

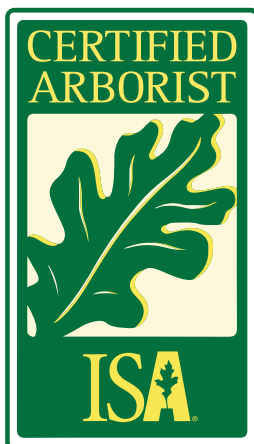


299 & 307 SARNIA ROAD
LONDON, ONTARIO
TREE ASSESSMENT REPORT
FOR REZONING APPLICATION

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

DATE: FEBRUARY, 2023

RKLA PROJECT #: 22-290



TM

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 1721 Architects to prepare a tree assessment report in conjunction with the proposed development at 299 & 307 Sarnia Road. 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 the current site plan for the purpose of application for rezoning.

Note that refinement of these recommendations will be made upon completion of design at the time of application for site plan approval.

1.2 EXECUTIVE SUMMARY

The inventory captured 163 individual trees and 2 vegetation units. Trees were identified within the subject site, within 3 meters of the legal property boundary, and within the City ROW of Sarnia Road. 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. The subject site is NOT within or adjacent to a City of London Tree Protection Area.

1.2.1 TREE SPECIES COMPOSITION CHART

The following chart summarizes the number of each tree species observed. The two vegetation units are not included in this chart.

%	Qty.	Botanical Name	Common Name	%	Qty.	Botanical Name	Common Name
22%	36	<i>Picea abies</i>	Norway Spruce	1%	2	<i>Acer saccharum</i>	Sugar Maple
13%	22	<i>Picea glauca</i>	White Spruce	1%	2	<i>Fraxinus</i> spp.	Ash
11%	18	<i>Pinus strobus</i>	White Pine	1%	2	<i>Magnolia</i> spp.	Magnolia
6%	9	<i>Carya cordiformis</i>	Bitternut Hickory	1%	2	<i>Malus</i> spp.	Apple
6%	9	<i>Picea pungens</i>	Colorado Spruce	1%	2	<i>Ostrya virginiana</i>	Ironwood
5%	8	<i>Thuja occidentalis</i>	Cedar	1%	2	<i>Platanus x acerifolia</i>	London Plane Tree
4%	7	<i>Acer platanoides</i>	Norway Maple	1%	2	<i>Quercus rubra</i>	Red Oak
3%	5	<i>Juglans nigra</i>	Black Walnut	1%	2	Unknown deciduous	Unknown deciduous
3%	5	<i>Prunus virginiana</i>	Chokecherry	1%	1	<i>Acer saccharinum</i>	Silver Maple
2%	4	<i>Acer saccharum</i> subsp. <i>nigrum</i>	Black Maple	1%	1	<i>Castanea mollissima</i>	Chinese Chestnut
2%	4	<i>Morus alba</i>	White Mulberry	1%	1	<i>Celtis occidentalis</i>	Hackberry
2%	4	<i>Pinus nigra</i>	Austrian Pine	1%	1	<i>Cercis canadensis</i>	Redbud
2%	4	<i>Tsuga canadensis</i>	Canadian Hemlock	1%	1	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Honey Locust
1%	2	<i>Acer negundo</i>	Manitoba Maple	1%	1	<i>Picea</i> spp.	Spruce
1%	2	<i>Acer palmatum</i>	Japanese Maple	1%	1	<i>Populus</i> spp.	Poplar
				1%	1	<i>Tilia cordata</i>	Little Leaf Linden
				100%	163		

1.2.2 TREE REMOVAL AND PRESERVATION RECOMMENDATIONS

- Due to conflict with the proposed development, a total of 129 trees and 2 vegetation units located with the subject site and the City ROW of Sarnia road are recommended for removal.
- At time of application for SPA, acquire consent from City of London for removal of 5 trees within or shared with the City ROW of Sarnia Road (tree ID #s 2, 4, 6, 7, & 87).
- Preserve 3 trees within the City ROW of Sarnia Road (tree ID #s 3, 5, & 95).
- Follow pre, during, and post construction recommendations outlined in the Construction Impact Mitigation Recommendations in this report.
- Review and refine these recommendations at time of application for SPA.

2.0 SUBJECT SITE AND SCOPE OF WORK

The subject site is located at 299 & 307 Sarnia Road. There are two existing dwellings with associated existing structures. Trees are generally scattered throughout the two properties.

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.

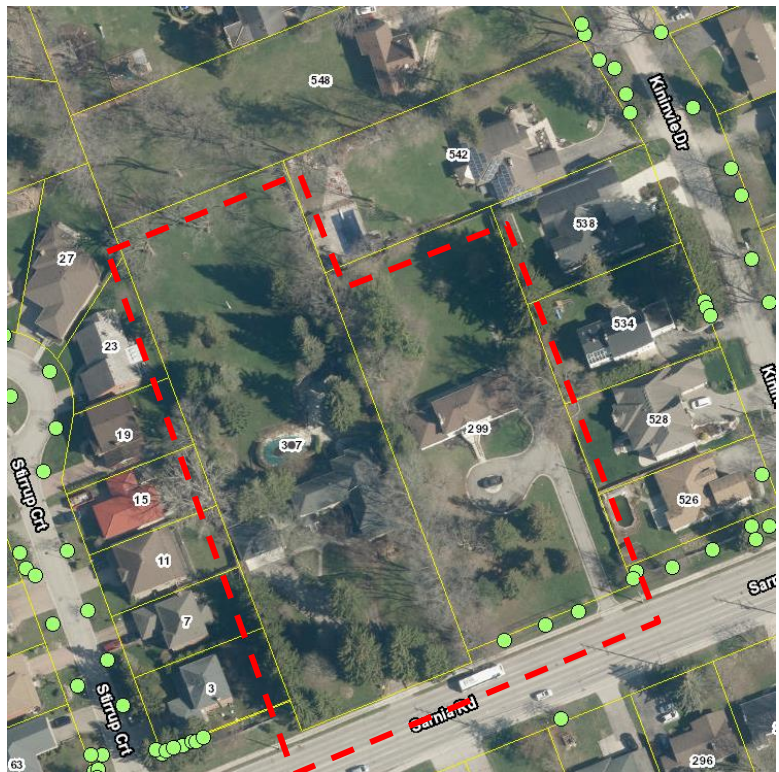


Figure 1 - Image capture from City of London mapping
Red dashed line - limit of tree inventory

3.0 METHODOLOGY

Field work was completed on January 17th, 2023 by RCLA staff member Luke Koudys, ISA certified arborist ON 2965A. A topographic survey provided by Callon Dietz was used as a base for the field work and determined tree location/ownership. All trees with a minimum DBH of 10cm within the given scope were identified and assessed, and trees of all sizes within the City ROW were assessed. Trees were NOT tagged in the field. Each tree is assigned a number which are identified in the tree data table and on the tree preservation plan. Tree identification numbers include 1-163 and veg. unit 1 & 2.

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 Condition (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 buds, 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, 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. The assessment took place when deciduous tree canopy was not present. Buds were used to determine the crown condition of the deciduous trees. 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.

The City of London Tree Protection By-Law (C.P.-1555-252) defines the Critical Root Zone as *“the area of land within a radius of ten (10) cm from the trunk of a tree for every one (1) cm of trunk diameter”*.

4.0 TREE INVENTORY AND PRESERVATION/REMOVAL RECOMMENDATIONS

4.1 TREE DATA TABLE

The following recommendations are based on requirements of 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>Fraxinus</i> spp.	Ash	Subject Site - 299 Sarnia Road	23	2	1	Fair	Fair	Moribund, only epicormic growth alive	Conflict with proposed entrance	remove	Construction conflict and poor tree health
2	<i>Fraxinus</i> spp.	Ash	City ROW Sarnia Road	27	2	1	Fair	Fair	Moribund, only epicormic growth alive	Conflict with proposed entrance	remove	Construction conflict and poor tree health - Consent from the City for tree removal required
3	<i>Platanus acerifolia</i>	London Plane Tree	Boundary - 299 Sarnia Road and City ROW Sarnia Road	9	1.5	5	Good	Good	Minor wound healing	Potential conflict with proposed grading	preserve	TP

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
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4	<i>Platanus acerifolia</i>	London Plane Tree	Boundary - 299 Sarnia Road and City ROW Sarnia Road	8	1.5	5	Good	Good	Tree guard at base	Conflict with proposed walkway	remove	Construction conflict - Consent from the City for tree removal required
5	<i>Tilia cordata</i>	Little Leaf Linden	City ROW Sarnia Road	4	1	5	Good	Good	Tree guard at base, old stake	Potential conflict with proposed grading	preserve	TP
6	<i>Prunus virginiana</i>	Chokecherry	City ROW Sarnia Road	30	4	4	Good	Good	Black knot, canopy heavy south	Conflict with proposed walkway	remove	Construction conflict - Consent from the City for tree removal required
7	<i>Prunus virginiana</i>	Chokecherry	Boundary - 299 Sarnia Road and City ROW Sarnia Road	40	4	4	Good	Good	Black knot, canopy heavy south	Conflict with proposed walkway	remove	Construction conflict - Consent from the City for tree removal required
8	<i>Acer saccharum</i> subsp. <i>nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	15	5	3	Good	Good	Sparse lower canopy	Conflict with proposed walkway	remove	Construction conflict
9	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road	26	4	3	Fair	Fair	Healing wounds along south side of trunk	Conflict with proposed walkway	remove	Construction conflict
10	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road	19	4	3	Fair	Good		Conflict with proposed walkway	remove	Construction conflict
11	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road	34	6	4	Fair	Good		Conflict with proposed walkway	remove	Construction conflict
12	Unknown deciduous	Unknown deciduous	Subject Site - 299 Sarnia Road	39	1	1			Fully dead	Conflict with proposed walkway	remove	Construction conflict
13	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road	21	5	5	Poor	Fair	Canopy heavy east, trunk leans east	Conflict with proposed walkway	remove	Construction conflict
14	<i>Ostrya virginiana</i>	Ironwood	Subject Site - 299 Sarnia Road	28	3	5	Good	Good	Some dead lower branches	Conflict with proposed walkway	remove	Construction conflict
15	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road & 307 Sarnia Road	62	5	5	Good	Good		Conflict with proposed building	remove	Construction conflict
16	<i>Ostrya virginiana</i>	Ironwood	Subject Site - 299 Sarnia Road	16	2	5	Good	Good		Conflict with proposed building	remove	Construction conflict
17	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road & 307 Sarnia Road	47	6	5	Good	Good	Some dead lower branches	Conflict with proposed building	remove	Construction conflict
18	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road & 307 Sarnia Road	62	6	5	Good	Good	Along property line	Conflict with proposed building	remove	Construction conflict
19	<i>Acer saccharum</i> subsp. <i>nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	36	5	5	Good	Good	Along property line	Conflict with proposed building	remove	Construction conflict
20	<i>Acer saccharum</i> subsp. <i>nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	36	6	5	Good	Good	Along property line	Conflict with proposed building	remove	Construction conflict
21	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 307 Sarnia Road	61	7	5	Good	Good	Along property line	Conflict with proposed road	remove	Construction conflict

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)
22	<i>Carya cordiformis</i>	Bitternut Hickory	Subject Site - 299 Sarnia Road	62	7	5	Good	Good	Along property line	Conflict with proposed road	remove	Construction conflict
23	<i>Acer platanoides</i>	Norway Maple	Subject Site - 299 Sarnia Road	40	5	5	Fair	Good	Cavity forming on trunk, frass present	Conflict with proposed road	remove	Construction conflict
24	<i>Acer saccharum</i> subsp. <i>nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	83	8	3	Poor	Poor	Trunk decay, canopy all epicormic growth	Conflict with proposed building	remove	Construction conflict
25	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	49	5	5	Good	Good	Limbed up 5 meters	Conflict with proposed building	remove	Construction conflict
26	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	53	5	4	Good	Good	Limbed up 5 meters, visibly stressed	Conflict with proposed building	remove	Construction conflict
27	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	26, 16	3	3	Fair	Good	Multi-stem 2, suspected rhizosphaera, die back, gall	Conflict with proposed building	remove	Construction conflict
28	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	33, 23, 20, 16	4	3	Poor	Fair	Multi-stem 4, suspected rhizosphaera, die back, gall	Conflict with proposed building	remove	Construction conflict
29	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	42	5	4	Good	Good	Some die back	Conflict with proposed building	remove	Construction conflict
30	<i>Pinus nigra</i>	Austrian Pine	Subject Site - 299 Sarnia Road	38	4	4	Good	Good	Canopy heavy south, some die back	Conflict with proposed building	remove	Construction conflict
31	<i>Celtis occidentalis</i>	Hackberry	Subject Site - 299 Sarnia Road	53	7	5	Fair	Fair	Growing into cedars, canopy heavy east	Conflict with proposed road	remove	Construction conflict
32	<i>Prunus virginiana</i>	Chokecherry	Subject Site - 299 Sarnia Road	29	4	3	Good	Good	0.5 meter away from fence line, black knot	Potential conflict with proposed grading	remove	Possible construction conflict and poor tree health
33	<i>Picea</i> spp.	Spruce	Subject Site - 299 Sarnia Road	22	2	4			Moribund	Potential conflict with proposed grading	remove	Possible construction conflict and poor tree health
34	<i>Acer saccharinum</i>	Silver Maple	Boundary - 299 Sarnia Road, 528 Kininvie Drive, 534 Kininvie Drive	-135	10	1	Fair	Good	2.2 meters away from shed, trunk located between fence	Potential conflict with proposed grading	preserve	Possible construction conflict. Tree protection and preconstruction root pruning/ canopy pruning would be required
35	<i>Thuja occidentalis</i>	Emerald Cedar	534 Kininvie Drive	20	3	45	Poor	Good	Off property, leaning onto fence	Potential conflict with proposed grading	preserve	TP
36	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	33	3	3	Good	Good		Conflict with proposed building	remove	Construction conflict
37	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	17	2	2	Good	Good	Insect gallery holes present	Conflict with proposed building	remove	Construction conflict
38	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	14, 12	2	2	Fair	Good	Multi-stem 2	Conflict with proposed building	remove	Construction conflict
39	<i>Picea glauca</i>	White Spruce	Subject Site - 299 Sarnia Road	21	2.5	2.5	Good	Good	Lean west	Conflict with proposed building	remove	Construction conflict
40	<i>Acer saccharum</i>	Sugar Maple	534 Kininvie Drive	10	2	2	Fair	Good	Grown through fence	Potential conflict with proposed grading	preserve	TP
41	<i>Acer saccharum</i>	Sugar Maple	534 Kininvie Drive	13, 12, 7	2.5	2.5	Fair	Good	Multi-stem 3, grown through fence	Potential conflict with proposed grading	preserve	TP

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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)
42	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 534 Kininvie Drive	-72	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
43	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 534 Kininvie Drive	-50	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
44	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 538 Kininvie Drive	-40	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
45	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 538 Kininvie Drive	-30	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
46	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 538 Kininvie Drive	-40	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
47	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 538 Kininvie Drive	-30	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
48	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 538 Kininvie Drive	-30	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
49	<i>Picea abies</i>	Norway Spruce	Boundary 299 Sarnia Road & 538 Kininvie Drive	-40	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	TP
50	<i>Castanea mollissima</i>	Chinese Chestnut	Subject Site - 299 Sarnia Road	40	3	5	Fair	Good	Poorly pruned limbs, healing wounds	Conflict with proposed building	remove	Construction conflict
51		Unknown deciduous	Subject Site - 299 Sarnia Road	21, 16	3	4	Good	Good	Multi-stem 2	Conflict with proposed building	remove	Construction conflict
52	<i>Acer platanoides</i>	Norway Maple	Subject Site - 299 Sarnia Road	22	4	5	Fair	Good	Slight lean at base, fence grown	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
53	<i>Acer platanoides</i>	Norway Maple	Subject Site - 299 Sarnia Road	30	3	5	Poor	Fair	Canopy heavy south, fence grown	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
54	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 299 Sarnia Road	15	2	1	Poor	Fair	Moribund	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
55	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 299 Sarnia Road	17, 13	2	1	Fair	Fair	Multi-stem 2, leaning onto fence	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
56	<i>Acer negundo</i>	Manitoba Maple	Subject Site - 299 Sarnia Road	15	4	4	Fair	Fair	Canopy heavy south, large limbs over fence	Conflict with proposed road	remove	Construction conflict
57	<i>Morus alba</i>	White Mulberry	Subject Site - 299 Sarnia Road	30	5	4	Poor	Fair	Canopy heavy south, large limbs over fence	Conflict with proposed road	remove	Construction conflict
58	<i>Morus alba</i>	White Mulberry	Subject Site - 299 Sarnia Road	40	8	4	Poor	Fair	Multiple major cavities, trunk decay at base	Conflict with proposed building	remove	Construction conflict
59	<i>Juglans nigra</i>	Black Walnut	Subject Site - 299 Sarnia Road	80	4	5	Fair	Good	Juniper shrubs at base, lean south	Conflict with proposed building	remove	Construction conflict

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)
60	<i>Prunus virginiana</i>	Chokecherry	Subject Site - 299 Sarnia Road	24	3	4	Good	Good	Canopy heavy south	Conflict with proposed building	remove	Construction conflict
61	<i>Juglans nigra</i>	Black Walnut	Subject Site - 299 Sarnia Road	30, 5	3	4	Fair	Good	Multi-stem 2	Conflict with proposed building	remove	Construction conflict
62	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	20	2.5	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
63	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	12	2	4	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
64	<i>Tsuga canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	14	2	4	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
65	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	25	2	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
66	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	26	3	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
67	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	24	3	4	Poor	Fair	Leader dead, new leader re establishing	Conflict with proposed building	remove	Construction conflict
68	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	35	3	4	Good	Good		Conflict with proposed building	remove	Construction conflict
69	<i>Prunus virginiana</i>	Chokecherry	Subject Site - 299 Sarnia Road	54	5	4	Good	Good	Black knot	Conflict with proposed building	remove	Construction conflict
70	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	21	4	4	Good	Good		Conflict with proposed building	remove	Construction conflict
71	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	25	4	4	Good	Good		Conflict with proposed building	remove	Construction conflict
72	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	42	4	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
73	<i>Tsuga canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	23	2	4	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
74	<i>Tsuga canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	17	2	3	Fair	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
75	<i>Tsuga canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	33	4	3	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
76	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	25	3	3	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
77	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	13	2	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
78	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	14	2	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
79	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	18	2	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
80	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	12	2	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
81	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	35	2	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
82	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	50	4	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
83	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	34	4	5	Good	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
84	<i>Pinus strobus</i>	White Pine	Subject Site - 299 Sarnia Road	18	2	4	Good	Good		Conflict with proposed building	remove	Construction conflict

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)
85	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 299 Sarnia Road	12	2	4	Fair	Good	Lean west	Conflict with proposed building	remove	Construction conflict
86	<i>Acer platanoides</i>	Norway Maple	Subject Site - 299 Sarnia Road	39	7	4	Fair	Good		Conflict with proposed building	remove	Construction conflict
87	<i>Picea abies</i>	Norway Spruce	City ROW Sarnia Road	46	5	5	Good	Good	Vines growing up trunk, limbed up 3 meters	Conflict with proposed building and sidewalk	remove	Construction conflict - Consent from the City for tree removal required
88	<i>Morus alba</i>	White mulberry	Subject Site - 307 Sarnia Road	28	2	3	Fair	Good	Bark stripping off, old prune wounds	Conflict with proposed building and sidewalk	remove	Construction conflict
89	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	79	6	5	Good	Good	Low scaffold branch, limbed up 3 meters, exposed roots	Conflict with proposed building and sidewalk	remove	Construction conflict
90	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	59	5	3	Good	Good	Limbed up 3 meters	Conflict with proposed building	remove	Construction conflict
91	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	58	6	5	Good	Good	Limbed up 3 meters	Conflict with proposed building	remove	Construction conflict
92	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	50	5	4	Good	Good	Limbed up 3 meters	Conflict with proposed building	remove	Construction conflict
93	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	42	5	5	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	preserve	Potential construction conflict TP
94	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	43	4	5	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	preserve	Potential construction conflict TP
95	<i>Pinus nigra</i>	Austrian Pine	City ROW Sarnia Road	12	2	5	Good	Good	Full form	None	preserve	NA
96	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	46	5	4	Good	Good		Potential conflict with proposed grading	remove	Potential construction conflict
97	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	21	2	3	Good	Good	Over topped	Potential conflict with proposed grading	remove	Potential construction conflict
98	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	47, 36	5	4	Fair	Good	Multi-stem 2, included bark at union, union at grade	Potential conflict with proposed grading	remove	Potential construction conflict
99	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	36	4	4	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	remove	Potential construction conflict
100	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	56	4	4	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	remove	Potential construction conflict
101	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	29	3	4	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	remove	Potential construction conflict
102	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	27	4	4	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	remove	Potential construction conflict
103	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	48	4	4	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	remove	Potential construction conflict
104	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	41	4	4	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	remove	Potential construction conflict
105	<i>Malus spp.</i>	Apple	3 Stirrup Court	26, 22	3	5	Fair	Good	Multi-stem 2, located off property	None	preserve	TP

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
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106	<i>Malus spp.</i>	Apple	3 Stirrup Court	29	3	5	Fair	Good	Located off property	None	preserve	TP
107	<i>Acer platanoides</i>	Norway Maple	Subject Site - 307 Sarnia Road	39	4	5	Good	Good	Old prune wounds	Conflict with proposed building	remove	Construction conflict
108	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	25	2	3	Good	Good	Suspected rhizosphaera	Conflict with proposed building	remove	Construction conflict
109	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	44	4	4	Good	Good	Located in centre island in driveway	Conflict with proposed building	remove	Construction conflict
110	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	52	4	4	Good	Good	Located in centre island in driveway	Conflict with proposed building	remove	Construction conflict
111	<i>Magnolia spp.</i>	Magnolia	Subject Site - 307 Sarnia Road	14, 12, 7, 5	2.5	5	Good	Good	Multi-stem 4, primary union at grade, epicormic growth	Conflict with proposed building	remove	Construction conflict
112	<i>Acer platanoides</i>	Norway Maple	Subject Site - 307 Sarnia Road	24	3	5	Good	Good	Prune wounds	Conflict with proposed building	remove	Construction conflict
113	<i>Gleditsia triacanthos var. inermis</i>	Honeylocust	Subject Site - 307 Sarnia Road	56	4	5	Good	Good	Old light cords around base and trunk	Conflict with proposed road	remove	Construction conflict
114	<i>Cercis canadensis</i>	Redbud	Subject Site - 307 Sarnia Road	32, 30, 30, 26	4	5	Fair	Fair	Multi-stem 4, large cavity at primary union, vines growing up limbs	Conflict with proposed road	remove	Construction conflict
115	<i>Acer palmatum</i>	Japanese Maple	Subject Site - 307 Sarnia Road	21, 20, 19, 19, 12	3	5	Fair	Good	Multi-stem 5, minor trunk cavities forming	Conflict with proposed road	remove	Construction conflict
116	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	67	8	5	Good	Good	Scaffold branch competing for dominance	Conflict with proposed building	remove	Construction conflict
117	<i>Magnolia spp.</i>	Magnolia	Subject Site - 307 Sarnia Road	14, 12, 6	2.5	5	Good	Good	Multi-stem 3, epicormic growth, primary union at grade	Conflict with proposed building	remove	Construction conflict
118	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	49	5	4	Good	Good	Canopy heavy west, suspected rhizosphaera	Conflict with proposed building	remove	Construction conflict
119	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	41	3	4	Good	Good	Suspected rhizosphaera	Conflict with proposed building	remove	Construction conflict
120	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	43	3	4	Good	Good	Suspected rhizosphaera	Conflict with proposed building	remove	Construction conflict
121	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	49	4	4	Good	Good	Suspected rhizosphaera	Conflict with proposed building	remove	Construction conflict
122	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	58	5	4	Good	Good	Low scaffold branches	Conflict with proposed road	remove	Construction conflict
123	<i>Acer negundo</i>	Manitoba Maple	Subject Site - 307 Sarnia Road	50	6	5	Fair	Fair	Leaning on fence, epicormic growth	Conflict with proposed road	remove	Construction conflict
124	<i>Acer platanoides</i>	Norway Maple	542 Kininvie Drive	55	5	5	Fair	Fair	Trunk cavity below primary union, canopy heavy west	Conflict with proposed road	remove	Construction conflict
125	<i>Morus alba</i>	White mulberry	542 Kininvie Drive	30	4	5	Good	Good	Epicormic growth, major lean west over fence	Potential conflict with proposed grading	preserve	TP
126	<i>Juglans nigra</i>	Black Walnut	542 Kininvie Drive	40, 20	5	5	Fair	Good	Multi-stem 2, included bark at grade	Potential conflict with proposed grading	preserve	TP
127	<i>Juglans nigra</i>	Black Walnut	Subject Site - 307 Sarnia Road	64, 53	7	5	Fair	Good	Multi-stem 2, included bark at grade	Conflict with proposed building	remove	Construction conflict

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
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128	<i>Pinus nigra</i>	Austrian Pine	Subject Site - 307 Sarnia Road	15	2	3	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP
129	<i>Pinus nigra</i>	Austrian Pine	Subject Site - 307 Sarnia Road	14	2	3	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP
130	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	25	3	4	Fair	Good	Leader broken off, new leader establishing	Potential conflict with proposed grading	preserve	TP
131	<i>Juglans nigra</i>	Black Walnut	Subject Site - 307 Sarnia Road	66	6	5	Good	Good	Canopy heavy west	Conflict with proposed building	remove	Construction conflict
132	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	22	3	4	Good	Good		Potential conflict with proposed grading	preserve	TP
133	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	33	3	3	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP
134	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	27	3	3	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP
135	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	9	1.5	2	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP
136	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 307 Sarnia Road	35	2	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
137	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 307 Sarnia Road	30	2	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
138	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 307 Sarnia Road	36, 29	2	4	Fair	Good	Multi-stem 2, sparse crown	Conflict with proposed building	remove	Construction conflict
139	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	36	3.5	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
140	<i>Picea abies</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	34	3.5	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
141	<i>Picea abies</i>	Norway Spruce	Subject Site - 307 Sarnia Road	50	4	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
142	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	32	3	2	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
143	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	42	4	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
144	<i>Picea pungens</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	23	3	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
145	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	30	3	3	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
146	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	23	3	3	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
147	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	24	3	3	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
148	<i>Quercus rubra</i>	Red Oak	Subject Site - 307 Sarnia Road	64	5	5	Good	Good	Canopy heavy west	Potential conflict with proposed grading	preserve	TP
149	<i>Quercus rubra</i>	Red Oak	Subject Site - 307 Sarnia Road	76	5	5	Good	Good	Canopy heavy west	Potential conflict with proposed grading	preserve	TP
150	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	32	2	3	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP

GENERAL INFORMATION				SIZE		HEALTH & CONDITION				RECOMMENDATIONS		
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151	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	31	2	3	Good	Good	Sparse crown	Potential conflict with proposed grading	preserve	TP
152	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	39	3	3	Good	Good	Lean east	Potential conflict with proposed grading	preserve	TP
153	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 307 Sarnia Road	37	3	4	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
154	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	23	2	3	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
155	<i>Picea glauca</i>	White Spruce	Subject Site - 307 Sarnia Road	37	3	3	Good	Good	Sparse crown	Conflict with proposed building	remove	Construction conflict
156	<i>Populus</i> spp.	Poplar	Boundary - 307 Sarnia Road & 15 Stirrup Court	-140	7	5	Good	Good	Fence grown, trunk growing over/ through fence. Exact DBH measurement could not be determined due to the trunk being located between two fences	Potential conflict with proposed grading	preserve	Possible construction conflict. Tree protection and preconstruction root pruning/ canopy pruning would be required
157	<i>Acer palmatum</i>	Japanese Maple	Subject Site - 307 Sarnia Road	25, 24, 23	3	5	Good	Good	Multi-stem 3, primary union at grade	Conflict with proposed building	remove	Construction conflict
158	<i>Picea abies</i>	White Spruce	Subject Site - 307 Sarnia Road	41	3	3	Good	Good	Hedge	Conflict with proposed building	remove	Construction conflict
159	<i>Picea abies</i>	White Spruce	Subject Site - 307 Sarnia Road	43	3	3	Poor	Good	Hedge, dead leader, new leader establishing	Conflict with proposed building	remove	Construction conflict
160	<i>Picea abies</i>	White Spruce	Subject Site - 307 Sarnia Road	48	3	3	Good	Good	Hedge row	Conflict with proposed building	remove	Construction conflict
161	<i>Picea abies</i>	White Spruce	Subject Site - 307 Sarnia Road	34	3	4	Good	Good	Hedge row	Conflict with proposed building	remove	Construction conflict
162	<i>Picea abies</i>	White Spruce	Subject Site - 307 Sarnia Road	42	3.5	4	Good	Good	Hedge row	Conflict with proposed building	remove	Construction conflict
163	<i>Picea abies</i>	White Spruce	Subject Site - 307 Sarnia Road	43	3	4	Good	Good	Hedge row	Conflict with proposed building	remove	Construction conflict

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)

VEG UNIT 1	<i>Thuja occidentalis</i>	Cedar	Subject Site - 299 Sarnia Road	-10-25	2	5	Good	Good	Dense cedar hedge, approximately 10 to 15 individuals	Conflict with proposed road	remove	Construction conflict
VEG UNIT 2	<i>Thuja occidentalis</i>	Cedar	Subject Site - 299 Sarnia Road	-5-20	1.5	4	Good	Good	Sparse cedar hedge, approximately 10 to 15 individuals	Conflict with proposed building	remove	Construction conflict

5.0 POTENTIAL CONSTRUCTION IMPACTS ON TREES

Most 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 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. Should branches on City owned trees be damaged by or during construction, the contractor is to notify City of London Forestry Operations as soon as possible. No person(s) other than City staff or the City's designated contractor may perform work on any City tree.

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.

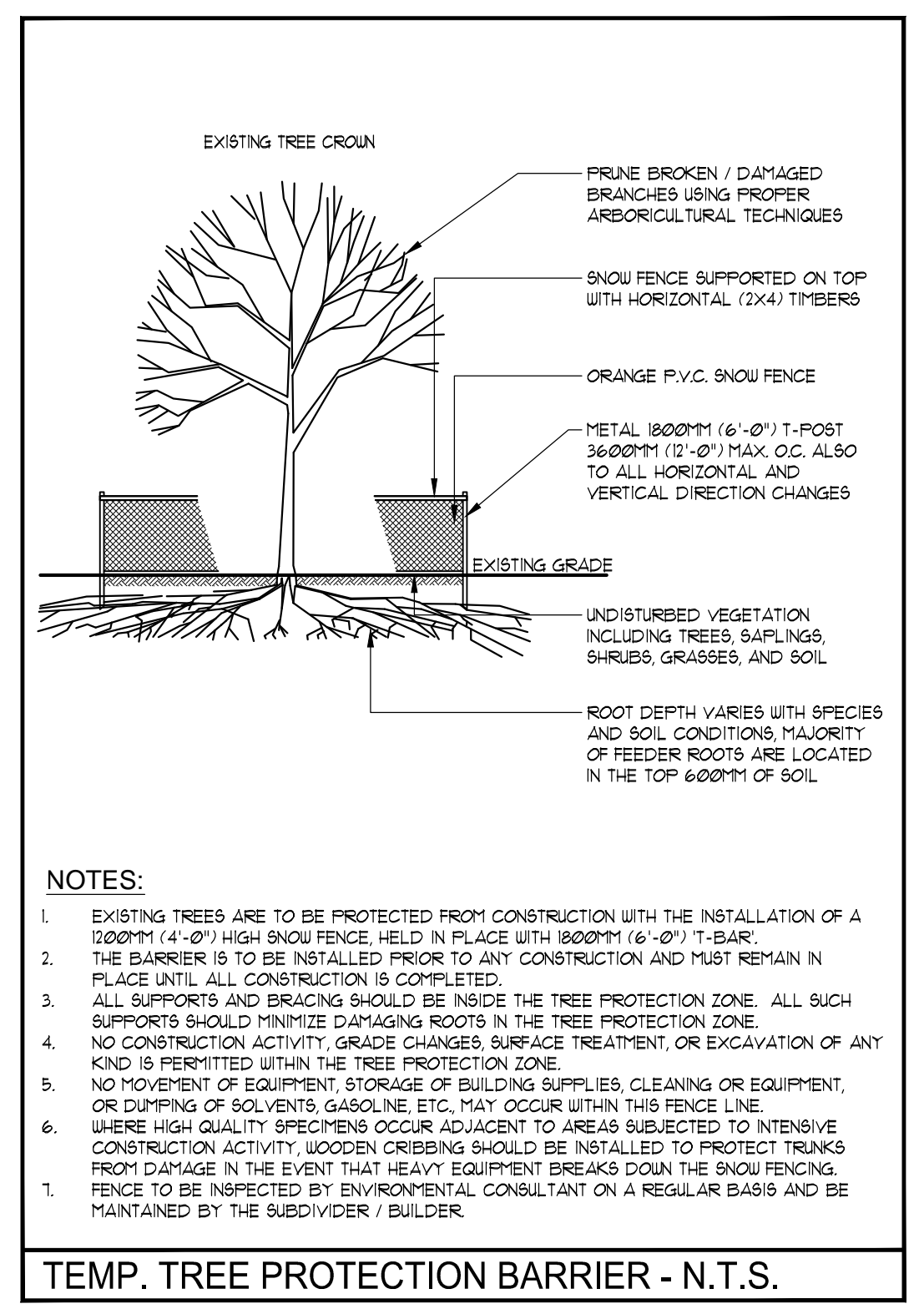
While reasonable efforts have been made to ensure the trees recommended for retention are healthy, no guarantees are offered or implied, that these trees or any part of them will remain standing.

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: 519-667-332

9.0 APPENDIX A - TREE PRESERVATION DRAWINGS



CONSTRUCTION IMPACT MITIGATION RECOMMENDATIONS

PRE-CONSTRUCTION RECOMMENDATIONS

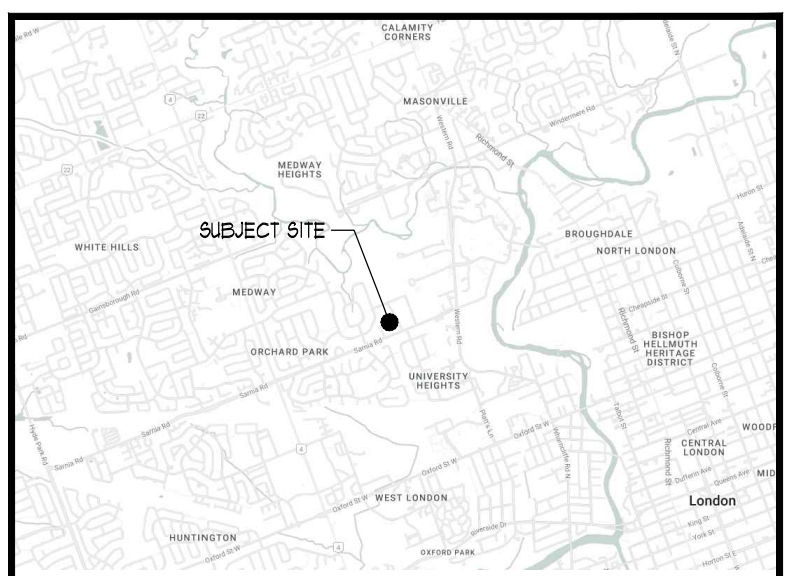
- PRIOR TO ANY CONSTRUCTION ACTIVITY, TREE PRESERVATION FENCING IS TO BE INSTALLED AS PER THE ATTACHED TREE PRESERVATION DRAWINGS AND DETAIL.
- TREES APPROVED FOR REMOVAL ARE TO BE CLEARLY INDICATED IN THE FIELD (MARKED WITH SPRAY PAINT OR OTHER AGREED UPON METHOD) BY THE PROJECT ARBORIST OR LANDSCAPE ARCHITECT PRIOR TO ANY TREE REMOVAL OPERATIONS. ALL REMOVALS TO BE UNDERTAKEN BY AN ISA CERTIFIED ARBORIST.
- 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 CONDUCT 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.
- 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.
- THE EXISTING GROUND-LAYER VEGETATION AT THE BASE OF TREES TO BE PRESERVED MUST REMAIN INTACT WITHIN THE CRITICAL ROOT ZONE SO AS NOT TO DISRUPT THE SOIL AROUND THE BASE OF THE EXISTING TREES.
- FINAL SITE GRADING PLANS SHOULD ENSURE THAT THE EXISTING SOIL MOISTURE CONDITIONS ARE MAINTAINED.

RECOMMENDATIONS RELATED TO THE CONSTRUCTION PROCESS

- 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.
- 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.
- 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.
- 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.
- 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.
- AVOID PLACING HEAVY EQUIPMENT UNDER OR WITHIN CLOSE PROXIMITY TO TREES TO BE PRESERVED TO PREVENT CANOPY DAMAGE FROM EXPOSURE TO THE HEAT OF THE EXHAUST.
- 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. SHOULD BRANCHES ON CITY OWNED TREES BE DAMAGED BY OR DURING CONSTRUCTION, THE CONTRACTOR IS TO NOTIFY CITY OF LONDON FORESTRY OPERATIONS AS SOON AS POSSIBLE. NO PERSON(S) OTHER THAN CITY STAFF OR THE CITY'S DESIGNATED CONTRACTOR MAY PERFORM WORK ON ANY CITY TREE.

POST-CONSTRUCTION RECOMMENDATIONS

- AVOID DISCHARGING RAIN WATER LEAPERS ADJACENT TO RETAINED TREES, AS THIS MAY RESULT IN AN OVERLY MOIST ENVIRONMENT WHICH CAN CAUSE ROOT ROT.
- AFTER ALL WORK IS COMPLETED, TREE PRESERVATION FENCES AND ANY OTHER IMPACT MITIGATION PARAPHERNALIA MUST BE REMOVED.
- A FINAL REVIEW MUST BE UNDERTAKEN BY THE PROJECT ARBORIST TO ENSURE THAT ALL MITIGATION MEASURES AS DESCRIBED ABOVE HAVE BEEN MET.



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. KOUDYS, O.A.L.A. C.S.L.A. LANDSCAPE ARCHITECT, LONDON, ONTARIO (519) 667-3322.

DATE	DESCRIPTION	No.
FEB/12/23	ISSUED FOR ZBA	3.
FEB/11/23	ISSUED FOR REVIEW	2.
FEB/07/23	ISSUED FOR INFO	1.

PLOTTING INFORMATION:
 PLOTTED DATE: FEB/12/23
 PLOTTED SCALE: 1:1

FOR REVIEW ONLY

PROFESSIONAL SEAL: RONALD H. KOUDYS, O.A.L.A. C.S.L.A., MEMBER OF THE ASSOCIATION OF LANDSCAPE ARCHITECTS OF ONTARIO

PROJECT TITLE:
 299-307 SARNIA ROAD
 LONDON, ONTARIO

DRAWING TITLE:
TREE PRESERVATION PLAN

DATE: DECEMBER 2022	SCALE: AS NOTED	DRAWING No. T-1
DRAWN: RCLA Inc.	CHECKED BY: RAK.	
PROJECT No. 22-290Lb		

TREE PRESERVATION PLAN
 SCALE = 1:300

TREES RECOMMENDED FOR REMOVAL (129)

ID #	BOTANICAL NAME	COMMON NAME	LOCATION	SIZE	HEALTH & CONDITION	COMMENTS	EXPECTED CONSTRUCTION IMPACTS	RECOMMENDATIONS	IMPACT MITIGATION OR REMOVAL RATIONALE (IP - tree preservation)		
1	<i>Rhus typhina</i>	Ash	Subject Site - 299 Sarnia Road	25	2	Fair	Good	Pruned, only epicormic growth alive	Conflict with proposed entrance	remove	Construction conflict and poor tree health
2	<i>Rhus typhina</i>	Ash	City ROW Sarnia Road	27	2	Fair	Fair	Pruned, only epicormic growth alive	Conflict with proposed entrance	remove	Construction conflict and poor tree health for tree removal required
4	<i>Ailanthus glandulosa</i>	London Plane Tree	Boundary - 299 Sarnia Road and City ROW Sarnia Road	8	15	5	Good	Free guard of base	Conflict with proposed walkway	remove	Construction conflict - Consent from the City for tree removal required
5	<i>Prunus virginiana</i>	Chokeberry	City ROW Sarnia Road	30	4	4	Good	Black knot, canopy heavy south	Conflict with proposed walkway	remove	Construction conflict - Consent from the City for tree removal required
7	<i>Prunus virginiana</i>	Chokeberry	Boundary - 299 Sarnia Road and City ROW Sarnia Road	40	4	4	Good	Black knot, canopy heavy south	Conflict with proposed walkway	remove	Construction conflict - Consent from the City for tree removal required
8	<i>Acer saccharum subsp. nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	15	5	3	Good	Sparsely lower canopy	Conflict with proposed walkway	remove	Construction conflict
9	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road	26	4	3	Fair	Healthy wounds along south side of trunk	Conflict with proposed walkway	remove	Construction conflict
10	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road	19	4	3	Fair	Good	Conflict with proposed walkway	remove	Construction conflict
11	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road	34	6	4	Fair	Good	Conflict with proposed walkway	remove	Construction conflict
12	Unknown deciduous	Unknown deciduous	Subject Site - 299 Sarnia Road	39	1	1	Fair	Fully dead	Conflict with proposed walkway	remove	Construction conflict
13	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road	29	2	3	Poor	Canopy heavy west, trunk leans	Conflict with proposed walkway	remove	Construction conflict
14	<i>Salix virginiana</i>	Ironwood	Subject Site - 299 Sarnia Road	20	3	5	Good	Some dead lower branches	Conflict with proposed walkway	remove	Construction conflict
15	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road & 300 Sarnia Road	62	5	5	Good	Good	Conflict with proposed building	remove	Construction conflict
16	<i>Salix virginiana</i>	Ironwood	Subject Site - 299 Sarnia Road	16	2	5	Good	Good	Conflict with proposed building	remove	Construction conflict
17	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road & 300 Sarnia Road	47	6	5	Good	Some dead lower branches	Conflict with proposed building	remove	Construction conflict
18	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road & 300 Sarnia Road	62	6	5	Good	Along property line	Conflict with proposed building	remove	Construction conflict
19	<i>Acer saccharum subsp. nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	36	5	5	Good	Along property line	Conflict with proposed building	remove	Construction conflict
20	<i>Acer saccharum subsp. nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	36	6	5	Good	Along property line	Conflict with proposed building	remove	Construction conflict
21	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 307 Sarnia Road	19	7	5	Good	Along property line	Conflict with proposed road	remove	Construction conflict
22	<i>Carina canadensis</i>	Bitternail Hickory	Subject Site - 299 Sarnia Road	62	7	5	Good	Along property line	Conflict with proposed road	remove	Construction conflict
23	<i>Acer saccharum subsp. nigrum</i>	Norway Maple	Subject Site - 299 Sarnia Road	40	5	5	Fair	Canopy forming on trunk, has trunk decay, canopy all epicormic growth	Conflict with proposed building	remove	Construction conflict
24	<i>Acer saccharum subsp. nigrum</i>	Black Maple	Subject Site - 299 Sarnia Road	85	4	3	Poor	Trunk decay, canopy all epicormic growth	Conflict with proposed building	remove	Construction conflict
25	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	40	5	5	Good	Limbed up 5 meters	Conflict with proposed building	remove	Construction conflict
26	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	53	5	4	Good	Limbed up 5 meters, visibly stressed	Conflict with proposed building	remove	Construction conflict
27	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	26	16	5	Good	Multi-stem 2, supported rhizosphere dieback, gal	Conflict with proposed building	remove	Construction conflict
28	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	31, 25, 20, 16	4	3	Fair	Multi-stem 2, supported rhizosphere dieback, gal	Conflict with proposed building	remove	Construction conflict
29	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	42	5	4	Good	Some dieback	Conflict with proposed building	remove	Construction conflict
30	<i>Alnus nigra</i>	Austrian Pine	Subject Site - 299 Sarnia Road	38	4	4	Good	Canopy heavy south, some dieback	Conflict with proposed building	remove	Construction conflict
31	<i>Celtis occidentalis</i>	Hackberry	Subject Site - 299 Sarnia Road	53	7	5	Fair	Pruned, 40% dead, canopy heavy west	Conflict with proposed road	remove	Construction conflict
32	<i>Prunus virginiana</i>	Chokeberry	Subject Site - 299 Sarnia Road	29	4	3	Good	15 meters away from fence line, black knot	Potential conflict with proposed grading	remove	Possible construction conflict and poor tree health
33	<i>Alnus spp.</i>	Spruce	Subject Site - 299 Sarnia Road	22	2	4	Good	Pruned	Potential conflict with proposed grading	remove	Possible construction conflict and poor tree health
36	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	33	3	3	Good	Good	Conflict with proposed building	remove	Construction conflict
37	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	17	2	2	Good	West side of hole present	Conflict with proposed building	remove	Construction conflict
38	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	14, 12	2	2	Fair	Multi-stem 2	Conflict with proposed building	remove	Construction conflict
39	<i>Alnus glabra</i>	White Spruce	Subject Site - 299 Sarnia Road	21, 25, 23	2	2	Good	Good	Conflict with proposed building	remove	Construction conflict
50	<i>Catalpa baccata</i>	Chinese Chestnut	Subject Site - 299 Sarnia Road	40	5	5	Fair	Floury ground limbs, leaning, arched	Conflict with proposed building	remove	Construction conflict
51	Unknown deciduous	Unknown deciduous	Subject Site - 299 Sarnia Road	2, 16	3	4	Good	Multi-stem 2	Conflict with proposed building	remove	Construction conflict
52	<i>Acer saccharum</i>	Norway Maple	Subject Site - 299 Sarnia Road	22	4	5	Fair	Slight lean to base, fence grown	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
53	<i>Acer saccharum</i>	Norway Maple	Subject Site - 299 Sarnia Road	30	3	5	Poor	Canopy heavy south, fence grown	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
54	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 299 Sarnia Road	16	2	1	Poor	Pruned	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
55	<i>Thuja occidentalis</i>	Emerald Cedar	Subject Site - 299 Sarnia Road	10, 15	2	1	Fair	Multi-stem 2, leaning onto fence	Potential conflict with proposed grading	remove	Potential construction conflict and poor tree health
56	<i>Acer glabrum</i>	Hardhack Maple	Subject Site - 299 Sarnia Road	15	4	4	Fair	Canopy heavy south, large limbs over fence	Conflict with proposed road	remove	Construction conflict
57	<i>Alnus alba</i>	White Mulberry	Subject Site - 299 Sarnia Road	30	5	4	Poor	Canopy heavy south, large limbs over fence	Conflict with proposed road	remove	Construction conflict
58	<i>Alnus alba</i>	White Mulberry	Subject Site - 299 Sarnia Road	40	4	4	Poor	Multi-stem 2, leaning onto fence	Conflict with proposed road	remove	Construction conflict
59	<i>Asplen. nigra</i>	Black Walnut	Subject Site - 299 Sarnia Road	80	4	5	Fair	Juniper shrubs at base, lean south	Conflict with proposed building	remove	Construction conflict
60	<i>Prunus virginiana</i>	Chokeberry	Subject Site - 299 Sarnia Road	24	3	4	Good	Canopy heavy south	Conflict with proposed building	remove	Construction conflict
61	<i>Asplen. nigra</i>	Black Walnut	Subject Site - 299 Sarnia Road	30, 5	4	4	Fair	Multi-stem 2	Conflict with proposed building	remove	Construction conflict
62	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	20	2	5	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
63	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	10	2	4	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
64	<i>Thuja canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	14	2	4	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
65	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	25	2	5	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
66	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	26	3	5	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
67	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	24	3	4	Poor	Leads dead, new leader not establishing	Conflict with proposed building	remove	Construction conflict
68	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	35	3	4	Good	Good	Conflict with proposed building	remove	Construction conflict
69	<i>Prunus virginiana</i>	Chokeberry	Subject Site - 299 Sarnia Road	54	5	4	Good	Black knot	Conflict with proposed building	remove	Construction conflict
70	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	17	4	4	Good	Good	Conflict with proposed building	remove	Construction conflict
71	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	25	4	4	Good	Good	Conflict with proposed building	remove	Construction conflict
72	<i>Alnus strabus</i>	White Pine	Subject Site - 299 Sarnia Road	42	4	4	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
73	<i>Thuja canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	23	2	4	Good	Forest interior	Conflict with proposed building	remove	Construction conflict
74	<i>Thuja canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	17	2	3	Fair	Forest interior	Conflict with proposed building	remove	Construction conflict
75	<i>Thuja canadensis</i>	Canadian Hemlock	Subject Site - 299 Sarnia Road	33	4	3	Good	Forest interior	Conflict with proposed building	remove	Construction conflict

VEGETATION UNITS RECOMMENDED FOR REMOVAL (2)

ID #	BOTANICAL NAME	COMMON NAME	LOCATION	SIZE	HEALTH & CONDITION	COMMENTS	EXPECTED CONSTRUCTION IMPACTS	RECOMMENDATIONS	IMPACT MITIGATION OR REMOVAL RATIONALE (IP - tree preservation)			
VEG UNIT 1	<i>Thuja occidentalis</i>	Cedar	Subject Site - 299 Sarnia Road	10-15	2	5	Good	Good	Some older trees, approximately 10 to 15 individuals	Conflict with proposed building	remove	Construction conflict
VEG UNIT 2	<i>Thuja occidentalis</i>	Cedar	Subject Site - 299 Sarnia Road	5-10	15	4	Good	Good	Some older trees, approximately 10 to 15 individuals	Conflict with proposed building	remove	Construction conflict

TREES RECOMMENDED FOR PRESERVATION (34)

ID #	BOTANICAL NAME	COMMON NAME	LOCATION	SIZE	HEALTH & CONDITION	COMMENTS	EXPECTED CONSTRUCTION IMPACTS	RECOMMENDATIONS	IMPACT MITIGATION OR REMOVAL RATIONALE (IP - tree preservation)				
3	<i>Alnus x ambigua</i>	London Plane Tree	Boundary - 299 Sarnia Road and City ROW Sarnia Road	9	15	5	Good	Good	Minor wound healing	Potential conflict with proposed grading	preserve	IP	
5	<i>Faba acuticarpa</i>	Little Leaf Linden	City ROW Sarnia Road	4	1	5	Good	Good	Free guard of base, old stake	Potential conflict with proposed grading	preserve	IP	
14	<i>Acer saccharum</i>	Sugar Maple	Boundary - 299 Sarnia Road, 538 Kinross Drive, 534 Kinross Drive	150	10	1	Fair	Good	15 meters away from tree, trunk located between fence	Potential conflict with proposed grading	preserve	Possible construction conflict, tree protection and preservation not planned (canopy pruning would be required)	
35	<i>Thuja occidentalis</i>	Emerald Cedar	534 Kinross Drive	20	3	4	Poor	Good	30' proximity, leaning onto fence	Potential conflict with proposed grading	preserve	IP	
40	<i>Acer saccharum</i>	Sugar Maple	534 Kinross Drive	10	2	2	Fair	Good	Down through fence	Potential conflict with proposed grading	preserve	IP	
41	<i>Acer saccharum</i>	Sugar Maple	534 Kinross Drive	10, 12, 7, 2.5	2.5	2.5	Fair	Good	Multi-stem 3, grown through fence	Potential conflict with proposed grading	preserve	IP	
42	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 534 Kinross Drive	-72	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
43	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 534 Kinross Drive	-50	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
44	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	-40	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
45	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	-30	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
46	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	-40	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
47	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	-30	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
48	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	-50	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
49	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	-40	5	5	Good	Good	Located behind existing wood fence	Potential conflict with proposed grading	preserve	IP	
91	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	42	5	5	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	preserve	Potential construction conflict IP	
94	<i>Alnus alba</i>	Norway Spruce	Boundary - 299 Sarnia Road & 538 Kinross Drive	45	4	5	Good	Good	Limbed up 3 meters	Potential conflict with proposed grading	preserve	Potential construction conflict IP	
96	<i>Alnus nigra</i>	Austrian Pine	City ROW Sarnia Road	12	2	5	Good	Good	Full form	None	None	None	
105	<i>Malus spp.</i>	Apple	3 Sarnia Court	26, 12	3	5	Fair	Good	Multi-stem 2, located off property	None	None	preserve	IP
106	<i>Malus spp.</i>	Apple	3 Sarnia Court	29	3	5	Fair	Good	Located off property	None	None	preserve	IP
105	<i>Malus alba</i>	White Mulberry	542 Kinross Drive	30	4	5	Good	Good	Canopy growth, major lean west over fence	Potential conflict with proposed grading	preserve	IP	
105	<i>Asplen. nigra</i>	Black Walnut	542 Kinross Drive	40, 10	5	5	Fair	Good	Multi-stem 2, rounded bark at grade	Potential conflict with proposed grading	preserve	IP	
108	<i>Alnus nigra</i>	Austrian Pine	Subject Site - 307 Sarnia Road	16	2	3	Good	Good	Sparsely crown	Potential conflict with proposed grading	preserve	IP	
109	<i>Alnus nigra</i>	Austrian Pine	Subject Site - 307 Sarnia Road	14	2	3	Good	Good	Sparsely crown	Potential conflict with proposed grading	preserve	IP	
120	<i>Alnus purpurea</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	25	3	4	Fair	Good	Leader broken off, new leader not establishing	Potential conflict with proposed grading	preserve	IP	
102	<i>Alnus purpurea</i>	Colorado Spruce	Subject Site - 307 Sarnia Road	22	3	4	Good	Good	Sparsely crown	Potential conflict with proposed grading	preserve	IP	
154	<i>Alnus glabra</i>	White Spruce	Subject Site - 307 Sarnia Road	33	3	3	Good	Good	Sparsely crown	Potential conflict with proposed grading	preserve	IP	
154	<i>Alnus glabra</i>	White Spruce	Subject Site - 307 Sarnia Road	27	3	3	Good	Good	Sparsely crown	Potential conflict with proposed grading	preserve	IP	
155	<i>Alnus glabra</i>	White Spruce	Subject Site - 307 Sarnia Road	9	15	2	Good	Good	Sparsely crown	Potential conflict with proposed grading	preserve	IP	
148	<i>Quercus rubra</i>	Red Oak	Subject Site - 307 Sarnia Road	64	5	5	Good	Good	Canopy heavy west	Potential conflict with proposed grading	preserve	IP	
149	<i>Quercus rubra</i>	Red Oak	Subject Site - 307 Sarnia Road	76	5	5	Good	Good	Canopy heavy west	Potential conflict with proposed grading	preserve</		