



**769 QUEEN STREET EAST
ST. MARY'S, ONTARIO
TREE ASSESSMENT REPORT
FOR ZBA**

PREPARED BY: RON KOUDYS LANDSCAPE
ARCHITECTS INC

DATE: JULY, 2022

RKLA PROJECT #: 22-200



TM

A handwritten signature in blue ink that reads "M. Peeters".

MICHELLE PEETERS
LANDSCAPE ARCHITECT
BLA, DIP. HORT. TECH, OALA, ISA CERTIFIED ARBORIST

Michelle Peeters
ON 2129A

CONTENTS

- 1.0 Introduction and Executive Summary1
 - 1.1 Introduction1
 - 1.2 Executive Summary.....1
 - 1.2.1 Tree Species Composition Chart.....1
 - 1.2.2 Tree Removal and Preservation Requirements.....1
- 2.0 Subject Site and Scope of Tree Inventory2
- 3.0 Methodology.....2
 - 3.1 Health Assessment.....2
 - 3.2 Critical Root Zones3
- 4.0 Tree Inventory and Preservation/Removal Recommendations 4
 - 4.1 Tree Data Table..... 4
- 5.0 Potential Construction Impacts on Trees 6
 - 5.1 Soil Compaction..... 6
 - 5.2 Root Loss..... 6
 - 5.3 Grade Changes 6
 - 5.4 Mechanical Damage..... 7
 - 5.5 Changes to Exposure - Sun and Wind7
 - 5.6 Soil Contamination.....7
 - 5.7 Water Availability7
- 6.0 Construction Impact Mitigation Recommendations7
 - 6.1 Pre-construction recommendations7
 - 6.2 Recommendations related to the construction process 8
 - 6.3 Post-construction recommendations 8
- 7.0 Disclaimer 9
- 8.0 Contact Information 9
- 9.0 Appendix A - Tree Preservation Drawing10

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 INTRODUCTION

Ron Koudys Landscape Architects Inc. (RKLA) was retained by Staffen Family Holdings Inc. to prepare a tree assessment report in conjunction with the proposed development at 769 Queens Street east, St Mary's Ontario. The intent of this report is to summarize the findings of the tree assessment and make recommendations regarding tree preservation and removal based on tree health and expected construction impacts based on the current site plan for the purpose of application for rezoning and Official Plan Amendment. Refinement of these recommendations may be made at time of application for SPA.

1.2 EXECUTIVE SUMMARY

The inventory captured 33 individual trees. Trees were identified within the subject site and within 3 meters of the legal property boundary. No species classified as endangered or threatened under the Ontario Endangered Species Act, 2007, S.O. 2007, c. 6 were observed during the tree inventory. All trees observed are common to the current land uses and can be characterized as anthropogenic or opportunistic.

1.2.1 TREE SPECIES COMPOSITION CHART

The following chart summarizes the quantity of each tree species observed.

%	QTY	Botanical Name	Common Name
23%	7	<i>Picea abies</i>	Norway Spruce
13%	4	<i>Juglans nigra</i>	Black Walnut
13%	4	<i>Picea pungens</i> var. <i>glauca</i>	Colorado Blue Spruce
13%	4	<i>Rhamnus</i> spp	Buckthorn
13%	4	<i>Thuja occidentalis</i>	White Cedar
10%	3	<i>Pinus nigra</i>	Austrian Pine
6%	2	<i>Acer saccharum</i>	Sugar Maple
6%	2	<i>Picea glauca</i>	White Spruce
3%	1	<i>Acer platanoides</i>	Norway Maple
100%	31	Total	

1.2.2 TREE REMOVAL AND PRESERVATION REQUIREMENTS

- Remove 12 trees from subject site due to conflict with proposed construction.
- Remove 2 trees from the adjacent hydro utility facility due do conflict with proposed construction and/or poor tree condition. Consent to remove these trees from the hydro facility will be required at the time application for SPA.
- Preserve 19 trees located on the subject site and adjacent private property.
- Install and maintain tree preservation fencing as per the tree preservation drawings and details.
- Follow the pre, during, and post construction impact mitigation recommendations in this report.

2.0 SUBJECT SITE AND SCOPE OF TREE INVENTORY

The subject site is a portion of the St. Mary's Golf and Country Club located at 769 Queen Street East, St. Mary's, Ontario. Existing trees within the scope of inventory are associated with the golf course and adjacent hydro utility facility. Refer to Figure 1 for scope of tree inventory.



Figure 1 - Image capture from Google Earth
Red dashed line - limit of tree inventory

3.0 METHODOLOGY

Field work was completed on June 22, 2022 by RKLA staff member Michelle Peeters, ISA certified arborist ON 2129A. A topographic survey prepared by GRIT Engineering Inc. was used as a base for the field work and determined tree location/ownership. Note that not all trees assessed were located on the survey. Trees not included on the survey were located approximately via field measurements and aerial imagery. Trees with a minimum DBH of 10cm within the given scope were identified and assessed. No vegetation units were assessed. Trees were not tagged in the field. Each tree was assigned a number which are identified in the tree data table and on the tree preservation plan. Tree identification numbers include #'s 1-33.

The following information was recorded for each individual tree:

- Genus + specific epithet (Species)
- Diameter at breast height (DBH) (centimetres)
- Crown radius (metres)
- Crown Condition (overall general vigour of crown)
- Structural Form (excellent, good, fair, poor)
- Structural Integrity (good, fair, poor, hazard)
- General Comments

3.1 HEALTH ASSESSMENT

Trees were assessed following accepted arboricultural techniques and best practices using a limited visual inspection. The inspection included a 360 degree visual examination of the above-ground parts of each tree for structural defects including cavities, wounds, scars, external indicators of internal decay, evidence of insect

presence, discoloured or deformed foliage, canopy and root distribution, and the overall condition of the tree. Evaluation of tree health was based on visible tree health indicators including live buds, foliage condition, deadwood, structural defects, form, and signs of disease or insect infestation. Field observations were reviewed against available online imagery of the site to assist in determining tree canopy health. Quantified health assessments included in the inventory are explained here:

Crown Condition Assessment

- 5 Healthy: less than 10% crown decline
- 4 Slight decline: 11% - 30% crown decline
- 3 Moderate decline: 31% - 60% crown decline
- 2 Severe decline: 61% - 90% crown decline
- 1 Dead - No visible indication of living foliage or buds in crown

Structural Form Assessment

- Excellent: An ideal expression of a specific tree species, true to form, balanced canopy, good flare, typical internode length, full crown, etc.
- Good: A satisfactory and generally expected expression of a specific tree species, with only minor or typical variances from an ideal form.
- Fair: Nearly satisfactory, with defects or a combination of defects such as codominant leaders, unbalanced crown, poor/no flare, shortened internodes, has been poorly pruned, etc.
- Poor: Significantly flawed expression of a specific tree species

Structural Integrity Assessment

- Good: Defects if present are minor (e.g. twig dieback, small wounds); defective tree part is small (e.g. 5-8 cm diameter limb) providing little if any risk.
- Fair: Defects are numerous or significant (e.g. dead scaffold limbs); defective parts are moderate in size (e.g. limb greater than 5-8 cm in diameter).
- Poor: Defects are severe (trunk cavity in excess of 50%); defective parts are large (e.g. majority of crown).
- Hazard: Defects are severe and acute; defective part or collective defective parts render the tree a high risk threat to potential targets.

3.2 CRITICAL ROOT ZONES

The critical root zone of a tree is the portion of the root system that is the minimum necessary to maintain tree vitality and stability. Critical root zones are commonly prescribed by municipal bylaws based solely on DBH and/or drip line, and are typically expressed as a circular shape around the tree. There are a number of other factors, however, that are considered when establishing a critical root zone.

Factors that inform location and extent of a tree preservation barriers to protect the critical root zone include: species tolerance to root loss and other construction impacts (as established by authoritative resources and professional experience), tree trunk size (DBH), tree health and vigour, structural condition, landscape context, soil type, moisture availability, topography, ground cover, crown size (drip line) and balance, current physical root restrictions, visible root arrangement, relationship to neighbouring trees, relationship between tree and proposed construction, type of proposed construction, etc.

4.0 TREE INVENTORY AND PRESERVATION/REMOVAL RECOMMENDATIONS

4.1 TREE DATA TABLE

The following recommendations are based on tree health/condition, and construction impacts expected by the current site plan. Grey indicates recommended removal.

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
ID #	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	CROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACTS	PRESERVE OR REMOVE	IMPACT MITIGATION or REMOVAL RATIONALE (TP = tree protection)
1	<i>Picea pungens var. glauca</i>	Colorado Blue Spruce	Subject site	-30	3.5	5	good	good	Branched to grade, minor thinning	Conflict with proposed building A	remove	construction impacts
2	<i>Picea pungens var. glauca</i>	Colorado Blue Spruce	Subject site	-25	3.5	5	good	good	Branched to grade, minor thinning	Conflict with proposed parking	remove	construction impacts
3	<i>Picea pungens var. glauca</i>	Colorado Blue Spruce	Subject site	-30	3.5	5	good	good	Branched to grade, minor thinning	Conflict with proposed parking	remove	construction impacts
4	<i>Picea pungens var. glauca</i>	Colorado Blue Spruce	Subject site	-30	3.5	5	good	good	Branched to grade, minor thinning	Conflict with proposed parking	remove	construction impacts
5	<i>Acer saccharum</i>	Sugar Maple	Subject site	60	4	5	poor	fair	Significant scaffold branch loss, significant epicormic growth, fused branches, tight unions with included bark, pruned for hydro line clearance	Conflict with proposed parking	remove	construction impacts
6	<i>Pinus nigra</i>	Austrian Pine	Hydro utility facility	-35	4.5	4	fair	good	Central leader gone, insect damage to trunk, on slope	none	preserve	TP barrier
7	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	21	3	5	fair	poor	Low branched, on slope, significant trunk damage, deep old trunk wounds	none	remove	poor structural integrity tree adjacent to proposed parking - consent from land owner required
8	<i>Rhamnus spp</i>	Buckthorn	Subject site	19, 18, 18, 17, 9	4	1	fair	fair	Multistem 5, fully dead, drooping branches, trunk rot, invasive species	Conflict with proposed parking	remove	construction impacts & invasive species
9	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	16, 13, 10	2.5	5	fair	fair	Multistem 3, included bark with seam at primary union, dense understory	Conflict with proposed parking	remove	construction impacts - consent from land owner required
10	<i>Rhamnus spp</i>	Buckthorn	Subject site	13	4.5	4	fair	fair	Heavily suppressed, dead wood, invasive species	Conflict with proposed parking	remove	construction impacts
11	<i>Rhamnus spp</i>	Buckthorn	Subject site	13, 7, 7	3	2	fair	fair	Multistem 3, suppressed, dead wood, invasive species	none	remove	invasive species
12	<i>Rhamnus spp</i>	Buckthorn	Subject site	15, 13	3	4	fair	fair	Multistem 2, suppressed, invasive species	none	remove	invasive species
13	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	17	3	5	good	good	Low branched, thin canopy	none	preserve	none

14	<i>Picea abies</i>	Norway Spruce	Subject site	64	6	5	fair	fair	Codominant leaders with buttressing at union	Conflict with proposed amenity area	remove	construction impacts
15	<i>Thuja occidentalis</i>	White Cedar	Subject site	-70	4	5	good	good	Nearly branched to grade, clustered primary union, DBH taken below low primary union	Conflict with proposed building B	remove	construction impacts
16	<i>Thuja occidentalis</i>	White Cedar	Subject site	-65	4.5	5	good	good	Nearly branched to grade, DBH taken below low primary union	Conflict with proposed building B	remove	construction impacts
17	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	-45, 40	5	5	fair	fair	Multistem 2, nearly branched to grade, primary union at grade, loose crown, on slope	none	preserve	TP barrier
18	<i>Picea abies</i>	Norway Spruce	Subject site	49	6	5	good	good	Loose crown	potential conflict with site grading	preserve	TP barrier
19	<i>Picea glauca</i>	White Spruce	Subject site	36	4	3	good	good	Sparse crown, dead lower branches	potential conflict with site grading	preserve	TP barrier
20	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	17, 15	3	5	fair	fair	Multistem 2, low branched, included bark at primary union	none	preserve	TP barrier
21	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	37	6	5	good	good	soil/gravel piled at base of tree	none	preserve	TP barrier
22	<i>Picea glauca</i>	White Spruce	Subject site	33	3.5	1	good	fair	Fully dead	none	preserve	TP barrier
23	<i>Picea abies</i>	Norway Spruce	Subject site	13	2.5	5	good	good	Full form, branched to grade	none	preserve	none
24	<i>Picea abies</i>	Norway Spruce	Subject site	10	2.5	5	good	good	Full form, branched to grade	none	preserve	none
25	<i>Picea abies</i>	Norway Spruce	Subject site	13	2.5	5	good	good	Full form, branched to grade	none	preserve	none
26	<i>Picea abies</i>	Norway Spruce	Subject site	13	2.5	5	good	good	Full form, branched to grade	none	preserve	none
27	<i>Picea abies</i>	Norway Spruce	Subject site	11	2	5	good	good	Full form, a bit thin	none	preserve	TP barrier
28	<i>Acer platanoides</i>	Norway Maple	Hydro utility facility	33	2.5	2	poor	poor	Moribund, rot at primary union, significant dead wood and snags	none	preserve	none
29	<i>Pinus nigra</i>	Austrian Pine	Hydro utility facility	38	4.5	5	good	good	Minor dead lower branches, sparse crown	none	preserve	none
30	<i>Pinus nigra</i>	Austrian Pine	Hydro utility facility	47, 36	5	5	fair	fair	Multistem 2, bulge at primary union with included bark	none	preserve	none
31	<i>Acer saccharum</i>	Sugar Maple	Hydro utility facility	19, 10	4	5	fair	fair	Multistem 2, primary union below grade, codominant leaders	none	preserve	none
32	<i>Picea abies</i>	Norway Spruce	Subject site	-15	3	5	good	good	Branched to grade, full form	none	preserve	none
33	<i>Picea abies</i>	Norway Spruce	Subject site	-15	3	6	good	good	Branched to grade, full form	none	preserve	none

5.0 POTENTIAL CONSTRUCTION IMPACTS ON TREES

Some trees have been recommended for removal due to direct conflict with the proposed development. Some trees that have been recommended for preservation may be in proximity to the proposed construction. Trees to be preserved may be affected by the construction process, or by the construction itself. It is imperative that the design team and the construction crew understand the potential for, and the causes of tree damage. Trees recommended for preservation may experience some or all of the following potential construction impacts. Strategies and methods to avoid these impacts are outlined in the Construction Impact Mitigation Recommendations section of this report.

5.1 SOIL COMPACTION

Soil compaction is caused by heavy or repeated compression or vibration of the soil around the tree. Soil compaction reduces the amount and size of macro and micro pore space that is vital for subsurface movement of air and water. The harmful effects of soil compaction include, but are not limited to: slower water infiltration, poor aeration, reduced root growth and an overall increased susceptibility to biotic and abiotic stressors.

5.2 ROOT LOSS

Root loss occurs when roots are severed. The majority of roots are typically located within the top 60cm of soil and can extend outward up to three times the extent of the tree drip line. Excavation of any kind within the critical root zone* can sever roots. Two categories of roots need to be considered when evaluating impacts of root loss - small, fibrous absorbing roots, and large structural roots. Significant loss of either or both of these functions can cause stress and/or affect the structural stability of the tree. Note, however, that it is commonly accepted that healthy trees can typically tolerate and recover from the removal of approximately 33% (up to a maximum of 50%) of their root mass. Thorough consideration regarding extent of acceptable root removal is dependent on individual species characteristics, root loss distribution, and site specific conditions (*ref. Trees and Development: A Technical Guide to Preservation of Trees During Land Development by Nelda Matheny and James R. Clark, 1998. Pg 72*).

* Refer to 'Critical Root Zones' in this report for definition.

5.3 GRADE CHANGES

Lowering of the grade around trees has immediate and long term effects on trees. Lowering of grade requires immediate root loss from cutting the roots which results in water stress from the root removal and potential reduced structural stability.

Raising the grade around a tree can be equally damaging. The addition of fill over the root zone of a tree alters the roots' ability for normal water and gas exchange that is necessary for healthy root growth and stability. Fill essentially suffocates the roots and can lead to the slow and eventual decline of the tree.

5.4 MECHANICAL DAMAGE

Mechanical damage is caused by physical contact with a tree that damages the tree to any degree. During land development and construction activities, there is an increased risk of both minor and fatal mechanical damage to trees from construction equipment. Minor damage can create entry points for insects and pathogens, and fatal damage can cause irreparable structural damage.

5.5 CHANGES TO EXPOSURE - SUN AND WIND

Trees can be negatively affected by increased exposure to sun or wind when neighbouring trees are removed. This can be of particular concern when 'interior trees' (trees that have developed surrounded by other trees) are suddenly exposed to forest edge conditions. These trees may experience higher intensity of direct sunlight resulting in leaf scald, and instability due to increased wind and snow loads.

Trees can be negatively affected by decreased exposure to sunlight. Proposed development that includes tall buildings located to the south and west of mature existing trees can greatly reduce the amount of daily direct sunlight. While this change in environment may not cause the immediate or eventual death of a tree, it can certainly slow development and alter growing habits and patterns, and must therefore be a consideration when evaluating trees for potential preservation.

5.6 SOIL CONTAMINATION

Soil health around a tree can be compromised by contamination from spills or leaks of fuels, solvents, or other construction related fluids.

5.7 WATER AVAILABILITY

Grading and servicing requirements for development can affect water availability for trees. Trees may experience a loss of available water due to a lowered water table or the capture or redirection of subsurface and/or overland flow. Conversely, trees may experience an increase of available water due to changes in site grading and storm water retention efforts.

The successful survival of the trees to be preserved is largely dependent on adhering to the construction impact mitigation recommendations that follow.

6.0 CONSTRUCTION IMPACT MITIGATION RECOMMENDATIONS

The following general recommendations are provided to guide the removal process, mitigate construction impacts, and ensure compliance with provincial, federal, and municipal regulatory requirements. Some of the recommendations listed below are noted to be undertaken by an ISA certified arborist.

6.1 PRE-CONSTRUCTION RECOMMENDATIONS

- a) Prior to any construction activity, tree preservation fencing is to be installed as per the attached tree preservation drawings and detail.
- b) Trees approved for removal are to be clearly indicated in the field (marked with spray paint or other agreed upon method) by the project arborist or

landscape architect prior to any tree removal operations. All removals to be undertaken by an ISA certified arborist.

- c) In accordance with the Migratory Birds Convention Act, 1994, all removals must take place between September 1st and March 31st to avoid disturbing nesting migratory birds. If tree removal occurs between April 1st and August 31st, a biologist is required to complete a search for nests. Once cleared, the contractor has 48 hours to remove. If removal does not occur within 48 hours, another search will be required.
- d) Care should be taken during the felling operation to avoid damaging the branches, stems, trunks, and roots of nearby trees to be preserved. Where possible, all trees are to be felled towards the construction zone to minimize impacts on adjacent vegetation. All removals to be undertaken by an ISA certified arborist.
- e) It is recommended that the existing ground-layer vegetation at the base of trees to be preserved remain intact within the critical root zone so as not to disturb the soil around the base of the existing trees.
- f) Final site grading plans should ensure that the existing soil moisture conditions are maintained.

6.2 RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

- a) Tree preservation fencing is to be maintained in good condition and effective for the duration of construction until all construction activity is complete or as per the project arborist or landscape architect.
- b) Tree preservation fencing is to remain intact as per the tree preservation drawings, and can only be temporarily removed with the express written consent from the project arborist or landscape architect. Should tree preservation fencing be temporarily relocated or moved, it is to be reinstated as per the tree preservation plans as soon as possible.
- c) No construction, excavation, adding of fill, stockpiling of construction material, or heavy equipment is permitted within the critical root zone/within the tree preservation fencing.
- d) When excavation near a tree is required, and it is anticipated that roots will be severed and exposed, duration of exposure is to be minimized to prevent root desiccation.
- e) During the excavation process, roots 25mm or larger that are severed and exposed should be hand pruned to leave a clean-cut surface. To be undertaken by an ISA certified arborist. Exposed severed roots that cannot be covered in soil on the same day as the cuts are made are to be kept moist. Exposed roots are to be kept moist by covering them with water soaked burlap or any other means available to prevent them from drying out.
- f) Avoid idling heavy equipment under or within close proximity to trees to be preserved to prevent canopy damage from exposure to the heat of the exhaust.
- g) Broken branches on trees within the subject site to be preserved should be cleanly cut as soon as possible after the damage has occurred. To be undertaken by an ISA certified arborist.

6.3 POST-CONSTRUCTION RECOMMENDATIONS

- a) Avoid discharging rain water leaders adjacent to retained trees, as this may result in an overly moist environment which can cause root rot.

- b) After all work is completed, tree preservation fences and any other impact mitigation paraphernalia must be removed.
- c) A final review must be undertaken by the project arborist to ensure that all mitigation measures as described above have been met.

7.0 DISCLAIMER

The assessment of the trees presented within this report has been made using accepted arboricultural techniques. These include a visual examination of the above-ground parts of each tree for structural defects, scars, external indications of decay, evidence of insect presence, discoloured foliage, the general condition of the trees and the surrounding site, as well as the proximity of property and people. None of the trees examined were dissected, cored, probed, or climbed, and detailed root crown examinations involving excavation were not undertaken.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigour is constantly changing. They are not immune to changes in site conditions or seasonal variations in the weather.

While reasonable efforts have been made to ensure the trees recommended for retention are healthy, no guarantees are offered or implied, that these trees or any part of them will remain standing.

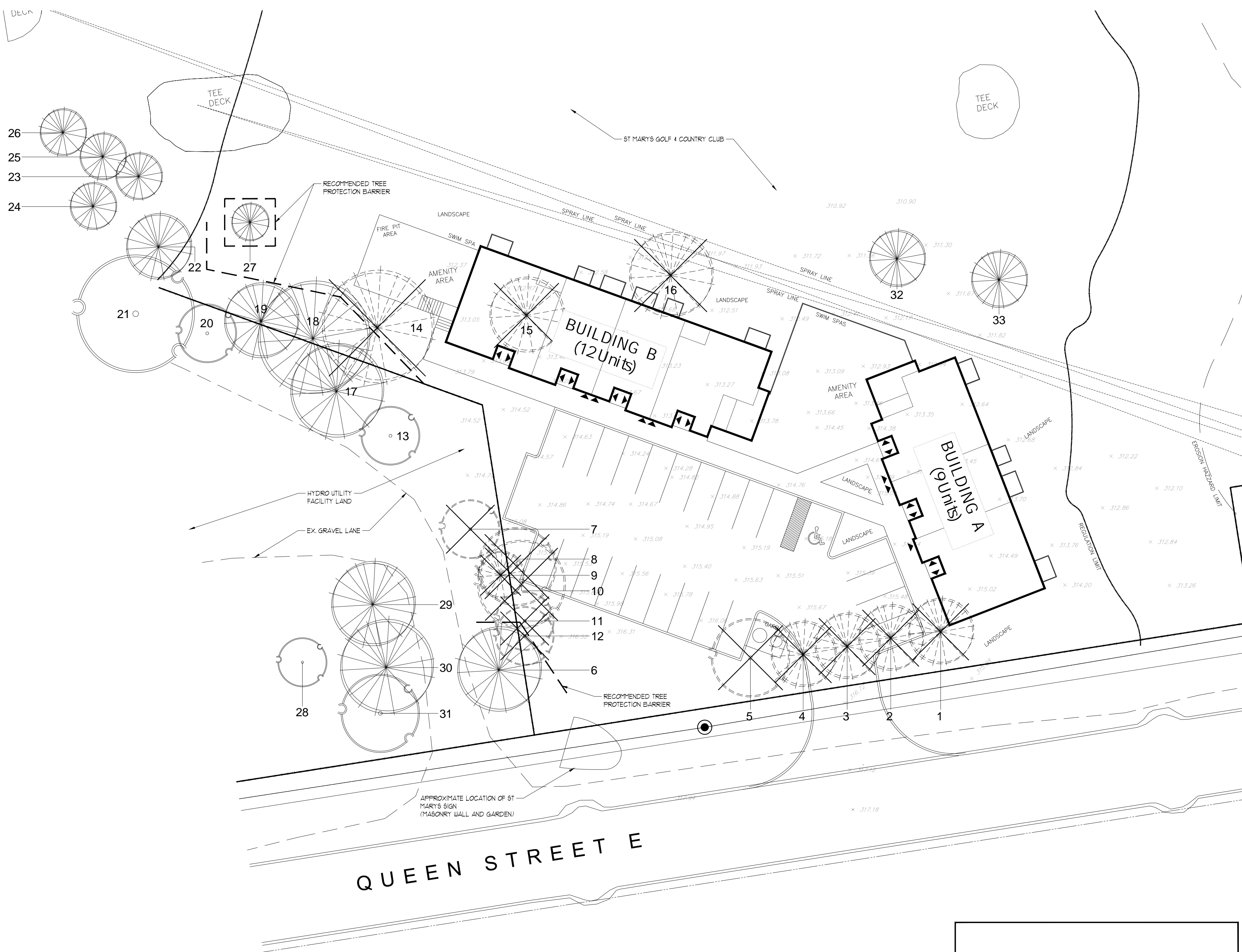
Note that this arborist report has been prepared using the latest drawings and information provided by the client. Any subsequent design or site plan changes affecting trees may require revisions to this report. Any new information or drawings are to be provided to RKLA prior to report submission to planning authorities.

8.0 CONTACT INFORMATION

Office:
Ron Koudys Landscape Architects Inc.
368 Oxford Street East
London, Ontario
N6A 1V7
Ph: 519-667-3322
Fax: 519-645-2474

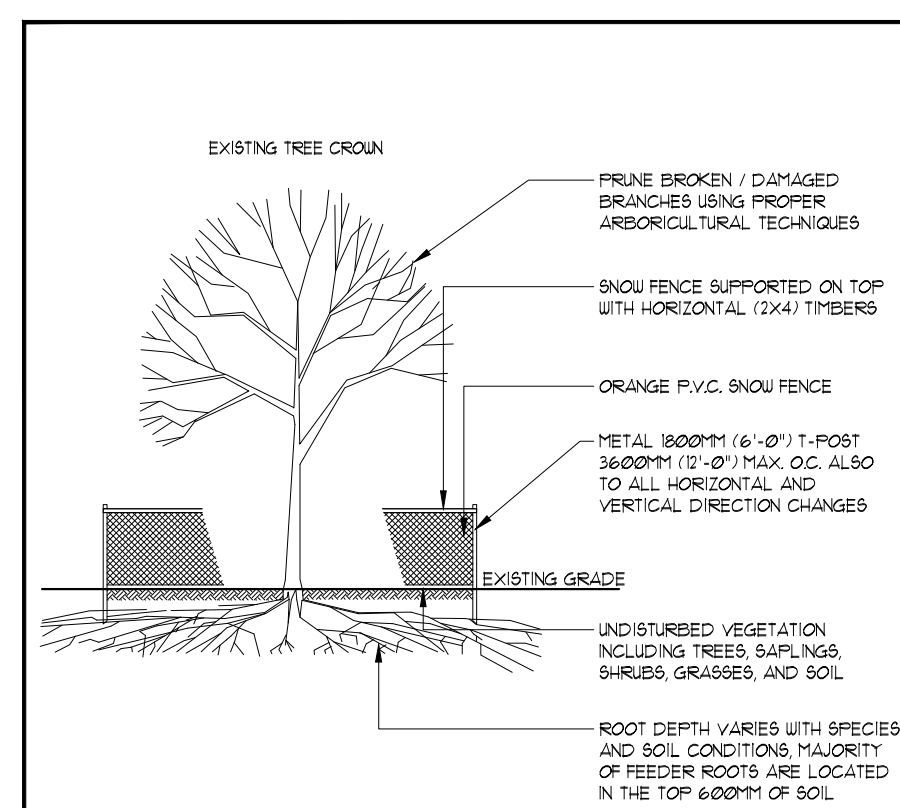
Staff:
Field work and report author
Michelle Peeters - michelle@rkla.ca
Qualifications ISA Certified Arborist ON-2129A
ISA Tree Risk Assessment Qualified
Qualified Butternut Assessor BHA #710
OALA full member - landscape architect

9.0 APPENDIX A - TREE PRESERVATION DRAWING



TREE PRESERVATION PLAN
SCALE = 1:250

REFER TO TREE ASSESSMENT REPORT FOR ADDITIONAL INFORMATION



- NOTES:**
- EXISTING TREES ARE TO BE PROTECTED FROM CONSTRUCTION WITH THE INSTALLATION OF A 2000MM (6'-0") HIGH SNOW FENCE HELD IN PLACE WITH 3000MM (10'-0") T-BARS.
 - THE BARRIER IS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION AND NOT REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETED.
 - ALL SUPPORTS AND BRACING SHOULD BE INSIDE THE TREE PROTECTION ZONE. ALL SUCH SUPPORTS SHOULD MINIMIZE DAMAGING ROOTS IN THE TREE PROTECTION ZONE.
 - NO CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT, OR EXCAVATION OF ANY KIND IS PERMITTED WITHIN THE TREE PROTECTION ZONE.
 - NO MOVEMENT OF EQUIPMENT, STORAGE OF BUILDING SUPPLIES, CLEANING OR EQUIPMENT, OR DRIPPING OF SOLVENTS, GASOLINE, ETC. THAT OCCUR WITHIN THIS FENCE LINE.
 - WHERE HIGH QUALITY SPECIMENS OCCUR ADJACENT TO AREAS SUBJECTED TO INTENSIVE CONSTRUCTION ACTIVITY, WOODEN CRIBBING SHOULD BE INSTALLED TO PROTECT TRUNKS FROM DAMAGE IN THE EVENT THAT HEAVY EQUIPMENT BREAKS DOWN THE BUILT FENCING.
 - FENCE TO BE INSPECTED BY ENVIRONMENTAL CONSULTANT ON A REGULAR BASIS AND BE MAINTAINED BY THE SUBCONTRACTOR / BUILDER.

TEMP. TREE PROTECTION BARRIER - N.T.S.

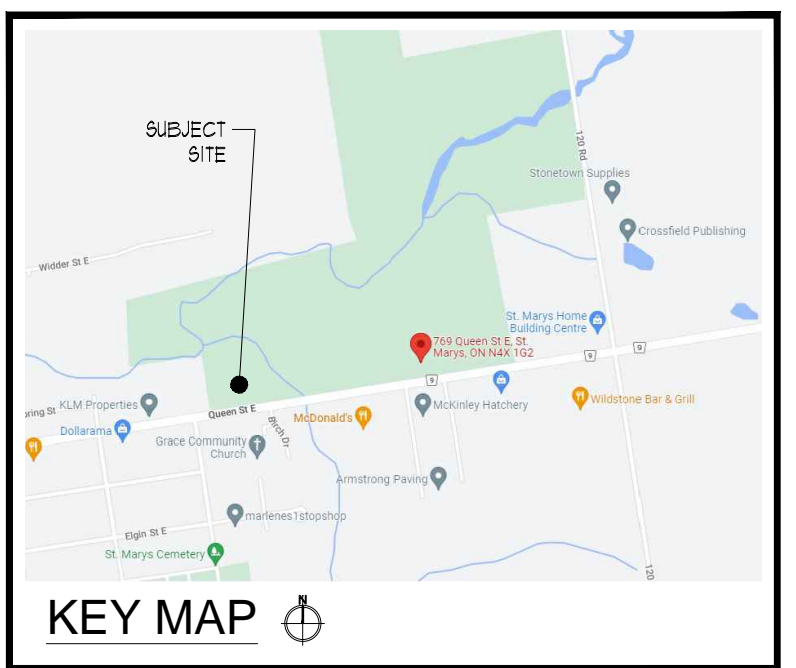
TREE RECOMMENDATIONS

TREES RECOMMENDED FOR REMOVAL (14 TREES)

ID#	GENERAL INFORMATION		SIZE	HEALTH & CONDITION		RECOMMENDATIONS						
	BOTANICAL NAME	COMMON NAME		LOCATION	COMMENTS	EXPECTED CONSTRUCTION IMPACTS	PRESERVE OR REMOVE	IMPACT MITIGATION or REMOVAL RATIONALE (TP = tree protection)				
1	<i>Picea pungens</i> var. <i>glauca</i>	Colorado Blue Spruce	Subject site	-30	35	5	good	good	Branches to grade, minor thinning	Conflict with proposed building A	remove	construction impacts
2	<i>Picea pungens</i> var. <i>glauca</i>	Colorado Blue Spruce	Subject site	-25	35	5	good	good	Branches to grade, minor thinning	Conflict with proposed parking	remove	construction impacts
3	<i>Picea pungens</i> var. <i>glauca</i>	Colorado Blue Spruce	Subject site	-30	35	5	good	good	Branches to grade, minor thinning	Conflict with proposed parking	remove	construction impacts
4	<i>Picea pungens</i> var. <i>glauca</i>	Colorado Blue Spruce	Subject site	-30	35	5	good	good	Branches to grade, minor thinning	Conflict with proposed parking	remove	construction impacts
5	<i>Acer saccharum</i>	Sugar Maple	Subject site	60	4	5	poor	fair	Significant scaffold branch loss, significant epicormic growth, fused branches, tight unions with included bark, pruned for hydro line clearance.	Conflict with proposed parking	remove	construction impacts
7	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	21	3	5	far	poor	low branched, on slope, significant trunk damage, deep old trunk wounds	none	remove	poor structural integrity tree adjacent to proposed parking - consent from land owner required
8	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	16, 15, 10	25	5	far	far	Multistem 5, fully dead, drooping branches, trunk rot, invasive species	Conflict with proposed parking	remove	construction impacts & invasive species
9	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	16, 15, 10	25	5	far	far	Multistem 3, included bark with seam at primary union, dense understory	Conflict with proposed parking	remove	construction impacts - consent from land owner required
10	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	16, 15, 10	25	5	far	far	Heavily suppressed, dead wood, invasive species	Conflict with proposed parking	remove	construction impacts
11	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	13, 7, 3	2	2	far	far	Multistem 3, suppressed, dead wood, invasive species	none	remove	invasive species
12	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	15, 15, 3	4	4	far	far	Multistem 2, suppressed, invasive species	none	remove	invasive species
14	<i>Picea abies</i>	Norway Spruce	Subject site	64	6	5	far	far	codominant leaders with buttressing at union	Conflict with proposed amenity area	remove	construction impacts
15	<i>Thuja occidentalis</i>	White Cedar	Subject site	-70	4	5	good	good	Nearly branched to grade, clustered primary union, DBH taken below low primary union	Conflict with proposed building B	remove	construction impacts
16	<i>Thuja occidentalis</i>	White Cedar	Subject site	-65	4	5	good	good	Nearly branched to grade, DBH taken below low primary union	Conflict with proposed building B	remove	construction impacts

TREES RECOMMENDED FOR PRESERVATION (19 TREES)

ID#	GENERAL INFORMATION		SIZE	HEALTH & CONDITION		RECOMMENDATIONS						
	BOTANICAL NAME	COMMON NAME		LOCATION	COMMENTS	EXPECTED CONSTRUCTION IMPACTS	PRESERVE OR REMOVE	IMPACT MITIGATION or REMOVAL RATIONALE (TP = tree protection)				
6	<i>Pinus nigra</i>	Austrian Pine	Hydro utility facility	-35	45	4	far	good	central leader gone, insect damage to trunk, on slope	none	preserve	TP barrier
13	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	17	3	5	good	good	low branched, thin canopy	none	preserve	none
17	<i>Thuja occidentalis</i>	White Cedar	Hydro utility facility	-65, 40	5	5	far	far	Multistem 2, nearly branched to grade, primary union at grade, loose crown, on slope	none	preserve	TP barrier
18	<i>Picea abies</i>	Norway Spruce	Subject site	49	6	5	good	good	Loose crown	potential conflict with site grading	preserve	TP barrier
19	<i>Picea glauca</i>	White Spruce	Subject site	36	4	3	good	good	Sparsely crown, dead lower branches	potential conflict with site grading	preserve	TP barrier
20	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	12, 15	3	5	far	far	Multistem 2, low branched, included bark at primary union	none	preserve	TP barrier
21	<i>Juglans nigra</i>	Black Walnut	Hydro utility facility	37	6	5	good	good	soil/gravel piled at base of tree	none	preserve	TP barrier
22	<i>Picea glauca</i>	White Spruce	Subject site	35	3	1	good	far	fully dead	none	preserve	TP barrier
23	<i>Picea abies</i>	Norway Spruce	Subject site	15	25	5	good	good	Full form, branched to grade	none	preserve	none
24	<i>Picea abies</i>	Norway Spruce	Subject site	10	25	5	good	good	Full form, branched to grade	none	preserve	none
25	<i>Picea abies</i>	Norway Spruce	Subject site	13	25	5	good	good	Full form, branched to grade	none	preserve	none
26	<i>Picea abies</i>	Norway Spruce	Subject site	13	25	5	good	good	Full form, branched to grade	none	preserve	none
27	<i>Picea abies</i>	Norway Spruce	Subject site	11	2	5	good	good	Full form, a bit thin	none	preserve	TP barrier
28	<i>Acer glaberrimum</i>	Norway Maple	Hydro utility facility	33	25	2	poor	poor	Moribund, rot at primary union, significant dead wood and snags	none	preserve	none
29	<i>Pinus nigra</i>	Austrian Pine	Hydro utility facility	38	45	5	good	good	Minor dead lower branches, sparse crown	none	preserve	none
30	<i>Pinus nigra</i>	Austrian Pine	Hydro utility facility	42, 36	5	5	far	far	Multistem 2, bulge at primary union with included bark	none	preserve	none
31	<i>Acer saccharum</i>	Sugar Maple	Hydro utility facility	19, 10	4	5	far	far	Multistem 2, primary union below grade, codominant leaders	none	preserve	none
32	<i>Picea abies</i>	Norway Spruce	Subject site	-15	3	5	good	good	Branches to grade, full form	none	preserve	none
33	<i>Picea abies</i>	Norway Spruce	Subject site	-15	3	6	good	good	Branches to grade, full form	none	preserve	none



RON KOUJDS LANDSCAPE ARCHITECTS INC.

ALL DRAWINGS REMAIN THE PROPERTY OF THE LANDSCAPE ARCHITECT AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE LANDSCAPE ARCHITECT'S WRITTEN PERMISSION.

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION OR TENDER PURPOSES UNLESS SIGNED AND DATED BY RONALD H. KOUJDS, O.A.L.A. C.S.L.A. LANDSCAPE ARCHITECT, LONDON, ONTARIO (519) 667-3322.

Ronald H. Koujds, O.A.L.A. C.S.L.A. DATE

DATE	DESCRIPTION	No.
2022.07.29	ISSUED FOR ZBA	2.
2022.07.18	ISSUED FOR REVIEW	1.

PLOTTING INFORMATION

PLOTTED DATE = JULY 29, 2022
PLOTTED SCALE = 1:1

PROJECT TITLE:
**769 QUEENS ST E
ST. MARY'S
ONTARIO**

DRAWING TITLE:
**TREE PRESERVATION
PLAN**

DATE: JUNE 2022	SCALE: AS NOTED	DRAWING No. T-1
DRAWN: RKL/LA Inc.	CHECKED BY: RKL	
PROJECT No. 22-200Lc ZBA		