TREE CONSERVATION REPORT
JULIAN OF NORWICH

November 27, 2023

Prepared for:
FIGURR ARCHITECTS COLLECTIVE

Prepared by:

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Glossary

Canopy Structure (CS)	Assessment of the scaffold branches, unions and the canopy of the tree. This is measured on a scale of poor, fair, good.
Canopy Vigour (CV)	Assessment of the health of the tree and assesses the amount of deadwood and live growth in the crown as compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. This is measured on a scale of poor, fair, good.
Critical Root Zone (CRZ)	Zone under a tree where there should be no disturbance before, during and after construction. The CRZ is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk diameter.
Diameter at Breast Height (DBH)	Diameter of a tree trunk measured at 1.4 metre above ground, standardized by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture. DBH are generally measured in centimetres.
Dieback	Condition in which the ends of the branches are dying.
Distinctive Tree	Any tree, growing on a private property with a • DBH of 30 centimetres or greater, within the City of Ottawa Inner Urban Area (City of Ottawa Tree Protection By-law 2020-340); and • DBH of 50 centimetres or greater, within the City of Ottawa Suburban Area (City of Ottawa Tree Protection By-law 2020-340).
Drip Line	Perimeter of the area under a tree delineated by the crown.
Health Condition	Health Condition of each tree is divided into the following three categories: Canopy Structure (CS), Canopy Vigour (CV) and Trunk Integrity (TI).
Leader	The primary terminal shoot or trunk of a tree.
Ownership (Tree)	• Private: Tree growing on the subject site (not owned by the Municipal, Provincial, of Federal Government). • Boundary: Tree of which any part of the trunk, or a significant portion of its CRZ and/or canopy, is growing across one or more property lines. • Adjacent: Tree whose trunk is growing on a property sharing a boundary with the subject site. • City / Municipal: Tree residing on Municipal lands. • Provincial: Tree residing on Provincial lands. • Federal: Tree residing on Federal lands.
Sapling	A young tree measuring one (1) to two (2) metres high and having a DBH of two (2) to four (4) centimetres.
Scaffold Branches	The permanent or structural branches of a tree.
Seedling	A plant grown from a seed with a height of not more than one (1) metre.
Significant Tree	Tree / shrub deemed valuable because it is unusually beautiful or distinctive, comparatively old, distinctive in size or structure for its species, rare or unusual in the subject area, provides a habitat for rare or unusual wildlife species in the subject area, or has an historical, cultural, or landmark significance.
Significant Woodland	Woodland that contains mature stands of trees 80 years or older, have interior forest habitat more than 100 metres from forest edge, and are adjacent to a surface water feature.
Specimen Tree	Individual tree located in the middle of a field or open space. A specimen tree is not automatically a significant tree.

Stress	Any factor that negatively affects the health of a tree.
Structural Defect	Flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure.
Topping (Topped)	Cutting back a tree to buds, stubs, or laterals not large enough to become a new leader on the tree.
Tree Protection Zone (TPZ)	The area surrounding a tree that is marked and fenced off and where there is no storage of materials of any kind, no parking or moving of vehicles, and no disturbance of the soil or grade.
Tree Shoots	Tree shoots are sprouts that emerge from dormant buds along the trunk or branch of a tree. In an urban environment, shoots are often associated with stress to the tree. Trees with severe dieback due to winter injury, drought and salt spray often produce many shoots as a means of compensating for the loss of leaf surface due to stress or injury.
Tree Suckers	Tree suckers are sprouts that form from the roots of existing trees and tend to form new trees or shrubs. In an urban environment suckers can be associated with stress to the tree and are prevalent after a disturbance such as when mature trees are cut down. Some tree species have the tendency to sucker.
Trunk Integrity (TI)	Assessment of the trunk for any defects or weaknesses. It is measured on a scale of poor, fair, good.
Vigour	Overall health; capacity to grow and resist stress.

1 Introduction

1.1 Background and Objectives

Stantec Consulting Ltd. was retained by Figurr Architects Collective to complete a Tree Conservation Report as part of the zoning amendment for the redevelopment of the Julian of Norwich property located at 7 Rossland Avenue, in Ottawa.

Trees growing within anticipated limits of works have been assessed to determined potential impacts to redevelop the property into a mixed-use property combining residential, commercial, and institutional uses. This report presents a detailed inventory of the trees growing within the study area. Tree protection and tree mitigation recommendations have been developed in support of this redevelopment project.

This report is to be read in conjunction with:

- Appendix A: TREE INVENTORY SCHEDULE
- Appendix B: SITE PHOTOGRAPHS
- Appendix C: CURRENT VEGETATION PLAN
- Appendix D: PROPOSED DEVELOPMENT
- Appendix E: TREE PROTECTION DETAIL
- City of Ottawa Tree Protection (By-law No. 2020-340)

1.2 Subject Site

The subject site is located adjacent to Merivale Road, approximately halfway between Baseline Road and Meadowlands Drive (see **Figure 1**). The site is bounded by Withrow Ave (to the north), Merivale Rd (to the east), Rossland Ave (to the south). Four private residential properties bound the site to the west, adjacent to St. Helen's Place (see **Figure 2)**. The site is 0.72 hectares in area (*confirmed:https://maps.ottawa.ca)*

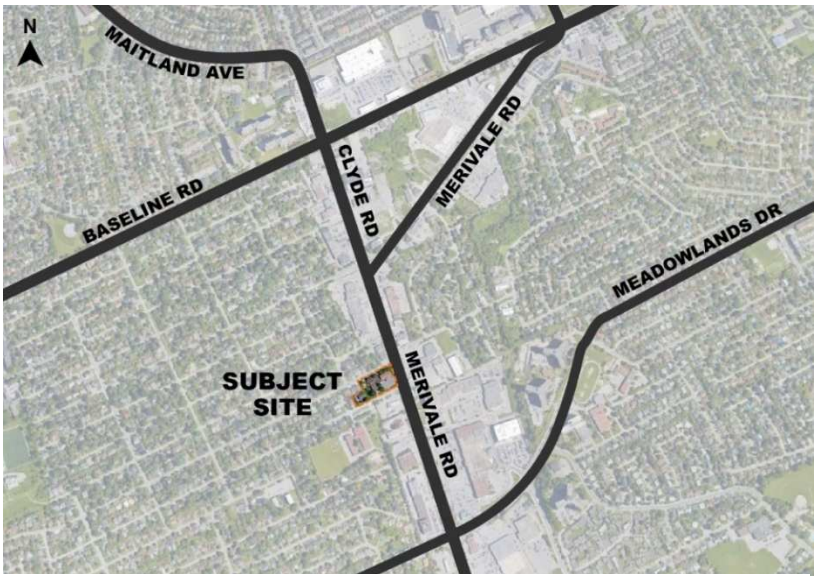


Figure 1: Key Map

The current property includes Julian of Norwich Anglican Church, the New Star Children's Theatre, and L'Arche Ottawa, a community and support group. The site combines parking lots, walkways, grassed areas, and specimen trees.

Figure 2: Site Boundaries

2 Tree Assessment

On-site tree assessments and inventories were conducted within the identified study area on October 5, 2021 and re-assessed October 20, 2023. The tree inventories were completed using the framework outlined by the *City of Ottawa's Tree Protection By-law* (By-law No. 2020-340) (City of Ottawa 2021a). All trees over 10 centimetres (cm) DBH (Diameter at Breast Height) within the project limits were assessed and inventoried. The assessment provided in this report and criteria applied during field investigations follow standard arboriculture techniques. All assessments were made by a visual inspection of the above ground portions of the tree viewed from ground level. No climbing, physical coring, excavation, or probing examination of the trees were made. Trees were assessed for species, quantity, trunk size and condition.

2.1 Methodology

Trees have been assessed and inventoried in accordance with *City of Ottawa's Tree Protection By-law* (By-law No.2020-340) (City of Ottawa 2021a). Tree Assessment Criteria include an inspection for abiotic and biotic defects impacting **T**runk **I**ntegrity, **C**anopy **S**tructure and / or **C**anopy **V**igor. The tree assessment includes a visual inspection for:

Evidence of abiotic (environmental, mechanical, and physical damage) and biotic (insects and disease) stressors,

Tree trunk integrity (TI) including an assessment of the trunk for any defects,

Tree canopy structure (CS) including an assessment of the scaffold branches and canopy of the tree,

Tree canopy vigour (CV) including assessment of the amount of deadwood versus live growth in the tree crown while also considering the size, colour and amount of foliage.

The above criteria (TI, CS & CV) are rated based on the following guidelines:

Good	Tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI, CS, CV).
Fair	Tree displays 15%-40% deficiency/defect within the given tree assessment criteria (TI, CS, CV).
Poor	Tree displays greater than 40% deficiency/defect within the given tree (TI, CS, CV).

The assessment of trees growing within the study area and along property boundaries was completed as part of this tree investigation. All existing trees growing on or within the property lines and with a DBH of 10cm or greater were assessed. When possible, trees were measured using a metric measuring tape. Trees were inventoried as a grouping where multiple trees formed one continuous canopy. Most tree locations identified on the current vegetation plans in Appendix C are based on satellite imagery available for the site, correlated with in-person observations.

2.2 Observations

Field observations were undertaken to confirm the health, species composition, DBH, and number of trees within the subject site. Within the tree inventory survey area, a total 20 individual trees with a DBH equal to or greater than 10 cm were assessed. A total of 11 different tree species were identified. Overall tree health is good, with only two Manitoba Maples and one Norway Maple being assessed as fair or declining. The trees on site were first assessed in the fall of 2021 and were re-assessed October 2023l; a few trees had been removed between the 2021 and 2023 assessments.

A total of 13 individual trees were identified as distinctive trees (i.e. tree 30cm DBH or greater (City of Ottawa 2021a)). Refer to the tree inventory table in Appendix A for tree information. The following sections provide a summary of the tree assessment.

2.2.1 TREE OWNERSHIP

Of the 20 trees assessed, 17 trees are privately owned, two (2) trees are street trees and municipally-owned (#16 & 17), and one (1) tree is on the boundary of the property line (#6).

2.2.2 TREE SPECIES

A total of 11 different species were identified and assessed. Refer to **Table 1** below. A total of 90% of the trees are deciduous with Norway Maple as the most predominant species present (40%).

Table 1: Tree Species Summary

Species - Botanical Name	Species – Common Name	Quantity	Distribution (%)
Acer platanoides	Norway Maple	8	40
Acer negundo	Manitoba Maple	3	15
Acer rubrum	Red Maple	1	5
Juglans nigra	Black Walnut	1	5
Larix laricina	Tamarack	1	5
Picea pungens	Blue Spruce	1	5
Undefined	Ornamental fruit tree	1	5
Quercus alba	White Oak	1	5
Quercus macrocarpa	Burr Oak	1	5
Quercus rubra	Red Oak	1	5
Tilia cordata	Littleleaf Linden	1	5
		20	100

It should be noted that Norway maples are considered invasive trees impacting growth of other vegetation around them. The Ontario Invasive Plant Council describes the Norway Maple as a “potential (…) serious invader” and that “preventing this invasive maple species from entering and damaging natural areas is an important priority for land managers, land use planning, and landscape design.” Many projects within the boundaries of the City of Ottawa are underway to remove the presence of Norway maples in our environment.

2.2.3 TREE SIZE

The trees on site are primarily mature. Of the trees assessed over 10cm DBH, seven (7) trees were under 30cm, and 13 trees were above 30cm in diameter. Refer to **Table 2** below.

Trees over 30cm DBH are considered distinctive trees as defined by the *City of Ottawa's Tree Protection By-law* (By-law No. 2020-340) (City of Ottawa 2021a).

Table 2: Tree Size Summary

	10 to 29cm DBH	Over 30 cm DBH	TOTAL
No. of Trees	7 (35%)	13 (65%)	**20**

2.2.4 TREE CONDITION

The condition or health of trees within the subject site was found to be mostly good. Trees were assessed for trunk integrity (TI), canopy structure (CS) and canopy vigour (CV). Of the trees assessed, seventeen (17) were in good condition, while trees assessed as fair (2 trees) or declining (1 tree) were limited to maples. Common defects observed include codominant stems, exposed roots, natural lean and branch tip dieback.

2.2.5 SPECIES-AT-RISK

No tree Species-at-Risk were identified within the subject site.

2.3 Vegetation Quality and Suitability for Retention

Although most trees growing on the subject site show good health conditions, other factors should be evaluated when establishing the suitability for retention of a tree. These factors include the following:

Location of the tree;

Structural condition of the tree;

Age and expected longevity of the tree;

Species response and tolerance to disturbance; and

Species invasiveness.

By considering all the factors listed above, trees recommended for retention will have a higher chance of responding positively to new site conditions for an extended period of time providing a safe environment for the property users.

3 Proposed Development & Tree Protection Recommendations

3.1 Proposed Development

The redevelopment plans for 7 Withrow include twenty-seven residential units divided into two 3-storey high buildings, a church, and an 8-storey mixed-use building. To support the development, two parking separated parking lots are included with gathering spaces where the church and mixed-use buildings are connecting. These changes to the property will impact trees and how the site is used; the following recommendations are made considering the current understanding of proposed future development and the location of distinct trees.

For this redevelopment, the layout of the site was developed to protect the large oak tree (tree #5). The proposed development also recommended retention of tree #1 and tree #2. It is recommended that existing trees to remain be protected and integrated within the site. Tree species, size and health should be considered, with an emphasis on preserving large, healthy native and or specimen trees.

Mitigation measures including but not limited to tree pruning / limbing and root protection should be considered before resorting to tree removal. To prioritize the health of trees recommended to be preserved, mitigation measures must be in place prior to any construction / demolition activities. It is recommended that the guidelines in section 3.2 below are followed.

3.1.1 ANTICIPATED IMPACTS TO TREES

The proposed development plans require the removal of 16 of the 19 individual trees growing on the subject site to facilitate the proposed construction. Tree removals will be required to accommodate site grading including new buildings, parking, and residential access drives / walkways. Most of the trees anticipated to require removal are non-native species. As indicated above, the proposed development plans include the retention of the large specimen White Oak tree (#5, at 115cm DBH). All removals shall be compensated as per City of Ottawa requirements (see section 3.2). A total of 13 tree removals are within the site property limits and privately owned. Two (2) of the anticipated tree removals are municipally owned (#16 & 17). One (1) tree anticipated to require removal is on the property boundary (#6) with the municipal right-of-way.

It is highly recommended that additional mitigation measures be undertaken to protect the heath and survival of the large specimen White Oak (#5) to be retained and protected. Oak trees can be susceptible to soil compaction within their root zone. The proposed development plans include the construction of an asphalt parking lot immediately outside the critical root zone. It is essential that the tree protection fencing be installed at this limit and protects as much of the area around the tree as possible. The roots from this tree likely extend far beyond the critical root zone but it should be noted the area east of the white oak is currently a parking area. Refer to section 3.2.4 below for guidelines when encountering roots during excavation work. It is recommended that Landscape plans include for the aeration / de-compaction of the soil around the tree including the addition of compost and a surface layer of mulch.

3.2 Tree Protection Recommendations

To ensure tree survival of the trees to be retained during and after construction, mitigation measures should be in place during construction. Adequate protection of the trees to be retained and their immediate environment is crucial for the survival of these trees. As such, the Contractor shall apply the following measures to prevent damages to the tress to be retained.

3.2.1 MONITORING TREE HEALTH

Trees located adjacent to construction works will experience change in their immediate environment. As a result, tree health should be monitored. Photographs of trees to remain should be taken prior to construction, if possible, when the trees are in full leaf, as a record of their condition.

Monitoring tree health both during and after construction should be made a priority. Actions should be taken as early as possible if / when the health of a protected tree declines. Damages may include:

Physical damage on tree bark;

Broken branches;

Compaction of root systems due to equipment and materials stored within the protected areas;

Cutting of the roots; and

Root exposure following excavation adjacent to trees to be preserved.

Services of a Certified Arborist should be used in order to give adequate care to damaged trees.

Trees that have died or have been damaged beyond repair by the Contractor during construction shall be removed and replaced by the Contractor as directed by the Contract Administrator at no cost for the owner.

3.2.2 PROTECTING TREES TO BE RETAINED

3.2.2.1 Tree Protection Fencing

All trees to remain shall be preserved and protected using a temporary tree protection fence. Most a tree's critical roots reside in the top 150 to 250 millimetres of soil and can very easily be inadvertently damaged. To ensure protection of the root system of trees to remain, temporary tree protection fencing must be installed at the critical root zone (or beyond) of any trees which will be impacted by construction / demolition activities. The CRZ of a tree is the zone around the trunk where there should be no disturbance before, during, and after construction. The CRZ is established as being 10 centimetres from the trunk for every centimetre of trunk diameter. For trees with a DBH of less than 10 centimetres, the CRZ is established as 1.5 metres from the trunk.

Tree protection fencing shall be installed prior to any construction works on site, including but not limited to the demolition of structures. Fencing shall be installed to protect the critical root zone. Limb and / or prune

as required to facilitate construction works and avoid damage to trees identified to remain / be protected under the supervision of a Certified Arborist. All tree protection fencing shall be installed as per City of Ottawa standards. Refer to latest Tree Protection Specification details from City of Ottawa inserted as Appendix E of this report. Fencing shall always be maintained in good repair during construction operations and shall only be removed upon completion and when agreed by the Contract Administrator. Temporary removal of fencing shall not be permitted without the approval from the Contract Administrator.

Within the CRZ of trees, as delineated by temporary tree protection fencing there should be:

No disturbance or alteration of the existing grade without approval including addition of fill, excavation, or scraping of the soil;

No installation of signs, notices or posters on trees;

No storage of construction materials, surplus soil, construction waste, or equipment;

No disposal (dumping or flushing) of contaminants or liquids; and

No movement of vehicles (personal or business), equipment or pedestrians.

Should disturbances or alterations within the tree protection zone be unavoidable, refer to section **3.2.4 Working Within Protected Areas** for additional mitigation strategies.

3.2.2.2 Selective Pruning/Limbing

Select pruning / limbing will be required in some areas including along the path of travel for the equipment. Prior to providing access to site to heavy equipment, the contractor should walk the site and complete selective pruning / limbing by a certified arborist. It is recommended that all efforts be made to protect and preserve existing trees.

Where limbs or portions of trees are removed to accommodate construction work, they will be removed carefully in accordance with accepted arboricultural practices.

3.2.3 CLEARING AND GRUBBING OF TREES

Any trees designated for removal and located outside a tree protected area will have the stumps completely excavated and removed unless such removal will adversely affect existing trees / ecology to remain. Utility locates should be completed prior to initiate any clearing and grubbing works.

3.2.3.1 Wildlife Protection

Clearing operations are prohibited between April 8 to August 28 of any year to protect breeding migratory birds and at-risk bat species. Should tree removal during this period be unavoidable, the contractor is required to retain the services of a qualified Biologist who will conduct a breeding migratory bird screening. This screening will identify and ensure there is no evidence of breeding migratory bird activities. Tree removal will be allowed within five (5) days of conducting the screening and confirming the absence of breeding migratory bird activities.

3.2.4 WORKING WITHIN PROTECTED AREAS

3.2.4.1 Excavation Work

To ensure the roots are not disturbed more than necessary and where excavation works are unavoidable within the CRZ of trees, the following mitigation measures shall be used:

All excavation within the CRZ of trees shall be by hand or hydro excavation using the smallest tools. Root cutting shall be made using a sharp spade or knife at the limit of disturbance prior to any construction activities.

The Contractor shall only tunnel or bore within the CRZ, instead of creating a trench.

Any roots that are exposed by construction activities must be covered with native topsoil immediately, to ensure that the roots do not dry out or have any further damage occur to them.

In all those instances where root pruning is required, the service of a Certified Arborist or Qualified Tree Worker under the supervision of a Certified Arborist shall be retained. In addition, all remedial works must be conducted by a certified care professional to ensure proper care is administered in order to enable the continued health of the trees.

3.2.4.2 Grading Work

Where re-grading is required within the CRZ, it should be performed by hand under the supervision of a Certified Arborist.

3.2.4.3 Root Protection

If any tree roots of trees to remain are exposed during construction, they should be immediately reburied with soil or temporarily covered with burlap, filter cloth, or woodchips and kept moist (i.e watering with a soft-spray nozzle at least three times a week). A covering plastic should be used in order to retain moisture during an extended period when watering may not be possible (i.e. over weekends).

3.2.5 ADDITIONAL PROTECTION MEASURES

The following mitigation measures shall also be respected:

When working near vegetation, **the Contractor shall ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy**.

Where necessary, the trees will be given an overall pruning to restore their appearance. Not more than one-third of the total branching shall be removed during a single operation. The services of a Certified Arborist shall be retained for this task.

3.3 Compensation Plantings

As indicated above, tree removal will be required as part of the redevelopment of the property. A total of 16 trees are proposed for removal as listed in Table 3 below. Based on the City of Ottawa's compensation requirements, the proposed development plan should provide a total of forty-two (42) new trees.

Table 3: Tree compensation Review

Tree Size (DBH)	*Tree Removal*	*Compensation Requirement (min.)*	*Anticipated Tree Planting Proposed (60mm cal.)*
10-29cm	6	2:1 = 12	--
30cm +	10	3:1 = 30	--
	Total	**42**	**42**

Figure 1 below demonstrates conceptual planting design with forty-two (42) compensation tree plantings and integration / protection of the existing large Oak and two large Maple trees (ID #'s 5, 1 & 2). Please note that the concept plan made available at the time of this report is draft only. It should be noted this project is at a preliminary stage of development and detailed design will happen during the site plan application process; site planting, including compensation tree planting will be developed further throughout the detailed design phase.

Figure 1 – Concept Landscape Plan

It is recommended that compensation tree plantings include native species where appropriate and be tolerant of urban conditions. It is recommended that the quantity of tree plantings should not only replace / compensate for the removed trees but aim to maximize the future canopy cover of the area, enhance the existing green space present on site and improve the microclimate.

4 Conclusion

This Tree Conservation Report provides a detailed description of the species, health, and sizes of the trees growing within the Julian of Norwich development site. The Subject Site is located within the Inner Urban area of the City of Ottawa as defined by Schedule F of the *City of Ottawa Tree Protection By-law*.

A total of 20 trees including 11 different species with a DBH equal to or greater than 10 cm were assessed. Of the trees assessed over 10cm DBH, 7 trees (35%) were under 30cm and 13 trees (65%) were above 30cm in diameter and considered distinctive (within the City of Ottawa Inner Urban area and larger than 30cm DBH).

Current development plans require that 16 of the 20 trees be removed. Mitigation measures are recommended for the trees to be retained and protected during construction including the large specimen Oak tree. Current proposed development plans anticipate forty-two (42) tree plantings to meet City of Ottawa compensation requirements (see section 3.2). Mitigation measures presented in this report should be applied to protect the health of the tree recommended to be protected. Limiting the area of disturbance associated with construction works and visually delineating and protecting the trees to be retained is critical. Tree mitigation measures must be in place prior to any construction activities, including but not limited to selective limbing and pruning and the installation of tree protection fencing.

5 References

City of Ottawa. 2021a. Tree Protection By-law No. 2020-340. Available: www.ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/law-z/tree-protection-law-no-2020-340.

Simkovic, Vicki. 2020. Norway Maple (*Acer platanoides*) : Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

APPENDICES

Appendix A Tree Inventory & Preservation Charts

EXISTING TREE SCHEDULE

Julian of Norwich, 8 Withrow Avenue

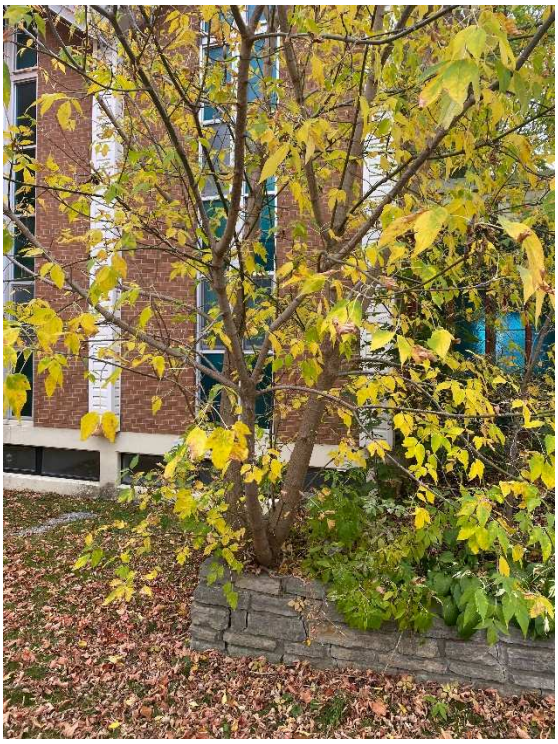
TREE ASSESSMENT: October 5, 2021, reassessed October 20, 2023

PLANT ID	BOTANICAL NAME	COMMON NAME	Ownership	DBH (CM)	HEALTH CONDITION	REMARKS	CONSTRUCTION IMPACT
1	*Acer platanoides*	Norway Maple	Private	45	Good		Retain & protect
2	*Acer platanoides*	Norway Maple	Private	40	Good		Retain & protect
3	*Quercus macrocarpa*	Burr Oak	Private	22	Good	Crown affected by proximity of Norway Maple (Tree 1)	Remove & compensate 2:1 min.
4	*Acer negundo*	Manitoba Maple	Private	15; 15	Declining	Growing on the edge of building foundation; large quantity of dead branches including branches more than 5cm in diameter.	Remove & compensate 2:1 min.
5	*Quercus alba*	White Oak	Private	115	Good	A few minor / small (less than 5cm dia.) dead branches.	Retain & protect
6	*Tilia cordata*	Littleleaf Linden	Boundary	55; 65	Good	Multistem (2 stems); suckers at the base of the trunks	Remove & compensate 3:1 min.
7	*Acer platanoides*	Norway Maple	Private	55	Good	-	Remove & compensate 3:1 min.
8	*Juglans nigra*	Black Walnut	Private	5 x 10	Good	Growing on the edge of the building foundation	Remove & compensate 2:1 min.
9	*Acer negundo*	Manitoba Maple	Private	2 x 10	Good	Growing on the edge of the building foundation	Remove & compensate 2:1 min.
10					*Tree assessed October 2021, confirmed removed 2023*		
11	*Acer platanoides*	Norway Maple	Private	40	Good	-	Remove & compensate 3:1 min.
12	*Acer platanoides*	Norway Maple	Private	80	Fair	Co-dominant stems, exposed and girdling roots. Open crown / pruned due to presence of overhead wires.	Remove & compensate 3:1 min.
13	*Acer platanoides*	Norway Maple	Private	50	Good	-	Remove & compensate 3:1 min.
14	*Acer platanoides*	Norway Maple	Private	70	Good	-	Remove & compensate 3:1 min.
15	*Acer platanoides*	Norway Maple	Private	40	Good	-	Remove & compensate 3:1 min.
					TREE ASSESSMENT: October 20, 2023		
16	*Acer rubrum*	Red Maple	Municipal	30	Good	-	Remove & compensate 3:1 min.
17	*Larix laricina*	Tamarack	Municipal	35	Good	Overhead wires	Remove & compensate 3:1 min.
18	*Quercus rubra*	Red Oak	Private	15	Good	Overhead wires	Remove & compensate 2:1 min.
19	*Picea pungens*	Blue spruce	Private	35	Good	Natural lean	Remove & compensate 3:1 min.
20	-	Ornamental fruit tree	Private	20-25	Good	Adjacent tree. Assessment made from outside property (fence). DBH approximate only.	Retain (adjacent tree)
21	*Acer negundo*	Manitoba Maple	Private	10	Fair	Natural lean, codominant baranches & stems	Remove & compensate 2:1 min.

Appendix B Site Photographs

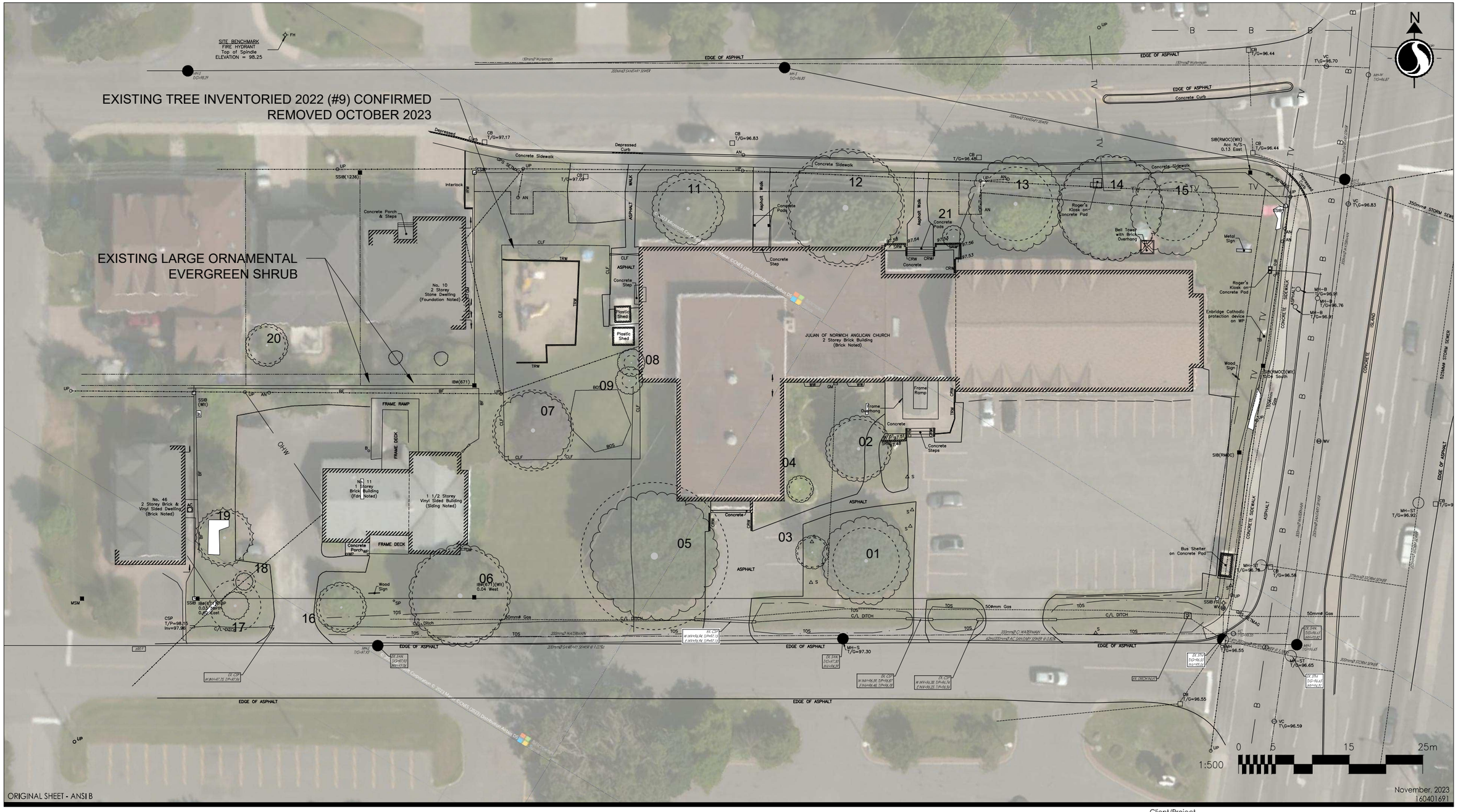
	**Photograph 1: Large White Oak Tree (#5) to be preserved and protected.**
	**Photograph 2: Red Maple (#16) in good condition.**

	**Photograph 3: Norway Maples (#13-15) in good condition but near overhead wires.**
	**Photograph 4: Tamarack tree (#17) next to utility pole.**

	**Photograph 5: Blue Spruce (#19) with a natural lean.**
	**Photograph 6: Manitoba Maple (#21) growing at edge of raised garden bed.**

	**Photograph 7: Norway Maple (#12) with co-dominant stems and exposed/girdling roots.**
	**Photograph 8: Trunk remaining from recently removed tree #10.**

Appendix C Current Vegetation Plan



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Legend

- EXISTING DECIDUOUS TREE
- EXISTING TREE GROUP
- CRITICAL ROOT ZONE

Notes

1. REFER TO EXISTING TREE SCHEDULE.
2. PLAN IS FOR REFERENCE ONLY.
3. AERIAL MAPPING FROM MICROSOFT BING MAPPING. AERIAL IMAGE 2022.
4. LOCATION OF TREES ARE APPROXIMATE ONLY, BASED ON SITE OBSERVATIONS AND ALIGNED TO AERIAL MAPPING.

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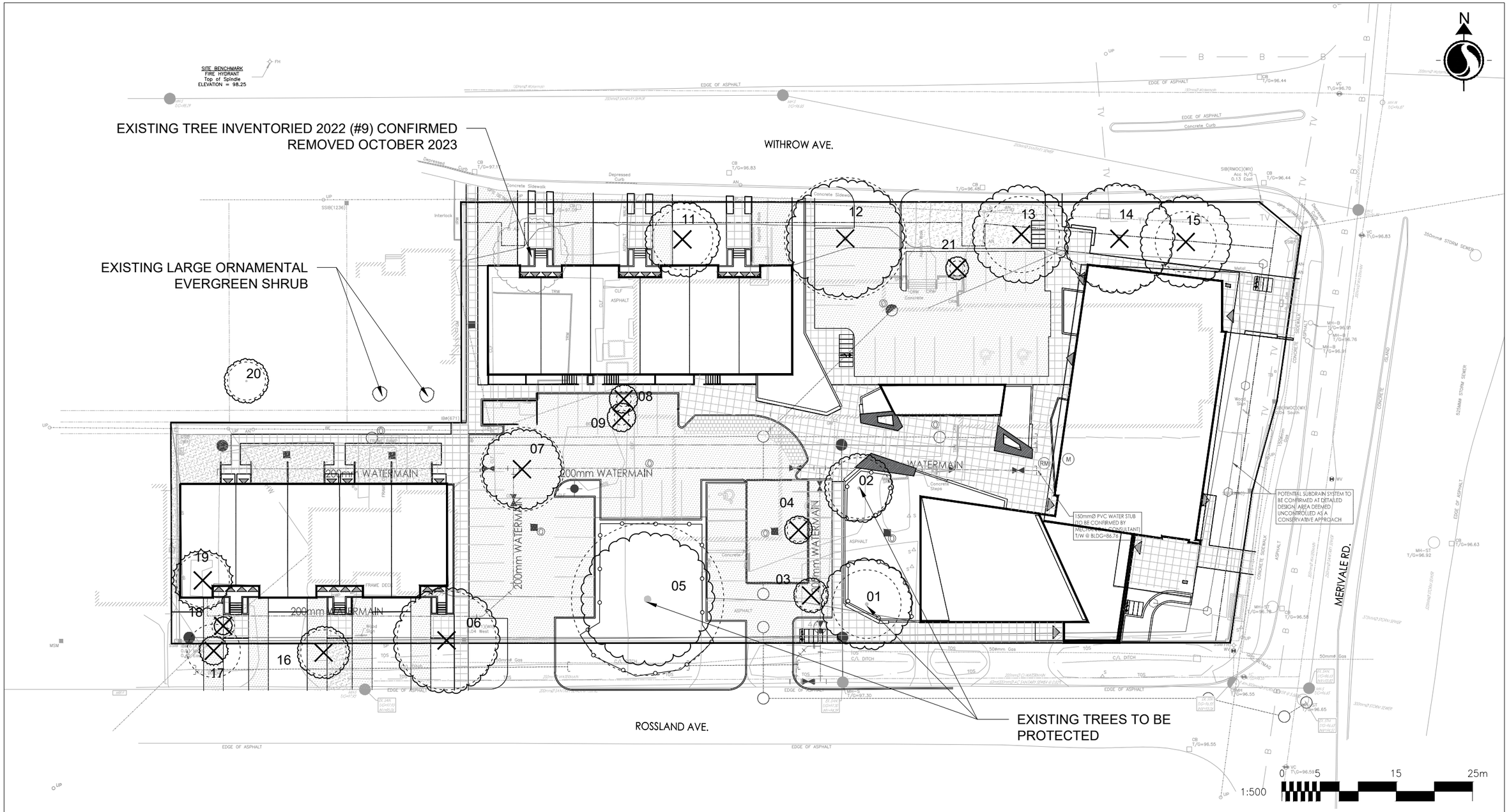
8 WITHROW AVENUE

Figure No.
1.0

Title
CURRENT VEGETATION PLAN

Appendix D: Proposed Development



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2023/11/27 2:21 PM By: Lester, Byron

ORIGINAL SHEET - ANSI B

November, 2023
160401691

Stantec

Stantec Consulting Ltd.
400 - 1331 Clyde Avenue
Ottawa ON
Tel. 613.722.4420
www.stantec.com

Legend

- EXISTING DECIDUOUS TREE
- EXISTING TREE GROUP
- CRITICAL ROOT ZONE
- ANTICIPATED TREE REMOVAL

Notes

1. PLAN IS FOR REFERENCE ONLY. REFER TO LATEST ARCHITECTURE, CIVIL, AND LANDSCAPE DESIGN PLANS.
2. LOCATION OF TREES ARE APPROXIMATE ONLY, BASED ON SITE OBSERVATIONS AND ALIGNED TO AERIAL MAPPING.
3. PROPOSED DEVELOPMENT PLAN IS FOR REFERENCE ONLY. DESIGN PLANS ARE SUBJECT TO CHANGE THROUGH FURTHER ONGOING DESIGN DEVELOPMENT.

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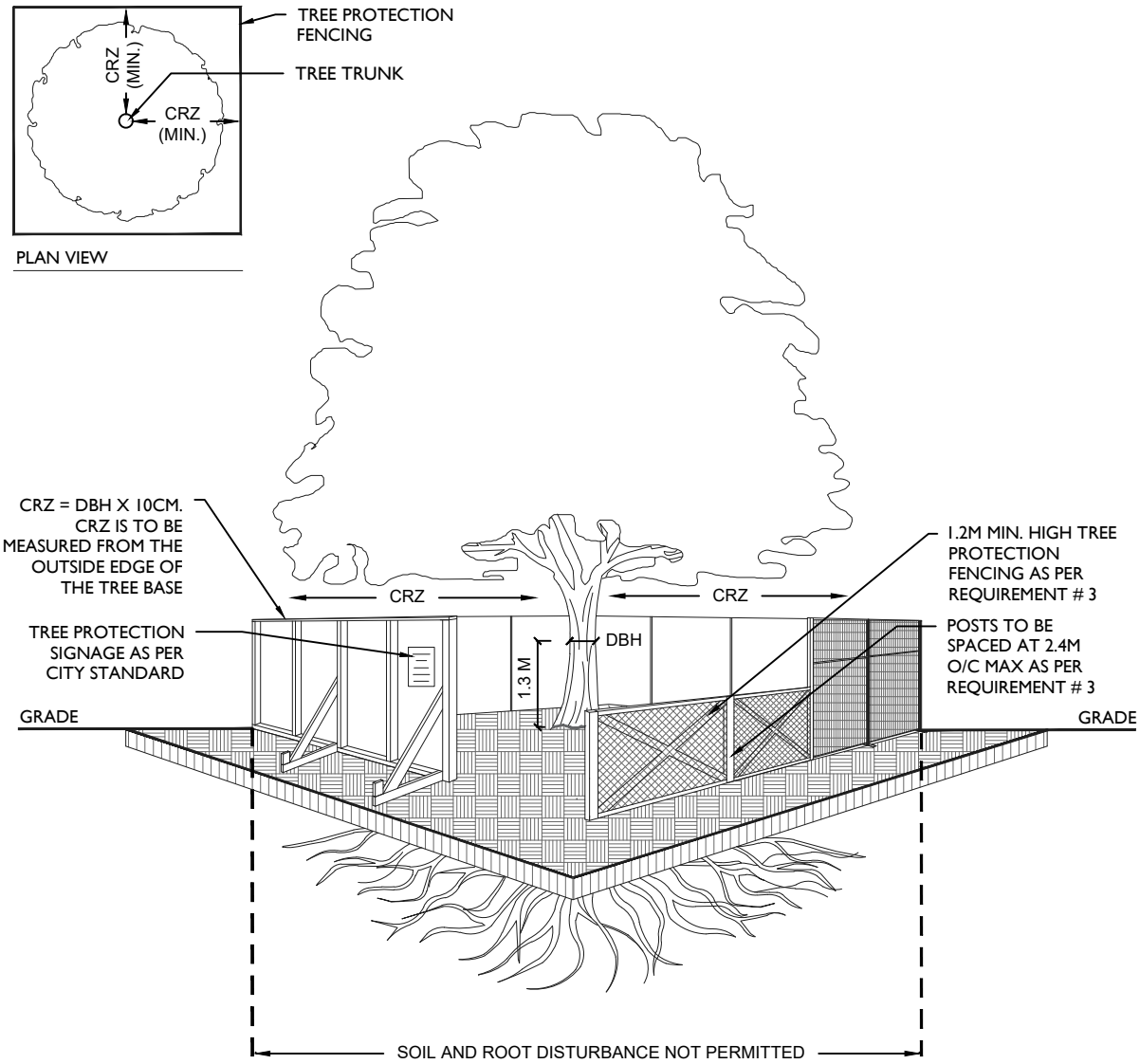
Figure No.
2.0

Title
PROPOSED DEVELOPMENT
& CONSERVED VEGETATION PLAN

Appendix E: Tree Protection Detail



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

Ottawa

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