Pinus nigra</i>	*	7	Good	dbh = 30, 24 (38); codominant in crown MAINTENANCE: install cable PRESERVATION: CRZ fencing (3.8 metres); root pruning
1,332	Austrian Pine <i>Pinus nigra</i>	33	6	Good	MAINTENANCE: none PRESERVATION: CRZ fencing (3.3 metres); root pruning
1,333	Common Crabapple <i>Malus pumila</i>	*	6	Good	dbh = 20, 15, 14, 12, 11, 10 (34) MAINTENANCE: none PRESERVATION: CRZ fencing (3.4 metres)
x	Hawthorn species <i>Crataegus sp.</i>	*	4	Good	dbh = < 10 cm; I see no compelling reason to remove MAINTENANCE: none PRESERVATION: CRZ fencing (2.0 metres); root pruning

NOTES:

1. All diameter measurements were taken at approximately 1.20 metres above grade, unless otherwise noted.
2. Asterisk(*) denotes codominant stems (i.e., tree forks below 1.20 metres); stem diameters (and aggregate dbh) are listed in comments.
3. Canopy spreads were not measured, and are only based on a rough visual estimate to the nearest metre.
4. CRZ = Critical Root Zone; EAB = Emerald Ash Borer
5. CRZ fencing (X.X) = minimum distance from trunk

Table 2: Neighbouring Trees

ID	SPECIES	DBH (cm)	CANOPY (m)	CONDITION RATING	COMMENTS
A	White Spruce <i>Picea glauca</i>	32	6	Fair	PRESERVATION: CRZ fencing (3.2 metres); root pruning
B	Scots Pine <i>Pinus sylvestris</i>	30	4	Good	codominant in crown PRESERVATION: CRZ fencing (3.0 metres); root pruning
C	Norway Maple <i>Acer platanoides</i>	50	12	Good	PRESERVATION: CRZ fencing (5.0 metres)
D	Sugar Maple <i>Acer saccharum</i>	42	9	Good	PRESERVATION: CRZ fencing (4.2 metres); root pruning
E	Austrian Pine <i>Pinus nigra</i>	54	9	Good	PRESERVATION: CRZ fencing (5.4 metres)
F	Austrian Pine <i>Pinus nigra</i>	56	9	Good	PRESERVATION: CRZ fencing (5.6 metres); root pruning
G	Austrian Pine <i>Pinus nigra</i>	*	7	Good	dbh = 37, 28 (46); codominant in crown PRESERVATION: CRZ fencing (4.6 metres); root pruning

3.0 ANALYSIS

The site is mostly an open field with a few trees around the perimeter. The site contains no wetlands, no woodlots, no high quality specimen trees, and no rare vegetation communities. A hydro corridor exists southerly to the site.

The inventory includes six deciduous and three coniferous species, none of which are currently listed in federal or Ontario endangered species legislation. There is one City-owned tree along St. Laurent Blvd. Norway maple, Austrian pine, and Scots pine are the only non-native species. A hawthorn, *Crataegus sp.*, was included on the survey plan (AOV 2017), despite not meeting the minimum 10-cm dbh threshold. We see no reason to remove it.

4.0 DISCUSSION

4.1 Tree Maintenance

Individual urban trees tend to require periodic maintenance to ensure safety and promote optimum health. Typically, most health and safety concerns can be addressed by:

- removal of dead limbs and branches (“deadwooding”)
- removal of dead codominant stems (i.e., multiple trunks)
- removal of hanging or broken branches
- removal of diseased or structurally unsound stems
- removal of branches to address clearance issues (sidewalks, buildings, utility wires)
- removal of rubbing and/or inward-growing branches
- removal or severance of parasitizing vegetation (i.e., vines)
- removal of epicormic twigs/branches
- removal of stubs from previous prunings
- removal of debris piled against trunks
- removal of excess soil or mulch burying the root collar
- removal of competing non-native woody vegetation
- removal or severance of girdling roots (where practical)
- removal of ties or other girdling items from the trunk or branches
- removal of stakes or t-bars (leftovers from initial planting)
- installing cables, threaded rod, or braces as may be needed
- periodic watering
- adding mulch

4.2 Tree Preservation

Trees within the proposed building and parking envelopes cannot be saved. Nine trees have been identified for preservation and can be protected with open and closed CRZs. Neighbouring trees (i.e. trees on adjacent private property) have some CRZs that extend into the site.

5.0 RECOMMENDATIONS

In the following subsections, recommended actions are numbered and are those required by the City. Additionally, some “best practices” have been included to provide a more comprehensive set of management actions with respect to the site’s future trees.

5.1 Before Construction

5.1.1 Tree Conservation Plan

- (R#1) Required:** Print and retain at least one copy of the Tree Conservation Plan on site during all phases of construction.

5.1.2 Hazard Mitigation & Tree Maintenance

- (R#2) **Required:** remove any identified tree hazards and non-retainable trees. Retain a copy of any Tree Permit on the property prior to the commencement of any tree removal.
- (R#3) *Best practice:* facilitate the treatment of all retainable trees according to the good arboricultural practices discussed in Section 4.1.

5.1.3 Tree Preservation

- (R#4) **Required:** protect the critical roots of retained trees by establishing Critical Root Zones (CRZs).

A CRZ in the City of Ottawa is ideally ten(10) centimetres from the trunk of the tree for every centimetre of trunk at breast height. The CRZ is calculated as dbh x 10.

- (R#5) **Required:** construct barriers to delineate CRZs.

Barriers shall be constructed under the guidance of an arborist. Neighbouring trees shall be protected with staked/anchored fencing to City standards, erected a minimum of dbh x 10 at the discretion of City staff. Barrier material shall be 1.2 metre snow fence wired to steel "T" bar posts (@2.4 metres o.c. max) 50 x 150 wood top rail bolted to posts. See also Appendix A.

- (R#6) *Best practice:* use exterior grade plywood lengthwise (i.e., 4 feet high) on any side where excavated (or other) material could spill into the CRZ.

5.2 During Construction

- (R#7) **Required:** maintain the integrity of all CRZs.

CRZ protection barriers must be kept intact and in good repair. Any missing signage must be promptly replaced. Within a CRZ, there must be no encroachments of any kind:

- No trenching, addition of fill, excavating, or scraping to change the grade without City approval
- No storage of building materials or equipment (including vehicles)
- No storage of surplus soil, construction waste, or debris over the root systems of the protected trees
- No disposal (dumping or flushing) of contaminants or liquids
- No movement of vehicles (personal or business), equipment or pedestrians
- Ensure that exhaust fumes from any equipment are not directed towards any tree canopy.

Directional micro-tunnelling, boring, and/or hand-digging within a CRZ may be permitted. Any open face cuts outside of a CRZ that are consistent with an approved plan that require root pruning, will require the services of a certified arborist or qualified tree worker under the supervision of a certified arborist.

- (R#8) **Required:** where root systems of trees are exposed directly adjacent to, or are damaged by construction work, they must be trimmed neatly with pruners or saws (do not use backhoe or other machinery) and the area promptly backfilled with appropriate material, such as top soil, burlap or mulch, to prevent desiccation.
- (R#9) *Best practice:* establish and use designated storage areas, as remote as possible from any CRZ, for excavated material, equipment, vehicle parking, building materials, etc...

5.3 After Construction

- (R#10) **Required:** secure the City's permission before removing any tree protection barriers.

If a barrier needs to be removed to facilitate landscaping activity (e.g., sodding), the City must be notified. Once any landscaping is done, barriers need to be promptly re-erected pending any final inspections by the City.

- (R#11) *Best practice:* leave as much top soil as possible on site to help ensure a fertile growing environment for any new trees that may be planted.
- (R#12) *Best practice:* when replanting near or under overhead wires, plant only tree species known to be relatively small at maturity (e.g., juneberry, tree lilac).
- (R#13) *Best practice:* replant with native species, of known local provenance, appropriate to local light, moisture, and soil conditions.

6.0 CONCLUSION

The tree preservation methodology for this site depends on the use of tree protection zones and barriers. Any tree protection barrier is just an arbitrary line regardless of the materials used in its construction. Stronger materials and more robust barrier construction will always have greater protection potential in the event of any accidental encroachment. However, even with a minimal barrier of plastic orange fencing, the enclosed healthy trees will be adequately protected as long as that line is respected.

Municipal tree protection by-laws exist to conserve both green infrastructure and the overall urban “forest”. Wise management of urban trees includes favouring species that are suitable to their locations and tolerant of urban growing conditions.

This 14-page report was prepared by



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References

AOV. Topographic Plan of Survey - Part of Lot 1 Concession 5 (Rideau Front). Nepean, ON: Annis, O'Sullivan, Vollebakk Ltd., 2017.

(received by Arborsphere as "20037_SRV_Survey Plan.pdf")

Ottawa (City of). *GeoOttawa*. Ottawa, ON: City of Ottawa, 2022.

(<http://maps.ottawa.ca/geottawa/>)

-----. *Tree Protection Specification*. Ottawa, ON: City of Ottawa, 2021.

(https://documents.ottawa.ca/sites/documents/files/tree_protection_specification_en.pdf)

-----. *Tree Protection By-law No. 2020-340*. Ottawa, ON: City of Ottawa, 2020.

(<https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/tree-protection-law-no-2020-340>)

-----. *Protecting Trees*. Ottawa, ON: City of Ottawa, 2014a.

(<http://ottawa.ca/en/residents/water-and-environment/trees-and-community-forests/protecting-trees>)

-----. *Tree Conservation Report Guidelines*. Ottawa, ON: City of Ottawa, 2014b.

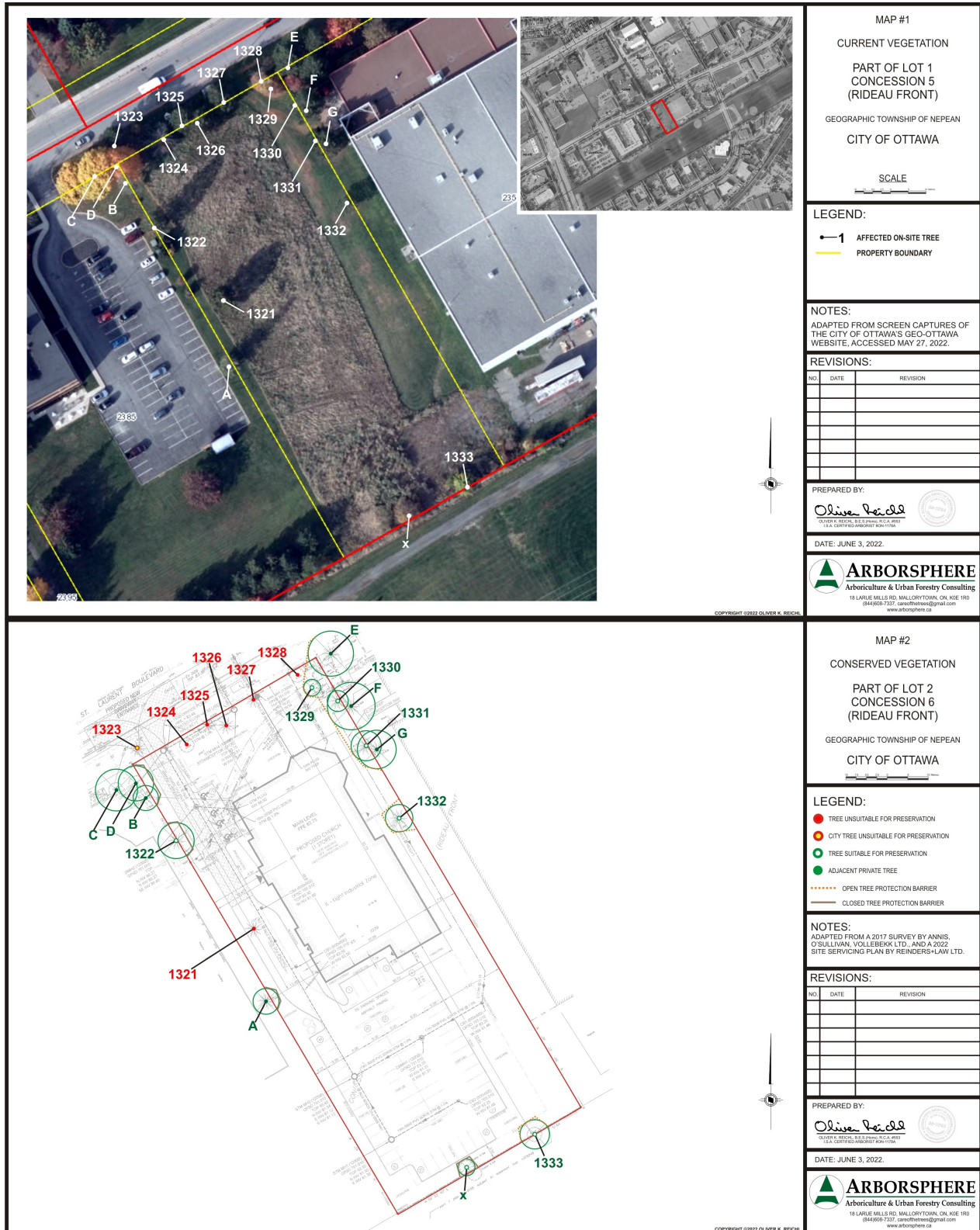
(<http://ottawa.ca/en/residents/water-and-environment/trees-and-community-forests/tree-conservation-report-guidelines>)

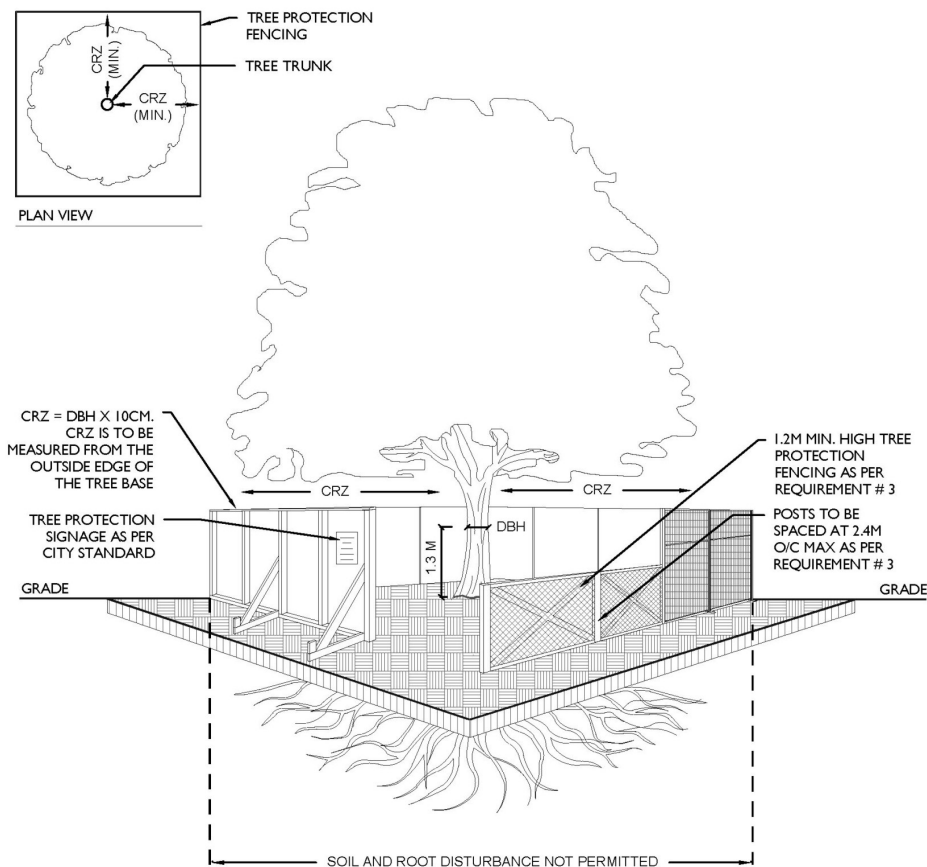
Reinders. *Site Servicing Plan*. Milton, ON: Reinders+Law, 2022.

(received by Arborsphere as "20037_SP3.pdf")

Appendix A

Tree Conservation Planning





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 FOR MORE INFORMATION ON HOW THE TREE BY-LAW APPLIES.

(Source:Ottawa 2021)

Appendix B

Assumptions and Limiting Conditions

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the arborist can neither guarantee nor be responsible for the accuracy of information provided by others.
2. Loss or alteration of any part of this report invalidates the entire report.
3. Possession of this report or copy thereof does not imply right of publication or use for any purpose by anyone other than the person(s) to whom it is addressed, without the prior expressed hand-written permission of the consulting arborist.
4. The consulting arborist shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Sketches, diagrams, graphs, and photographs in this report are intended as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys.
6. Unless expressed otherwise: 1) information contained in this report covers only those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

Appendix C

Certification of Performance

I, Oliver K. Reichl, certify:

- that I have personally inspected the tree(s) and/or property referred to in this report, and have stated my findings accurately;
- that I have no current or prospective interest in the plant material or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;
- that the analysis, opinions, and conclusions stated herein are my own, and are based on current scientific procedures and facts;
- that my compensation is not contingent upon the reporting of a predetermined conclusion that favours the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;
- that my analysis, opinions, and conclusions were developed, and this report has been prepared, according to commonly accepted arboricultural practices;
- that no one provided significant professional assistance to me, except as indicated within the report.
- that I am a member in good standing of the American Society of Consulting Arborists (ASCA) and the International Society of Arboriculture (ISA), and that I am a current ASCA Registered Consulting Arborist and ISA Certified Arborist.

