

APPROVED

By Molly Smith at 3:29 pm, Apr 21, 2023



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URBAN FORESTRY & FOREST MANAGEMENT CONSULTING

January 13, 2023

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MOLLY SMITH
PLANNER II
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT
DEPARTMENT, CITY OF OTTAWA

RE: TREE CONSERVATION REPORT FOR 100 TERENCE MATTHEWS CRESCENT, OTTAWA

This Tree Conservation Report (TCR) was prepared by IFS Associates Inc. (IFS) on behalf of Gifford Carr Insurance in support of the proposed addition to the rear of their existing office building at 100 Terence Matthews Crescent in Ottawa. 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 By-law reflects Section 4.8.2. of the City of Ottawa's Official Plan which calls for the retention of the City's urban forestry canopy and, in particular, the protection of large, healthy trees.

Under the Tree Protection By-law, a TCR is required for all plans of subdivision, site plan control applications, common elements condominium applications, and vacant land condominium applications where there is a tree of 10 cm in diameter at breast height (DBH) or greater on a site and/or if there is a tree on an adjacent site that has a critical root zone (CRZ) extending onto a development site. Trees of any size on adjacent City lands must also be documented in a TCR. 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 tree conservation report 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 land. Field work for this report was completed in October 2022.

As noted on Table 1 on pages 2, 3 and 4 of this report, four Norway maples are recommended for removal as a result of their currently poor or declining health condition. All other existing trees are to be preserved and protected during the proposed construction.



TREE SPECIES, CONDITION, SIZE AND STATUS

Table 1 below details the species, condition, size (diameter) and status of the individual and groups of trees on the subject and adjacent private property. Each of these trees is referenced by the numbers plotted on the tree conservation plan on page 5 of this report.

Table 1. Species, condition, size (diameter) and status of trees at 100 Terence Matthews Crescent

| Tree No. | Tree Species | DBH ¹ (cm) | Owner -ship ² | Condition, Age Class, Tree Condition Notes, Species Origin & Status (to be removed or preserved and protected) |
|----------|---|--------------------------|-----------------------------|--|
| 1 | Norway maple (<i>Acer platanoides</i>) | 29.9 | Private | Poor; mature; central stem broken at 3m; recent root damage related to curb replacement; introduced invasive species; to be removed (due to poor condition) |
| 2 | White spruce (<i>Picea glauca</i>) | 24 avg. | Private | Fair; mature; double stemmed at 0.4m; lower crown thin due to influence of two nearby maples; fair crown density, annual increment and needle colour where exposed to direct sunlight; native species; to be preserved and protected |
| 3 | Norway maple (<i>Acer platanoides</i>) | 34.6 | Private | Fair; mature; tri-stemmed at 1.75m; central stem dead and removed due to branch cluster; introduced invasive species; to be removed (due to declining condition) |
| 4 | Colorado spruce (<i>Picea pungens</i>) | 52.3 | Private | Fair; mature; scattered dead branches; root collar buried; good density, increment and needle colour; introduced species; to be preserved and protected |
| 5 | Austrian pine (<i>Pinus nigra</i>) | 52.1 | Private | Poor; mature; very poor form: co-dominant stems at 2.25m – central stem with competing lateral at 1m on southwest; competing and suppressed laterals at 0.5 on south, 1.5m on east, and 1.5 on west – broad crown; good density, increment and needle colour; introduced species; to be preserved and protected |
| 6 | Crab apple (<i>Malus spp.</i>) | 36.9 | Private | Good; mature; five-stemmed at 1.5m; broad, dense crown; cultivar; to be preserved and protected |
| 7 | Norway maple (<i>Acer platanoides</i>) | 41.5 | Private | Good; mature; tri-stemmed at 2m – central stem with competing laterals on east and west; introduced invasive species; to be preserved and protected |
| 8 | Norway maple (<i>Acer platanoides</i>) | 35.7 | Private | Good; mature; central stem for most of height with competing and suppressed laterals starting at 2.5m; introduced invasive species; to be preserved and protected |
| 9 | Norway maple (<i>Acer platanoides</i>) | 42.8 | Private | Good; mature; co-dominant stems at 3m with competing laterals at 1.5 and 2m on southwest; introduced invasive species; to be preserved and protected |

Table 1. Con't

| Tree No. | Tree species | DBH ¹ (cm) | Owner -ship ² | Condition, age class, tree condition notes & species origin |
|----------|---|--------------------------|-----------------------------|---|
| 10 | Austrian pine (<i>Pinus nigra</i>) | 43.4 | Private | Good; mature; single dominant stem; crown asymmetric towards north due to influence of tree #9; good density, increment and needle colour; introduced species; to be preserved and protected |
| 11 | Austrian pine (<i>Pinus nigra</i>) | 39.3 | Private | Fair; mature; mildly divergent form and crown moderately asymmetric towards southeast; good density, increment and needle colour; introduced species; to be preserved and protected |
| 12 | Austrian pine (<i>Pinus nigra</i>) | 40.7 | Private | Good; mature; single dominant stem; crown generally symmetric; good density, increment and needle colour; introduced species; to be preserved and protected |
| 13 | Norway maple (<i>Acer platanoides</i>) | 33.7 | Neighbour | Very poor; mature; co-dominant stem at 2m on west has failed – resulting in massive wound; major girdling root on east side of root collar; introduced invasive species; to be preserved and protected |
| 14 | Austrian pine (<i>Pinus nigra</i>) | 43.8 | Private | Good; mature; single dominant stem; crown generally symmetric; good density, increment and needle colour; introduced species; to be removed (conflicts with lowering of grade) |
| 15 | Austrian pine (<i>Pinus nigra</i>) | 47.7 | Private | Fair; mature; tri-stemmed at 1.25m – parallel; good density, increment and needle colour; introduced species; to be preserved and protected |
| 16 | Austrian pine (<i>Pinus nigra</i>) | 48.1 | Private | Fair; mature; co-dominant stems at 1.5m – parallel; poor crown density, good growth increment and needle colour; introduced species; to be removed (conflicts with lowering of grade) |
| 17 | Austrian pine (<i>Pinus nigra</i>) | 39.7 | Private | Good; mature; single dominant stem; crown generally symmetric; fair density, increment and needle colour; introduced species; introduced species; to be preserved and protected |
| 18 | Austrian pine (<i>Pinus nigra</i>) | 43.8 | Private | Good; mature; single dominant stem; crown generally symmetric; fair density, increment and needle colour; introduced species; introduced species; to be preserved and protected |
| 19 | White spruce (<i>Picea glauca</i>) | 25.2 | Neighbour | Fair; mature; mildly divergent and asymmetric towards southeast due to influence of tree #20; fair density, increment and needle colour; native species; to be preserved and protected |

Table 1. Con't

| Tree No. | Tree species | DBH ¹ (cm) | Owner -ship ² | Condition, age class, tree condition notes & species origin |
|----------|---|-----------------------|--------------------------|--|
| 20 | Norway maple (<i>Acer platanoides</i>) | 33.4 | Private | Very poor; mature; co-dominant stem at 2.5m on west has failed due to weak union – resulting in massive wound; introduced invasive species; to be removed (due to very poor condition) |
| 21 | Norway maple (<i>Acer platanoides</i>) | 23.4 | Private | Poor; mature; co-dominant stems at 2m – central stem with competing lateral on south; central stem topped at 2.5m; introduced invasive species; to be removed (due to poor condition) |
| 22 | Norway maple (<i>Acer platanoides</i>) | 35.7 | Neighbour | Poor; mature; co-dominant stems 2.25m – central with competing lateral on south; laterals on north recently broken (cause unknown) - crown now asymmetric towards south; introduced invasive species; to be preserved and protected |
| 23 | Colorado spruce (<i>Picea pungens</i>) | 25 avg. | Neighbour | Good; mature line of 7 trees; generally good density, increment and needle colour – except where vine and Manitoba maple growth impacting health; introduced species; to be preserved and protected |
| 24 | Manitoba maple (<i>Acer negundo</i>) | 21 avg. | Private | Good; mature; tri-stemmed from grade; partially shading neighbouring line of spruce; originated from seed; naturalized species; to be preserved and protected |

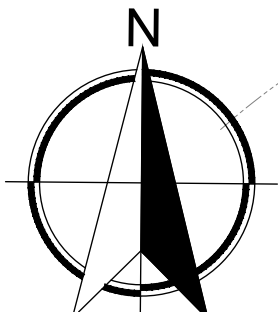
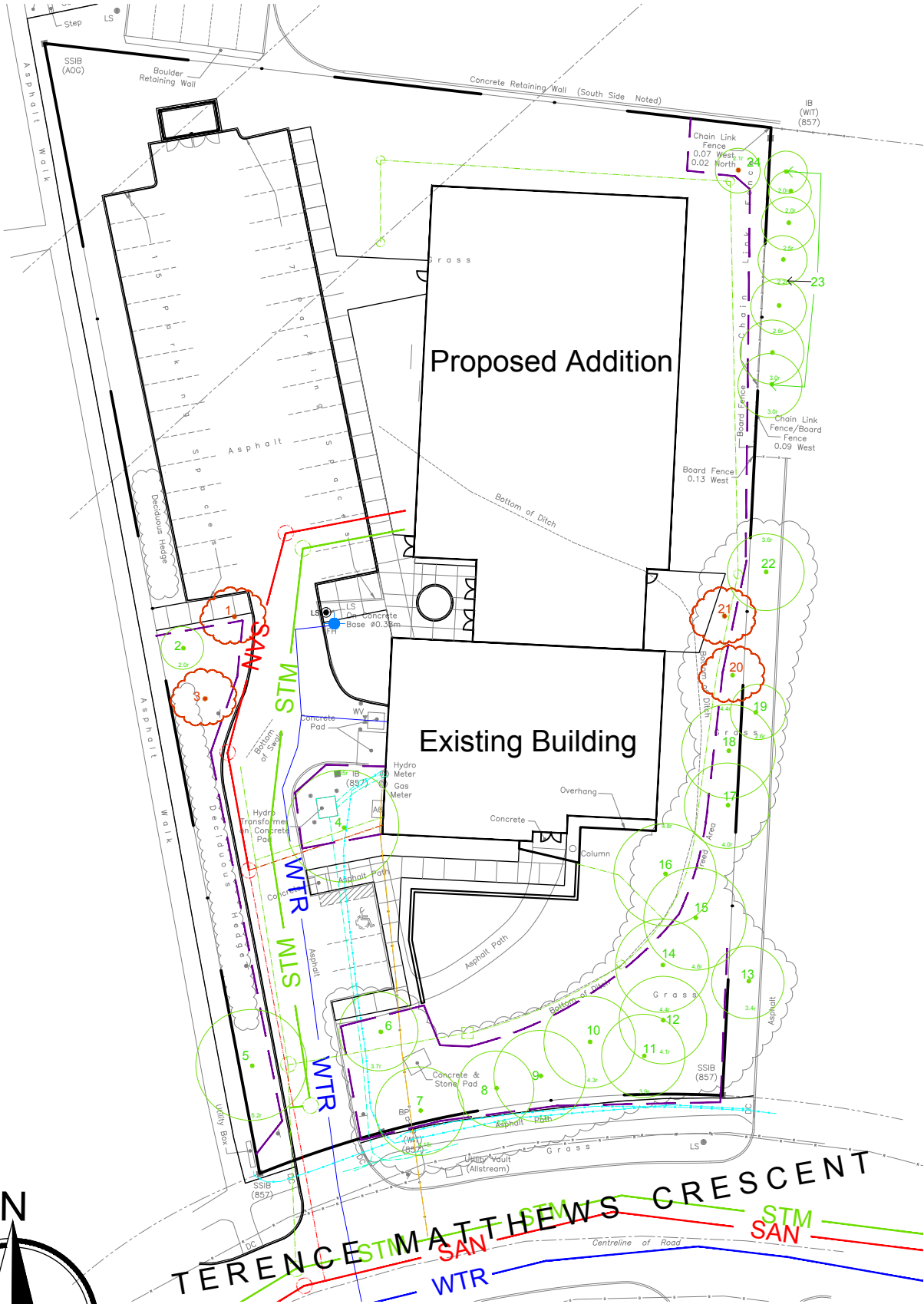
¹ diameter at breast height, or 1.4m from grade (unless otherwise indicated); average diameters indicate multi-stemmed trees; ²As determined from locations plotted on topographic survey

Pictures 1 to 7 on pages 8 through 11 of this report show selected trees on and adjacent to the subject property.

FEDERAL AND PROVINCIAL REGULATIONS

Federal and provincial regulations can be applicable to trees on private and public property. In particular, the following regulation has been considered for this property:

- 1) Endangered Species Act (2007): No butternuts (*Juglans cinerea*) were identified on the subject or adjacent properties. This species of tree is listed as threatened under the Province of Ontario's Endangered Species Act (2007) and so is protected from harm.
- 2) Migratory Bird Convention Act (1994): In the period between April and August of each year nest surveys are required to be performed by a suitably trained person no more than five (5) days before trees or other similar nesting habitat are to be removed.



TERENCE **STM** MATTHEWS CRESCENT
SAN **WTR** **STM** **SAN**

GIFFORD CARR INSURANCE OFFICE ADDITION

100 TERENCE MATTHEWS CRESCENT KANATA

TREE PRESERVATION MEASURES

As excavation occurs within close proximity to a number of trees, the following measures will be taken:

1. Hydro excavation along the edge of excavation in proximity to the trees so as to carefully expose roots. Exposed roots will then 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 tree. This will help reduce the loss of soil moisture (as soil dries the roots contained within die).

TREE PROTECTION MEASURES

Preservation and protection measures intended to mitigate damage during construction will be applied for the trees to be retained on and adjacent to the subject property. The following measures are the minimum required by the City of Ottawa to ensure tree survival during and following construction:

1. As per the City of Ottawa's tree protection barrier specification (included on page 7), erect a fence as close as possible to the CRZ of the trees;
2. Do not place any material or equipment within the CRZ of the tree(s);
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 instead of trenching within the CRZ of any 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 canopy.

¹ critical root zone (CRZ) is established as being 10 centimetres from the trunk of a tree for every centimetre of DBH. The CRZ is calculated as DBH x 10 cm.

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

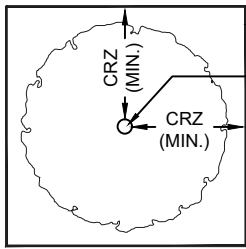
Please do not hesitate to contact me with any questions concerning this report.

Yours,



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





PLAN VIEW

TREE PROTECTION FENCING

TREE TRUNK

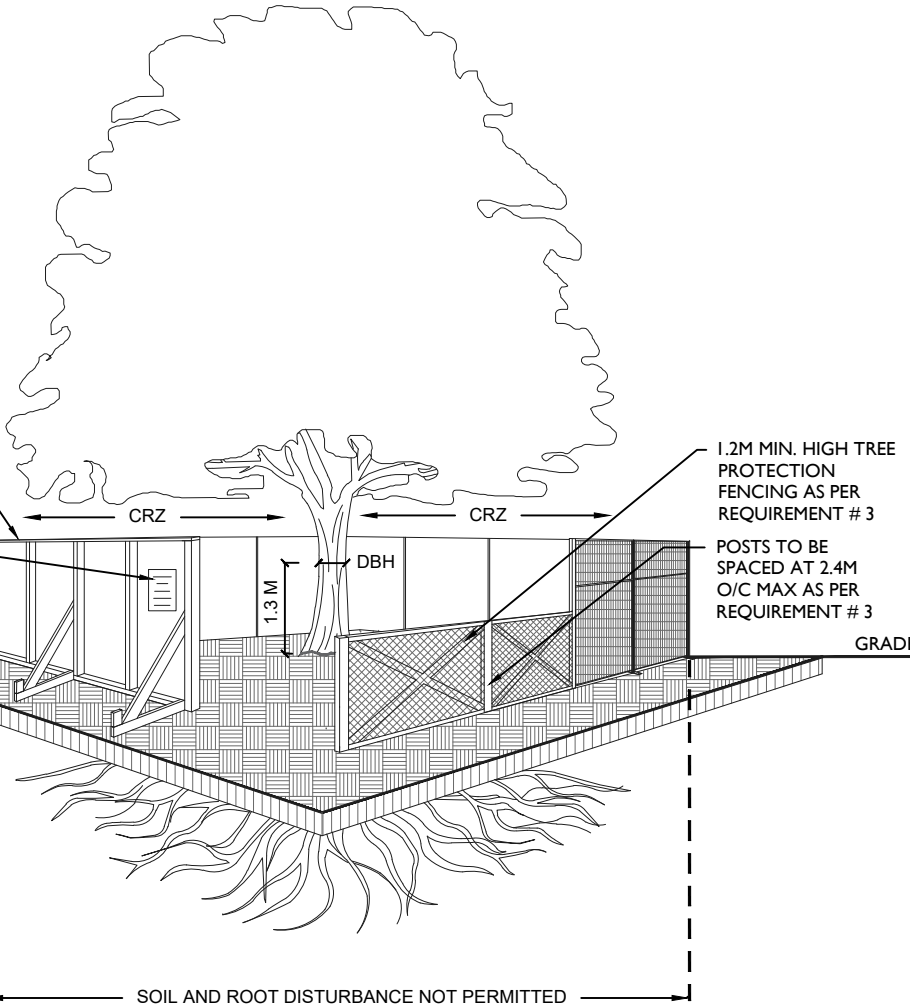
CRZ (MIN.)

CRZ (MIN.)

CRZ = DBH X 10CM.
CRZ IS TO BE MEASURED FROM THE OUTSIDE EDGE OF THE TREE BASE

TREE PROTECTION SIGNAGE AS PER CITY STANDARD

GRADE



1.2M MIN. HIGH TREE PROTECTION FENCING AS PER REQUIREMENT # 3

POSTS TO BE SPACED AT 2.4M O/C MAX AS PER REQUIREMENT # 3

SOIL AND ROOT DISTURBANCE NOT PERMITTED

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.

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, 2 and 3 (right to left) located at 100 Terence Matthews Crescent



Picture 2. Trees #6 and 7 (left to right) located at 100 Terence Matthews Crescent



Picture 3. Trees #7, 8, 9 and 10 (left to right) located at 100 Terence Matthews Crescent



Picture 4. Trees #10, 11, 12 and 14, 15, 16 (right to left) located at 100 Terence Matthews Crescent



Picture 5. Trees #17, 18 and 19 (left to right) located at 100 Terence Matthews Crescent



Picture 6. Trees #20, 21 and 22 (right to left) located at 100 Terence Matthews Crescent



Picture 7. Tree grouping #22 (right and background) and tree #23 (left foreground) located at 100 Terence Matthews Crescent



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 carried out 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 regards 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.

INDEMNIFICATION

An applicant for a permit or other approval based on this report shall agree to indemnify and save harmless *IFS Associates Inc.* from any and all claims, demands, causes of action, losses, costs or damages that affected private landowners and/or the City of Ottawa may suffer, incur or be liable for resulting from the issuance of a permit or approval based on this report or from the performance or non-performance of the applicant, whether with or without negligence on the part of the applicant, or the applicant's employees, directors, contractors and agents.

Further, under no circumstances may any claims be initiated or commenced by the applicant 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.