JACKSON
ARBORICULTURE
INC.
CONSULTING AND GIS ANALYSIS
118 Pleasant Ridge Road, Brantford ON, N3R 0B8
905-512-6303, jeremy@jacksonarbor.ca

Tree Inventory and Preservation Plan Report

Subject Property:

2020 Lakeshore Road
Burlington, ON

Prepared For:

Adesso Design Inc.
218 Locke St. S., 2nd Floor
Hamilton ON L8P 4B4

Prepared By:

Jackson Arboriculture Inc.
118 Pleasant Ridge Rd.
Brantford ON N3R 0B8

21 September 2021

Jackson Arboriculture Inc. Project No. 240

1.0 Introduction

Jackson Arboriculture Inc. was retained by Adesso Design Inc. to complete a Tree Inventory and Preservation Plan report for a property situated at 2020 Lakeshore Road in the City of Burlington, hereby referred to as the subject property. It is understood that a development application will be filed with the City for the redevelopment of the property.

The following study has been completed in accordance with the City of Burlington's Specifications Index for Tree Protection and Preservation (SPEC NO. SS12A) and the Site Plan Application Guidelines.

2.0 Methodology

At the onset of the project the arborilogical scope of work was coordinated with the client and the consulting team. Prior to conducting a site visit, the topographic survey of the subject property and current aerial photography were overlaid utilizing geographic information software, for use on site during the completion of the tree inventory. The tree locations, the topographic survey and the site plan were overlaid and a tree preservation analysis was completed to determine the impacts to each tree included in the inventory.

2.1 Tree Inventory

A site visit was conducted on the 26th of July 2021 to complete the tree inventory. All trees 10 cm in diameter and larger situated on subject property, on neighbouring property within 5 m and within the road allowances were included in the tree inventory. A visual assessment was completed on each tree included in the inventory and the following information is provided in the tree inventory table (Table 1):

- **Tree #**: A number assigned to each tree correlating to the tree inventory and the Tree Preservation Plan Sheet L-1, as prepared by Adesso Design Inc.
- **Species**: Common and scientific (Latin) species names.
- **DBH**: The trunk diameter at breast height, measured in centimeters at 1.4 m from the ground.
- **Condition**: The health of the tree regarding the trunk integrity, the crown structure and the crown vigour; each rated as poor, fair or good. The condition ratings are based on the signs, symptoms and defects exhibited by each tree, considering the conditions in which it is growing.
- **Dripline**: The distance from the stem to the tips of the live branches.
- **mTPZ**: Minimum Tree Preservation Zone, i.e. the distance in meters from the base of the tree trunk at which tree protection fence is to be installed.
- **Crown Class**: The position of the tree crown within the surrounding canopy, classified as dominant, codominant, intermediate or supressed.
- **Comments**: Any additional notes relevant to the tree's health or growing conditions.
- **Recommendation**: The recommended removal or preservation of each tree based on the impact assessment.

The trees included in the inventory are identified with numbers 1-53 and were located using the topographic survey prepared by A.T. McLaren Limited.

2.2 Impact Analysis

A tree preservation analysis was completed on each tree individually considering the impacts from the proposed development and many other factors including, but not limited to, tree condition, species, DBH and the existing site conditions. The impacts from the proposed development will occur where tree roots conflict with construction machinery during demolition, foundation excavation, grading and servicing.

During the tree preservation analysis the minimum Tree Protection Zone (mTPZ) distance, as outlined in the City's Specifications Index for Tree Protection and Preservation, was utilized to determine the potential impacts to each tree included in the inventory. Where encroachment is required within the mTPZ, tree removal may be required.

The mTPZ distance is the minimum distance at which development can safely occur without appreciably damaging a tree's root system. The mTPZ distance is based on the diameter of the tree and measured in meters from the base of the stem. Refer to Table 2 for the mTPZ distances based on trunk diameter.

Table 2. Minimum tree protection zone distances.

DBH (cm)	Min. Tree Preservation Zone Distance (m)*
	Radius
< 10	1.8
10 – 40	2.4
41 – 50	3.0
51 – 60	3.6
61 – 70	4.2
71 – 80	4.8
81 – 90	5.4
91 – 100	6.0
101 – 110	6.6

*As measured from the outside of the tree trunk.

3.0 Existing Conditions

The subject property is currently occupied by a hotel, restaurant and asphalt parking. The property is bound by Lakeshore Road to the north, Elizabeth Street to the east and parkland to the south and west.

4.0 tree Inventory Results

The results of the tree inventory indicate that a total of 53 trees reside on subject property, within the road allowances and on neighbouring property within 5 m of the property boundaries. The trees included in the inventory appear to be comprised of landscape plantings.

The trees included in the inventory are comprised of the following species:

- Honey Locust cultivar (*Gleditsia triacanthos var. 'inermis'*),
- Blue spruce (*Picea pungens*),
- Red Oak (*Quercus rubra*),
- Red Maple (*Acer rubrum*),
- Manitoba Maple (*Acer negundo*),
- Austrian Pine (*Pinus nigra*),
- Apple species (*Malus sp.*),
- Serviceberry species (*Amelanchier sp.*) and
- Columnar English Oak (*Quercus robur 'fastigiata'*).

No rare, threatened or endangered tree species were documented in the tree inventory. Refer to Table 1 for the complete tree inventory and Sheet L-1 for the tree locations.

5.0 Proposed Development

The proposed development includes the demolition of the existing building and the construction of two mixed use office/apartment towers.

6.0 Discussion

The following sections outline the recommended tree removal and preservation opportunities based on the results of the impact analysis.

6.1 Tree Removal

The removal of Trees 1-45 and 50-53 will be required to accommodate the proposed development.

Trees 1, 2, 4, 6, 8, 10, 12, 13, 15, 16, 22-35 appear to reside within road allowances. Permission from the appropriate City or Regional department will be required prior to their removal.

6.2 Tree Preservation

The preservation of Trees 46-49 will be possible with the use of appropriate tree protection measures. Tree protection measures must be implemented prior to the commencement of

demolition to ensure that the trees identified for preservation are not damaged by the proposed development activities.

Tree protection fence must be installed at the mTPZ distances outlined in the tree inventory. Refer to Sheets L-1 and L-2 for the prescribed tree protection fence locations and the tree protection fence detail.

6.3 Tree Protection Recommendations

The following recommendations are made in attempts to reduce the impacts to trees identified for preservation:

- Tree protection fence must be installed at locations outlined on Sheet L-1 prior to the commencement of demolition.
- Tree protection fence must be installed at the mTPZ distance as outlined in Table 1.
- Once tree protection fence has been installed it must not be moved, relocated or altered in any way (unless repairing fallen fence etc.) for the duration of the construction period.
- No intrusion into an area identified on Sheet L-1 as a tree preservation zone (TPZ) is allowed at anytime during construction.
- No storage of machinery, construction debris, materials, waste or any other items is allowed within a TPZ.
- Any tree branches (and roots) that conflict with proposed development must be pruned by a Certified Arborist in accordance with acceptable arboricultural practice.
- Tree protection fencing should be inspected by a Certified Arborist prior to and during construction to ensure that the fencing remains intact and in good repair throughout the stages of development.

7.0 Summary

Jackson Arboriculture Inc. was retained by Adesso Design Inc. to complete a Tree Inventory and Preservation Plan report for a property situated at 2020 Lakeshore Road in the City of Burlington. A tree inventory was conducted and an impact assessment was completed in the context of the proposed development plan.

The tree inventory documented a total of 53 situated on subject property, in the road allowances and on neighbouring property within 5 m of the property boundaries. The results of the impact assessment indicate that removal of 49 trees included in the tree inventory will be required to accommodate the proposed development.

Respectfully submitted,
Jackson Arboriculture Inc.

Jeremy Jackson

Jeremy Jackson, H.B.Sc.,
ISA Certified Arborist #ON-1089A
GIS Analyst

Limitations of Assessment

It is our policy to attach the following limitations of assessment to ensure that the client, municipalities and agencies are fully aware of what is technically and professionally realistic when visually assessing and retaining trees.

The assessment of the trees presented in 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 such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree and direction of any lean, the general condition of the trees and the surrounding site, and the proximity of property and people.

Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigour constantly change. They are not immune to changes in site conditions, or seasonal variations in the weather conditions, including severe storms with high-speed winds.

While reasonable efforts have been made to ensure that the trees recommended for retention are healthy no guarantees are offered, or implied, that these trees, or any parts of them, will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree of group of trees or their component parts in al circumstances. Inevitably a standing tree will always pose some risk. Most trees have the potential for failure under adverse weather conditions, and the risk can only be eliminated if the tree is removed.

Although every effort has been made to ensure that this assessment is reasonably accurate, trees should be re-assessed periodically. The assessment presented in this report is valid as the time of the inspection.

Table 1. Tree Inventory

Location: 2020 Lakeshore Rd, Burlington Date: 26 July 2021 Surveyors: JJJ

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	DL	mTPZ	CC	Comments	Recom.
1	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	38	G	G	G	7	2.4	CD		Remove
2	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	36	FG	G	G	8	2.4	CD	Swollen flare	Remove
3	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	27	FG	G	G	7	2.4	CD	Exposed roots - planted too high, structural root growing over curb	Remove
4	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	23	G	G	G	6	2.4	CD		Remove
5	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	32	G	G	G	8	2.4	CD	Union at 3 m	Remove
6	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	21	G	G	G	6	2.4	CD	Union at 2.5 m	Remove
7	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	33	G	G	G	7	2.4	CD		Remove
8	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	24	FG	G	G	5	2.4	CD	Seam	Remove
9	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	26	P	P	P	3	2.4	CD	Sign screwed to trunk, 70% dieback, root rot with ganoderma fruiting bodies -> REMOVE	Remove
10	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	26	FG	G	FG	5	2.4	CD	Seam	Remove
11	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	24	G	G	G	5	2.4	CD	Union at 2 m	Remove
12	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	23	G	G	G	5	2.4	CD	Union at 2 m	Remove
13	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	5	FG	PF	PF	1	2.4	I	Stem wound, 40% dieback	Remove
14	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	25	G	G	G	5	2.4	CD	Union at 3 m	Remove
15	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	37	FG	G	G	7	2.4	CD	Union at 3 m, seam, broken branches	Remove
16	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	37	G	G	G	6	2.4	CD		Remove
17	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	22	G	G	G	5	2.4	D		Remove
18	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	36	G	G	G	6	2.4	D	Union at 3 m	Remove
19	Blue Spruce	*Picea pungens*	13	G	G	G	1.5	2.4	CD		Remove
20	Blue Spruce	*Picea pungens*	13	P	P	P	1	2.4	CD	90% dieback	Remove
21	Blue Spruce	*Picea pungens*	11	G	G	FG	1.5	2.4	CD	10% dieback	Remove

22	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	43	FG	G	G	7	3.0	CD	Union at 3 m, seam	Remove
23	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	35	G	G	G	7	2.4	CD	Union at 3.5m	Remove
24	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	35	FG	G	G	7	2.4	CD	Union at 2.5 m, girdling root	Remove
25	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	32	F	G	G	6	2.4	CD	Swollen flare	Remove
26	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	29	G	G	G	5	2.4	CD		Remove
27	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	38	G	G	FG	8	2.4	CD	Union at 2.5 m, seam	Remove
28	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D	Light crook in crown	Remove
29	Red Oak	*Quercus rubra*	4	G	G	G	1	1.8	D		Remove
30	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D		Remove
31	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D		Remove
32	Red Oak	*Quercus rubra*	6	G	G	FG	1	1.8	D		Remove
33	Red Oak	*Quercus rubra*	5	G	G	G	1	1.8	D		Remove
34	Red Maple	*Acer rubrum*	7	G	G	G	1.5	1.8	D		Remove
35	Red Maple	*Acer rubrum*	7	G	G	G	1.5	1.8	D		Remove
36	Red Maple	*Acer rubrum*	7	G	G	G	1.5	1.8	CD		Remove
37	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	44	G	G	G	7	3.0	D		Remove
38	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	52	G	G	G	9	3.6	D	Union at 3 m	Remove
39	Manitoba Maple	*Acer negundo*	32	FG	G	G	6	2.4	CD	Unions at 1.6 m and 3 m	Remove
40	Austrian Pine	*Pinus nigra*	23, 34	F	F	FG	5	2.4	CD	Union at 1 m with 1 dead stem, poor form	Remove
41	Red Maple	*Acer rubrum*	15, 16	FG	F	F	2	2.4	D	Union at ground, chlorotic, 20% dieback	Remove
42	Red Maple	*Acer rubrum*	13, 10, 7, 8, 8	FG	F	F	2	2.4	D	Union at ground, chlorotic	Remove
43	Apple species	*Malus sp.*	16	G	G	G	2	2.4	CD	Pruning wounds, epicormic branching	Remove
44	Apple species	*Malus sp.*	13, 10	F	G	G	2	2.4	CD	Stem wound with heart rot, pruning wounds, epicormic branching	Remove
45	Austrian Pine	*Pinus nigra*	30	G	G	G	3	2.4	D		Remove
46	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	33	G	G	G	8	2.4	D		Preserve
47	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	26	G	G	G	6	2.4	CD		Preserve
48	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	24	G	G	G	5	2.4	CD		Preserve
49	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	32	G	G	G	6	2.4	CD	Union at 2.5 m	Preserve
50	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	27	G	G	G	6	2.4	CD		Remove
51	Honey Locust cultivar	*Gleditsia triacanthos var. 'inermis'*	36	G	G	FG	9	2.4	CD	Union at 2 m	Remove
52	Serviceberry species	*Amelanchier sp.*	15, 9	FG	G	G	4	2.4	CD	Union at 0.4 m with included bark	Remove

53	Columnar English Oak	*Quercus robur 'fastigiata'*	25	G	G	G	2	2.4	CD		Remove

Legend		
DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
DL	Dripline	(m)
mTPZ	Minimum Tree Preservation Zone	(m)
CC	Crown Class	(D, CD, I)
Recom.	Recommendation	(Preserve, Remove)
D	Dominant	
CD	Co-dominant	
I	Intermediate	
G	Good	
F	Fair	
P	Poor	