

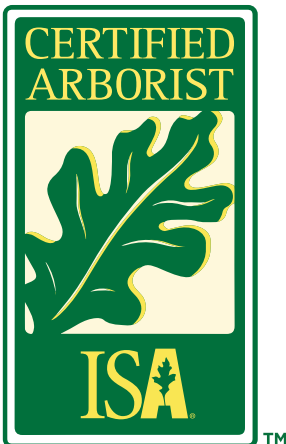


**17 EWEN ROAD
HAMILTON, ONTARIO
TREE ASSESSMENT REPORT
FOR ZBA**

**PREPARED BY: RON KOUDYS LANDSCAPE
 ARCHITECTS INC**

DATE: AUGUST, 2022

RKLA PROJECT #: 22-147



**Luke Koudys
ON-2865A**

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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 INTRODUCTION

Ron Koudys Landscape Architects Inc. (RKLA) was retained by Rise Real Estate Inc. to prepare a tree assessment report in conjunction with the proposed development at 17 Ewen Road, Hamilton, 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/ condition/ species and expected construction impacts based on the current site plan for the purpose of application for zoning by-law amendment.

1.2 EXECUTIVE SUMMARY

The inventory captured 8 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. There are no boundary trees associated with the subject site.

1.2.1 TREE SPECIES COMPOSITION CHART

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

%	Qty.	Botanical Name	Common Name
63%	5	<i>Acer negundo</i>	Manitoba Maple
12%	1	<i>Robinia pseudoacacia</i>	Black Locust
25%	2	<i>Ulmus</i> spp.	Elm
100%	8	Total	

1.2.2 TREE REMOVAL AND PRESERVATION REQUIREMENTS

- All eight (8) trees that have been identified have been recommended for removal due to poor tree condition and conflict with the proposed development.
- All trees that have been recommended for removal are located within the subject site.
- Follow pre construction recommendations outlined in section 6.0.

2.0 SUBJECT SITE AND SCOPE OF WORK

The subject site is 17 Ewen Road. The site is located between Ewen Road and Rifle Range Road. Existing trees are generally located within the East side of the subject site. All



eight trees are located close to the fence line.

The scope of this tree inventory includes the subject site as well as trees within 3m of the subject site property line. Refer to Figure 1 for scope of tree inventory.

3.0 METHODOLOGY

Field work was completed on March 19th, 2022. Field work consisted of tree images taken on site for later review by *Figure 1 - Image capture from City of Hamilton Mapping* certified arborist and the use of *Red dashed line - limit of tree inventory* aerial imagery to determine approximate canopy size. A topographic survey prepared by R.J. Burnside & Associates Limited was used to determine tree location/ownership. Note that not all trees assessed were located on the survey. Trees not included on the survey were located approximately via aerial imagery. Trees of all sizes within the City ROW, and trees with a minimum DBH of 10cm within the balance of the given scope were identified and assessed. Trees within the subject site were not tagged in the field.

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. 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 and grading/servicing 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 IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE	NOTES, IMPACT MITIGATION
1	<i>Acer negundo</i>	Manitoba Maple	Subject Site	-18, 15, 12, 11, 11, 6	2.5	3	Poor	Poor	Multi-stem 6, grown through fence, primary union at grade, growing between concrete block and fence	Conflict with proposed site grading & poor tree condition	Remove	
2	<i>Robinia pseudoacacia</i>	Black Locust	Subject Site	-14, 12	2	5	Fair	Fair	Multi-stem 2, primary union just above grade, included bark at primary union	Conflict with proposed site grading & poor tree condition	Remove	
3	<i>Ulmus spp.</i>	Elm	Subject Site	-50, 22, 20	4	4	Poor	Poor	Multi-stem 3, grown through fence, cavities at seams, significant deadwood, gnarly base	Conflict with proposed site grading & poor tree condition	Remove	
4	<i>Ulmus spp.</i>	Elm	Subject Site	-15, 12, 12, 10	3	5	Poor	Fair	Multi-stem 4, low crown, primary union just above grade, deadwood	Conflict with proposed site grading & poor tree condition	Remove	
5	<i>Acer negundo</i>	Manitoba Maple	Subject Site	-25, 20, 18, 15, 15, 12, 10, 8, 8	3.5	3	Fair	Fair	Multi-stem 9, significant deadwood	Conflict with proposed site grading & poor tree condition	Remove	
6	<i>Acer negundo</i>	Manitoba Maple	Subject Site	-25, 22, 20, 19, 12, 10, 10, 10, 8	4.5	4	Fair	Fair	Multi-stem 9, primary unions at grade, deadwood, epicormic growth	Conflict with proposed site grading & poor tree condition	Remove	
7	<i>Acer negundo</i>	Manitoba Maple	Subject Site	15, 15, 12, 11, 8, 6	3	4	Fair	Fair	Multi-stem 6, primary unions at grade, epicormic growth	Conflict with proposed site grading & poor tree condition	Remove	
8	<i>Acer negundo</i>	Manitoba Maple	Subject Site	12, 12, 9, 8, 6	2	3	Poor	Poor	Multi-stem 5, grown through fence, primary union at grade, deadwood	Conflict with proposed site grading & poor tree condition	Remove	

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 TREE REMOVAL PROCESS RECOMMENDATIONS

The following general recommendations are provided to guide the removal process, 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) Acquire necessary consent from neighbouring land owners for the removal of boundary trees and trees beyond the subject site.
- 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.

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

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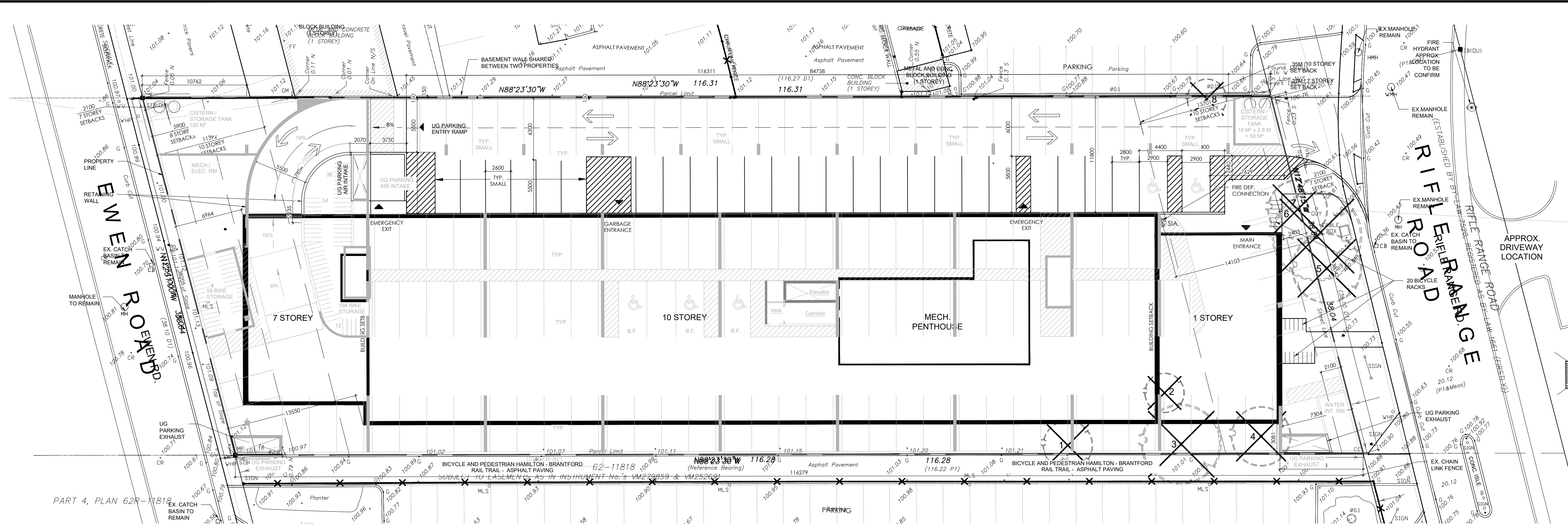
Qualifications OALA full member - landscape architect

Tree assessment and report writing:

Luke Koudys - Luke@RKLA.ca

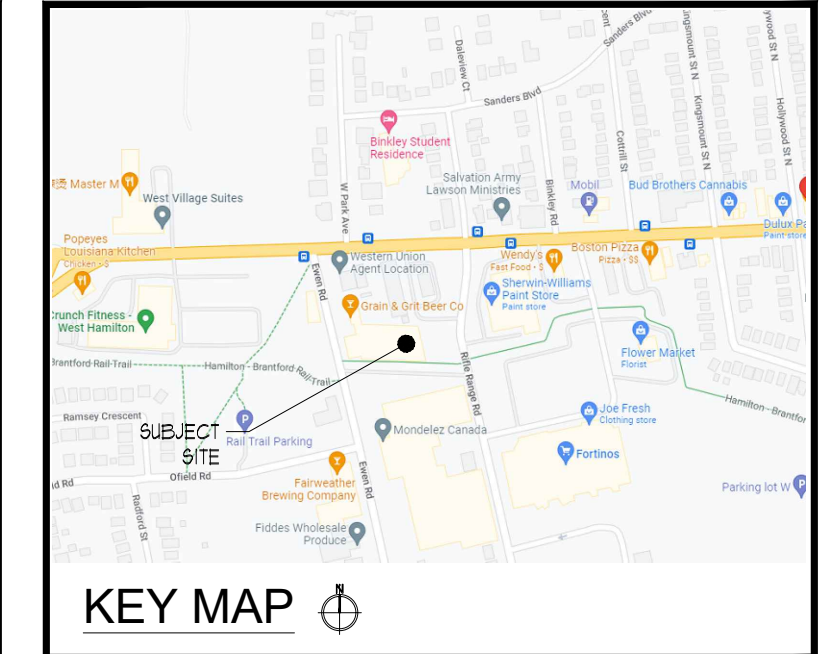
Qualifications ISA Certified Arborist® ON-2865A

9.0 APPENDIX A - TREE PRESERVATION DRAWINGS



LEGEND

- EXISTING DECIDUOUS TREES TO REMAIN
- EXISTING DECIDUOUS TREES TO BE REMOVED
- EXISTING CONIFEROUS TREES TO REMAIN
- EXISTING CONIFEROUS TREES TO BE REMOVED
- EXISTING PLANTINGS TO REMAIN
- EXISTING PLANTINGS TO BE REMOVED
- TREE PROTECTION BARRIER



TREE PRESERVATION PLAN
SCALE = 1:250

(8) TREES RECOMMENDED TO BE REMOVED

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS	
ID#	BOTANICAL NAME	COMMON NAME	LOCATION	DBH (cm)	CANOPY RADIUS (m)	GROWN CONDITION	STRUCTURAL FORM	STRUCTURAL INTEGRITY	COMMENTS	EXPECTED CONSTRUCTION IMPACT (CRZ = critical root zone)	PRESERVE OR REMOVE
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TREE REMOVAL PROCESS RECOMMENDATIONS

PRE-CONSTRUCTION RECOMMENDATIONS

- a) ACQUIRE NECESSARY CONSENT FROM NEIGHBOURING LAND OWNERS FOR THE REMOVAL OF BOUNDARY TREES AND TREES BEYOND THE SUBJECT SITE.
- 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.

REFER TO TREE ASSESSMENT REPORT FOR FURTHER INFORMATION



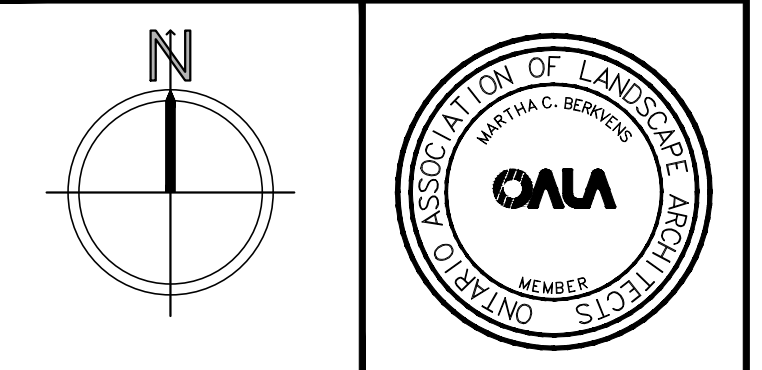
ALL DRAWINGS REMAIN THE PROPERTY OF THE LANDSCAPE ARCHITECT AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE LANDSCAPE ARCHITECTS WRITTEN PERMISSION.

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

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

2022.08.30	For ZBA	L
DATE	DESCRIPTION	No.

PLOTTING INFORMATION:
PLOTTED DATE: 2022.08.30
PLOTTED SCALE: 1:1



PROJECT TITLE:
RISE DEVELOPMENTS
17 EWEN RD.
HAMILTON, ONTARIO

DRAWING TITLE:
TREE PRESERVATION PLAN

DATE: APRIL 2022	SCALE: AS NOTED	DRAWING No.:
DRAWN: RKL/A Inc.	CHECKED BY: M.C.B.	T-1
PROJECT No.:		