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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

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July 14, 2023

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Intermediate Technologist, BIM Lead  
Linebox Studio  
1116 Lisgar Street, Unit 110  
Ottawa, ON  
K2P 0C2

Committee of Adjustment  
APR 15 2024  
City of Ottawa

**RE: TREE INFORMATION REPORT (FULL) FOR 113 NORTHWESTERN AVENUE**

This Tree Information Report (TIR) was prepared by IFS Associates Inc. (IFS) in support of an application for a building permit for 113 Northwestern Avenue. The need for this report is related to trees protected under the City of Ottawa’s Tree Protection By-law (By-law No. 2020-340). The work proposed at this address includes the demolition of an existing dwelling and construction of a new larger single-family dwelling and in-ground pool.

Within the inner urban area of Ottawa a TIR is required for infill developments and/or demolitions when a ‘distinctive’ tree is present (*i.e.* 30 cm in diameter at breast height (DBH) or greater). This includes distinctive trees on adjacent properties which have critical root zones (CRZ) extending onto a property slated for development or demolition. A “tree” is defined in the By-law as any species of woody perennial plant, including its root system, which has reached or can reach a minimum height of at least 450 cm at physiological maturity. The CRZ is calculated as DBH x 10 cm.

The approval of this TIR by the city and the issuing of a permit authorizes the removal of approved trees. **Importantly, although this report may be used to support the application for a tree removal permit, it does not by itself constitute permission to remove trees or begin site clearing activities. No such work should occur before a tree removal permit is issued authorizing the injury or destruction of a tree in accordance with the By-law. Further, the removal of any trees shared with or fully on neighbouring properties will require written permission of the adjacent landowner.**

The inventory in this report details the assessment of all individual trees on the subject and adjacent private property. No trees were found on nearby City of Ottawa lands. Field work for this report was completed in June 2023.

**TREE SPECIES, CONDITION, SIZE AND STATUS**

Table 1 on pages 2 and 3 details the individual distinctive trees on the subject property and three on adjacent public lands. Each of these trees is referenced by the numbers plotted on the tree information plan included on page 4 of this report.



Table 1. Tree information for 113 Northwestern Avenue

Tree No.	Tree species /Tolerance to Construction <sup>1</sup>	Owner ship	DBH <sup>2</sup> (cm)	CRZ <sup>3</sup> (m)	Distance to excavation (m) <sup>4</sup>	Tree Condition, Age Class, Condition Notes, Species Origin and Status (to be removed or preserved and protected)	Reason for removal	Forester's Opinion re. Removal
1	White spruce ( <i>Picea glauca</i> ) / Moderate-Good	Private	39.1	-	-	Very poor; mature; holding less than 25 percent living foliage; in advanced decline; native species; <b>to be removed</b>	Very poor condition	Tree and stump be removed
2	Basswood ( <i>Tilia americana</i> ) / Poor - Moderate	Private	35 avg.	-	-	Very poor; overmature; five-stemmed from grade; all stems broken/topped at 10-12m from grade; advanced decay and woodpecker activity – tree is hazardous; native species; <b>to be removed</b>	Very poor condition	Tree and stump be removed
3	Basswood ( <i>Tilia americana</i> ) / Poor - Moderate	Private	32.6 & 39.3	-	-	Poor; mature; double-stemmed from grade; heavy <i>Neonectria ditissima</i> (target) canker on both stems; top of both stems dead; in decline; native species; <b>to be removed</b>	Conflicts with pool skirt	Tree and stump be removed
4	Basswood ( <i>Tilia americana</i> ) / Poor - Moderate	Neighbour	49.8	5	>5	Good; mature; single dominant upright main stem with competing leaders at 14m; native species; <b>to be preserved and protected</b>	Not applicable – to be preserved	Not applicable
5	Basswood ( <i>Tilia americana</i> ) / Poor - Moderate	Private	35.5	3.6	<1	Fair; mature; dominant main stem with competing lateral at 8m on northwest; topped at 14m – recovered via epicormic growth; native species <b>to be removed</b>	Conflicts with pool skirt	Tree and stump be removed



Table 1. Con't

Tree No.	Tree species /Tolerance to Construction <sup>1</sup>	Owner ship	DBH <sup>2</sup> (cm)	CRZ <sup>3</sup> (m)	Distance to excavation (m) <sup>4</sup>	Tree Condition, Age Class, Condition Notes, Species Origin and Status (to be removed or preserved and protected)	Reason for removal	Forester's Opinion re. Removal
6	Bitternut hickory ( <i>Carya cordiformis</i> ) / Moderate - Good	Neighbour	52.2	5.2	>6	Fair; mature; co-dominant stems at 3.5m; growth form moderately divergent towards southeast; major wound 1-1.75m on north from past loss of major lateral stem – early decay at base of wound; native species; <b>to be preserved and protected</b>	Not applicable – to be preserved	Not applicable
7	Bur oak ( <i>Quercus macrocarpa</i> ) / Moderate - Good	Neighbour	95.9	9.6	+/-6	Good; very mature; co-dominant stems at 1.1m with suppressed laterals starting at 4m from grade; very broad crown, though asymmetric towards south; native species; <b>to be preserved and protected</b>	Not applicable – to be preserved	Not applicable

<sup>1</sup>As taken from Managing Trees during Construction; 2<sup>nd</sup> Ed., Fite and Smiley; <sup>2</sup> Diameter at breast height, or 1.3m from grade (unless otherwise indicated); <sup>3</sup> Critical root zone (CRZ) is considered as being 10 centimetres from the trunk of a tree for every centimetre of DBH. The CRZ is calculated as DBH x 10 cm;

<sup>4</sup>Approximate distances only.

**GENERAL NOTES**

- LEGEND**
- DECIDUOUS TREE TO REMAIN
  - CONIFEROUS TREE TO REMAIN
  - DECIDUOUS TREE TO BE REMOVED
  - CONIFEROUS TREE TO BE REMOVED
  - PROPOSED REPLANTING LOCATIONS

**REPLACEMENT TREE OPTIONS**

Large-leafed Conifers (Tree)	White pine (Pine)
Medium-leafed Conifers (Tree)	White spruce (Pine)
Small-leafed Conifers (Tree)	White spruce (Pine)
Large-leafed Deciduous (Tree)	White Birch (Birch)
Medium-leafed Deciduous (Tree)	White Birch (Birch)
Small-leafed Deciduous (Tree)	White Birch (Birch)
Large-leafed Broadleaf (Tree)	White Birch (Birch)
Medium-leafed Broadleaf (Tree)	White Birch (Birch)
Small-leafed Broadleaf (Tree)	White Birch (Birch)
Large-leafed Palm (Tree)	White Birch (Birch)
Medium-leafed Palm (Tree)	White Birch (Birch)
Small-leafed Palm (Tree)	White Birch (Birch)
Large-leafed Flowering (Tree)	White Birch (Birch)
Medium-leafed Flowering (Tree)	White Birch (Birch)
Small-leafed Flowering (Tree)	White Birch (Birch)
Large-leafed Non-flowering (Tree)	White Birch (Birch)
Medium-leafed Non-flowering (Tree)	White Birch (Birch)
Small-leafed Non-flowering (Tree)	White Birch (Birch)
Large-leafed Shrub (Tree)	White Birch (Birch)
Medium-leafed Shrub (Tree)	White Birch (Birch)
Small-leafed Shrub (Tree)	White Birch (Birch)
Large-leafed Groundcover (Tree)	White Birch (Birch)
Medium-leafed Groundcover (Tree)	White Birch (Birch)
Small-leafed Groundcover (Tree)	White Birch (Birch)
Large-leafed Climber (Tree)	White Birch (Birch)
Medium-leafed Climber (Tree)	White Birch (Birch)
Small-leafed Climber (Tree)	White Birch (Birch)
Large-leafed Vine (Tree)	White Birch (Birch)
Medium-leafed Vine (Tree)	White Birch (Birch)
Small-leafed Vine (Tree)	White Birch (Birch)
Large-leafed Grass (Tree)	White Birch (Birch)
Medium-leafed Grass (Tree)	White Birch (Birch)
Small-leafed Grass (Tree)	White Birch (Birch)
Large-leafed Sedge (Tree)	White Birch (Birch)
Medium-leafed Sedge (Tree)	White Birch (Birch)
Small-leafed Sedge (Tree)	White Birch (Birch)
Large-leafed Fern (Tree)	White Birch (Birch)
Medium-leafed Fern (Tree)	White Birch (Birch)
Small-leafed Fern (Tree)	White Birch (Birch)
Large-leafed Moss (Tree)	White Birch (Birch)
Medium-leafed Moss (Tree)	White Birch (Birch)
Small-leafed Moss (Tree)	White Birch (Birch)

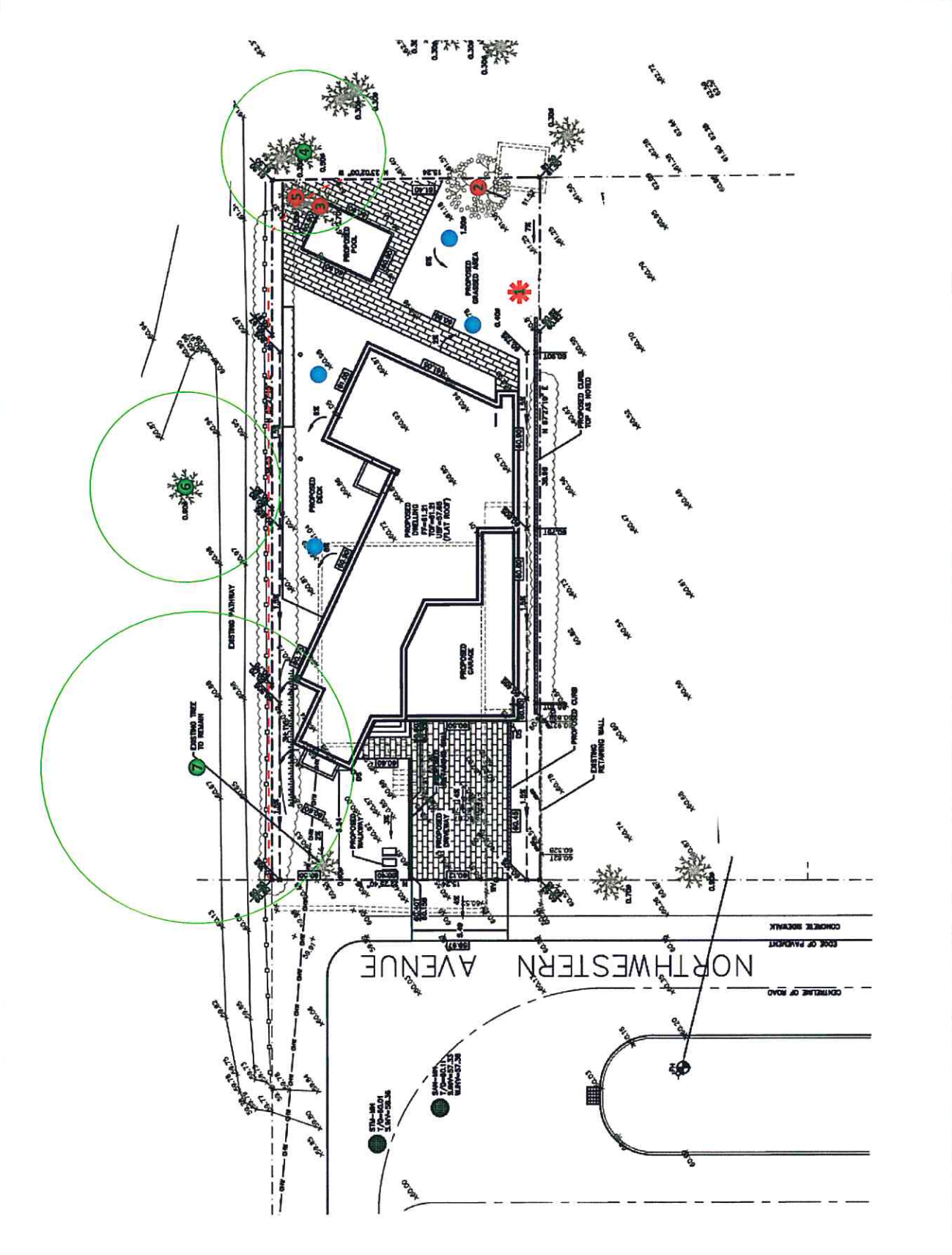
0 2.5 5 meters

Tree Information Plan

113 NORTHWESTERN AVENUE  
CITY OF OTTAWA



DATE	11/03/18
BY	2023/07/18
SCALE	35
SHEET NO.	1
TOTAL SHEETS	13



Pictures 1 to 4 on pages 8 through 11 of this report show selected distinctive trees on and adjacent to the subject property.

### **PROVINCIAL REGULATIONS**

Certain provincial regulations are applicable to trees on private property. In particular, the Endangered Species Act – ESA (2007) mandates that tree species on the Species at Risk in Ontario (SARO) list be identified. Butternut (*Juglans cinerea*) is present in Eastern Ontario and is listed as threatened on the SARO. Because of this it is protected from harm. No trees of this species were found on or near the subject property.

### **TREE PRESERVATION MEASURES**

An existing asphalt-covered pathway between them and the subject property will have served to limit root growth from trees #6 and 7. However, to help reduce the potential for root loss due to excavation the following measures will be taken in relation to tree #7:

1. Hydro excavation along the nearest foundation edge to carefully expose roots. Any roots will be cleanly cut and sealed before being reburied. Excavation can then resume using traditional mechanical means. Sealing the cleanly cut root ends with a beeswax product will help prevent the loss of moisture and facilitate healing.
2. If the excavation is to be left open for any time a covering of at least three layers of moistened burlap is to be draped over the exposed face of excavation closest to the trees. This will help reduce the loss of soil moisture.

### **TREE PROTECTION MEASURES**

Protection measures intended to mitigate damage during construction will be applied to all the trees to be preserved. The following measures are the minimum required by the City of Ottawa to ensure tree survival during and following construction:

1. Erect a fence as close as possible to the critical root zone (CRZ) of trees (City of Ottawa tree protection barrier detail included on page 7).
2. Do not place any material or equipment within the CRZ of the tree.
3. Do not attach any signs, notices or posters to any tree.
4. Do not raise or lower the existing grade within the CRZ without approval.
5. Tunnel or bore when digging within the CRZ of a tree.
6. Do not damage the root system, trunk or branches of any tree.
7. Ensure that exhaust fumes from all equipment are NOT directed towards any tree's crown.



**REPLACEMENT TREE PLANTING OR COMPENSATION**

As the property is within the inner urban area, the following ratios are used in terms of replacement tree planting: 2:1 for each removed distinctive tree measuring 30-49 cm in diameter and 3:1 for each distinctive tree measuring 50 cm or greater in diameter. As two trees in the range of 30-49cm are to be removed, compensation of four new trees is required. Replacement trees must be at least 50mm in caliper if deciduous and 2m in height if coniferous. Suggested replanting locations are shown on the plan on page 4.

This report is subject to the attached Limitations of Tree Assessments and Liability to which the reader's attention is directed.

Please do not hesitate to contact me with any questions concerning this report.

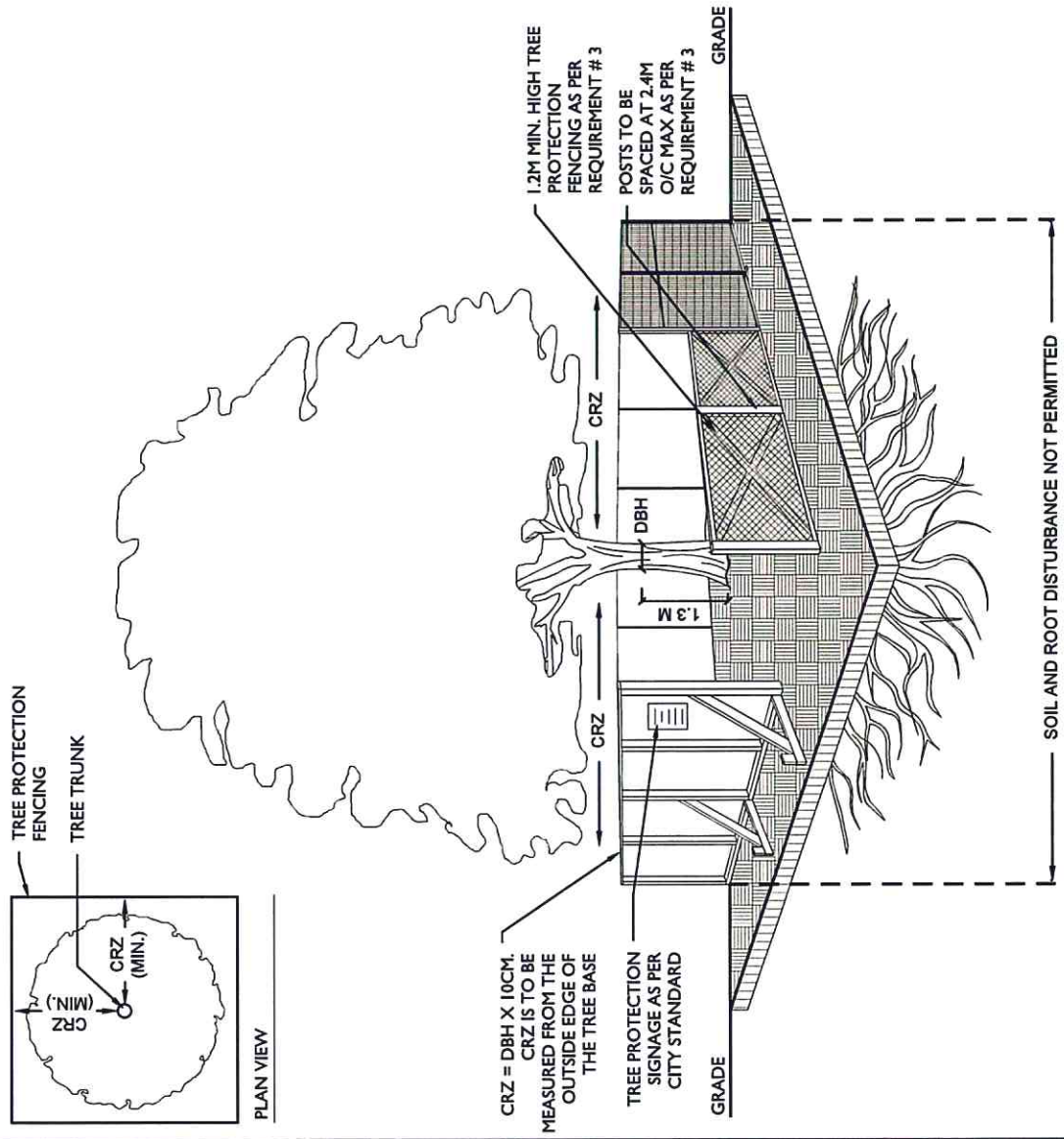
Yours,



Andrew K. Boyd, B.Sc.F, R.P.F. (#1828)  
Certified Arborist #ON-0496A and TRAQualified  
Consulting Urban Forester

- 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.



ACCESSIBLE FORMATS AND COMMUNICATION SUPPORTS ARE AVAILABLE, UPON REQUEST



## TREE PROTECTION SPECIFICATION

TO BE IMPLEMENTED FOR RETAINED TREES, BOTH ON SITE AND ON ADJACENT SITES, PRIOR TO ANY TREE REMOVAL OR SITE WORKS AND MAINTAINED FOR THE DURATION OF WORK ACTIVITIES ON SITE.

SCALE: NTS

DATE: MARCH 2021

DRAWING NO.: 1 of 1





Picture 1. Trees #1 and 2 (right to left), private spruce and basswood trees at 113 Northwestern Avenue





Picture 2. Trees #3 and 5 (right to left), private basswoods at 113 Northwestern Avenue





Picture 3. Tree #6, neighbouring bitternut hickory at 113 Northwestern Avenue (note asphalt pathway to right)





Picture 4. Tree #7, neighbouring bur oak at 113 Northwestern Avenue (crab apple in foreground is less than 30cm DBH so not distinctive)



# LIMITATIONS OF TREE ASSESSMENTS & LIABILITY

## GENERAL

It is the policy of *IFS Associates Inc.* to attach the following clause regarding limitations. We do this to ensure that our clients are clearly aware of what is technically and professionally realistic in assessing trees for retention.

This report was prepared by *IFS Associates Inc.* at the request of the client. The information, interpretation and analysis expressed in this report are for the sole benefit and exclusive use of the client. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the client to whom it is addressed. Unless otherwise required by law, neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through public relations, news or other media, without the prior expressly written consent of the author, and especially as to value conclusions, identity of the author, or any reference to any professional society or institute or to any initialed designation conferred upon the author as stated in his qualifications.

This report and any values expressed herein represent the opinion of the author; his fee is in no way contingent upon the reporting of a specified value, a stipulated result, nor upon any finding to be reported.

Details obtained from photographs, sketches, *etc.*, are intended as visual aids and are not to scale. They should not be construed as engineering reports or surveys. Although every effort has been made to ensure that this assessment is reasonably accurate, the tree(s) should be reassessed at least annually. The assessment presented in this report is valid at the time of the inspection only. The loss or alteration of any part of this report invalidates the entire report.

## LIMITATIONS

The information contained in this report covers only the tree(s) in question and no others. It reflects the condition of the assessed tree(s) at the time of inspection and was limited to a visual examination of the accessible portions only. *IFS Associates Inc.* has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the forestry and arboricultural professions, subject to the time limits and physical constraints applicable to this report. The assessment of the tree(s) presented in this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground portions of each tree for structural defects, scars, cracks, cavities, external indications of decay such as fungal fruiting bodies, evidence of insect infestations, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the tree(s) and the surrounding site, and the proximity of people and property. Except where specifically noted in the report, the tree(s) examined were not dissected, cored, probed or climbed to gain further evidence of their structural condition. Also, unless otherwise noted, no detailed root collar examinations involving excavation were undertaken.

While reasonable efforts have been made to ensure that the tree(s) proposed for retention are healthy, no warranty or guarantee, expressed or implied, are offered that these trees, or any parts of them, will remain standing. This includes other trees on or off the property not examined as part of this assignment. It is both professionally and practically impossible to predict with





absolute certainty the behaviour of any single tree or groups of trees or their component parts in all circumstances, especially when within construction zones. Inevitably, a standing tree will always pose some risk. Most trees have the potential for failure in the event of root loss due to excavation and other construction-related impacts. This risk can only be eliminated through full tree removal.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions, or seasonal variations in the weather. It is a condition of this report that *IFS Associates Inc.* be notified of any changes in tree condition and be provided an opportunity to review or revise the recommendations within this report. Recognition of changes to a tree's condition requires expertise and extensive experience. It is recommended that *IFS Associates Inc.* be employed to re-inspect the tree(s) with sufficient frequency to detect if conditions have changed significantly.

### ASSUMPTIONS

Statements made to *IFS Associates Inc.* in regard to the condition, history and location of the tree(s) are assumed to be correct. Unless indicated otherwise, all trees under investigation in this report are assumed to be on the client's property. A recent survey prepared by a Licensed Ontario Land Surveyor showing all relevant trees, both on and adjacent to the subject property, will be provided prior to the start of field work. The final version of the grading plan for the project will be provided prior to completion of the report. Any further changes to this plan invalidate the report on which it is based. *IFS Associates Inc.* must be provided the opportunity to revise the report in relation to any significant changes to the grading plan. The procurement of said survey and grading plan, and the costs associated with them both, are the responsibility of the client, not *IFS Associates Inc.*

### LIABILITY

Without limiting the foregoing, no liability is assumed by *IFS Associates Inc.* for:

- 1) Any legal description provided with respect to the property.
- 2) Issues of title and/or ownership with respect to the property.
- 3) The accuracy of the property line locations or boundaries with respect to the property.
- 4) The accuracy of any other information provided by the client or third parties.
- 5) Any consequential loss, injury or damages suffered by the client or any third parties, including but not limited to replacement costs, loss of use, earnings and business interruption; and,
- 6) The unauthorized distribution of the report.

Further, under no circumstances may any claims be initiated or commenced by the client against *IFS Associates Inc.* or any of its directors, officers, employees, contractors, agents or assessors, in contract or in tort, more than 12 months after the date of this report.

### ONGOING SERVICES

*IFS Associates Inc.* accepts no responsibility for the implementation of any or all parts of the report, unless specifically requested to supervise the implementation or examine the results of activities recommended herein. In the event that examination or supervision is requested, that request shall be made in writing and the details, including fees, agreed to in advance.



