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July 19, 2018 [Revised: May 23, 2019]

ARBORIST REPORT
1085 Clearview Avenue, Burlington, Ontario

BACKGROUND

MHBC was retained to conduct an inventory of the existing trees within the property known as 1085 Clearview Avenue, Burlington, Ontario. Field work was completed on July 17, 2018, this report relates to the condition of the trees as observed on that date.

PROCEDURE

The on-site inventory of existing trees was carried out using the current survey of the property and relies on the accuracy of this survey. The inventory includes by-law trees within the site boundary, all trees within adjacent public boulevards, and all private trees within 6.0 metres of the site boundary as per City of Burlington guidelines.

This inventory is summarized graphically in the Tree Inventory Plan TI-1, which shall always be read in conjunction with this report and shall form part of this report. For the purposes of this report, trees and groupings of trees are identified in terms of species, size, condition, and recommendations.

The following rating system was used in describing the general condition of the trees inventoried:

Good (G): Indicates a condition of vigor and no major concerns;
Fair (F): Indicates an adequate tree, which may have some minor issues;
Poor (P): Indicates declining health, bad form, or other more serious issues;
Dead (D): Indicates a dead tree that should be removed.

ASSUMPTIONS AND LIMITING CONDITIONS

- Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible and is assumed to be correct; however MHBC can neither guarantee nor be responsible for the accuracy of information provided by others.
- It is assumed that the properties are not in violation of any applicable codes, ordinances, statutes, or other governmental regulations.
- Unless otherwise required by law, possession of this report or a copy thereof does not imply right of publication or use for any purpose in whole or in part by any other than the person or company by whom it was commissioned.
- The use of excerpts from this report or alterations to this report, without the authorization of MHBC Planning will invalidate the entire report. This report may not be used for any purpose other than its intended purpose as outlined.
- Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination or accessible items without

dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies in the plants inventoried may not arise in the future.

- The determination of ownership of any subject tree(s) is the responsibility of the owner and any civil or common-law issues, which may exist between property owners with respect to trees, must be resolved by the owner. The recommendation to remove or maintain any tree(s) does not grant authority to encroach in any manner onto adjacent private properties.

SUMMARY OF TREES INVENTORIED

The following table summarizes the on-site trees. The trees shown with a tone are recommended for removal due to conflicts with the proposed works.

Tree #	Common Name	Botanical Name	DBH (CM)	Condition	Comments	Recommendation
1	Silver Maple	Acer saccharinum	69, 61, 74	Fair	3 Stems. Moderate deadwood in canopy. Significant root girdling.	Remove
2	Dense Yew	Taxus x media 'densiformis'	40	Fair		Retain
3	Amur Maple	Acer ginnala	6	Fair		Remove
4	Silver Maple	Acer saccharinum	12	Fair/Good	Mechanical damage at root flare.	Remove
5	Norway Maple	Acer platanoides	36	Fair		Remove
6	Balsam Fir	Abies Balsamea	20	Fair	Guy wire electrical pole in canopy.	Remove
7	Balsam Fir	Abies Balsamea	20	Fair		Remove
8	Austrian Pine	Pinus nigra	40	Fair		Remove
9	White Oak	Quercus alba	17	Poor	Main leader is dead. Tree in decline.	Remove
10	Austrian Pine	Pinus nigra	38	Fair	Moderate dead wood in canopy.	Remove
11	Scots Pine	Pinus sylvestris	24	Fair		Remove
12	Red Oak	Quercus rubra	23	Fair	Minor dead wood in canopy.	Remove
13	Scots Pine	Pinus sylvestris	20	Fair	Minor dead wood in canopy.	Remove
14	Scots Pine	Pinus sylvestris	20	Fair	Minor dead wood in canopy.	Remove
15	Red Oak	Quercus rubra	25	Fair	Minor dead wood in canopy.	Remove
16	Austrian Pine	Pinus nigra	31	Fair		Remove
17	Austrian Pine	Pinus nigra	28	Fair/Poor	Moderate to significant dead wood in canopy.	Remove
18	Red Oak	Quercus rubra	24	Fair	Minor dead wood in canopy.	Remove

19	Scots Pine	Pinus sylvestris	25	Fair	Moderate dead wood in canopy.	Remove
20	Scots Pine	Pinus sylvestris	20	Poor	Tree in sever decline. Significant dead wood in canopy.	Remove
21	Scots Pine	Pinus sylvestris	12	Fair/Poor		Remove
22	Red Oak	Quercus rubra	22	Fair	Minor to moderate dead wood in canopy.	Remove
23	Austrian Pine	Pinus nigra	22	Fair/Poor		Remove
24	Austrian Pine	Pinus nigra	24	Fair		Remove
25	Austrian Pine	Pinus nigra	21	Fair		Remove
26	Austrian Pine	Pinus nigra	18	Dead		Remove
27	Austrian Pine	Pinus nigra	18	Dead		Remove
28	Red Oak	Quercus rubra	21	Fair		Retain
29	White Spruce	Picea glauca	5	Poor		Remove
30	Austrian Pine	Pinus nigra	5	Fair/Good		Remove
31	Austrian Pine	Pinus nigra	28	Fair		Retain
32	Norway Maple	Acer platanoides	27	Fair/Good		Retain
33	Red Oak	Quercus rubra	20	Fair/Good		Remove
34	Silver Maple	Acer saccharinum	74	Fair	Moderate dead wood in canopy. Minor to moderate limb breakages.	Remove
35	Austrian Pine	Pinus nigra	27	Fair		Remove
36	Austrian Pine	Pinus nigra	31	Fair		Remove
37	Black Walnut	Juglans nigra	43	Fair		Remove
38	Silver Maple	Acer saccharinum	40	Fair		Remove
39	Manitoba Maple	Acer negundo	28	Poor		Remove
40	Manitoba Maple	Acer negundo	34	Fair/Poor		Remove
41	Tree of Heaven	Ailanthus altissima	56	Fair/Poor	Moderate to significant deadwood in canopy. Tree growing into Manitoba Maple (40).	Remove
42	Austrian Pine	Pinus nigra	13	Fair		Remove
43	Austrian Pine	Pinus nigra	15	Fair		Remove
44	Austrian Pine	Pinus nigra	19	Fair		Remove
45	Japanese Maple	Acer palmatum	14	Fair		Remove
46	Mountain Ash	Sorbus	20	Fair		Remove
47	White Spruce	Picea glauca	25	Fair		Remove

48	Black Walnut	Juglans nigra	18	Fair		Retain
49	White Spruce	Picea glauca	34	Fair		Remove
50	White Spruce	Picea glauca	30	Fair		Retain
51	White Spruce	Picea glauca	30	Fair		Retain
52	White Spruce	Picea glauca	30	Fair		Retain
53	Littleleaf Linden	Tilia cordata	21	Fair		Remove
54	Austrian Pine	Pinus nigra	19	Fair		Remove
55	Tree of Heaven	Ailanthus altissima	35	Fair	Co-dominant stem.	Remove

PHOTO RECORD



Tree #1 looking South-East.



Tree #2 and #3 looking North-East.



Tree #4 looking South-East.



Trees #5 through #7 looking North-East.



Trees #8 and #9 looking North-East.



Tree #10 through #17 looking South-West.



Trees #18 and #22 looking North-East.



Trees #23 through #32 looking North-East



Tree #33-34, and #54 looking North-West.



Trees #37 and #38 looking North-East.



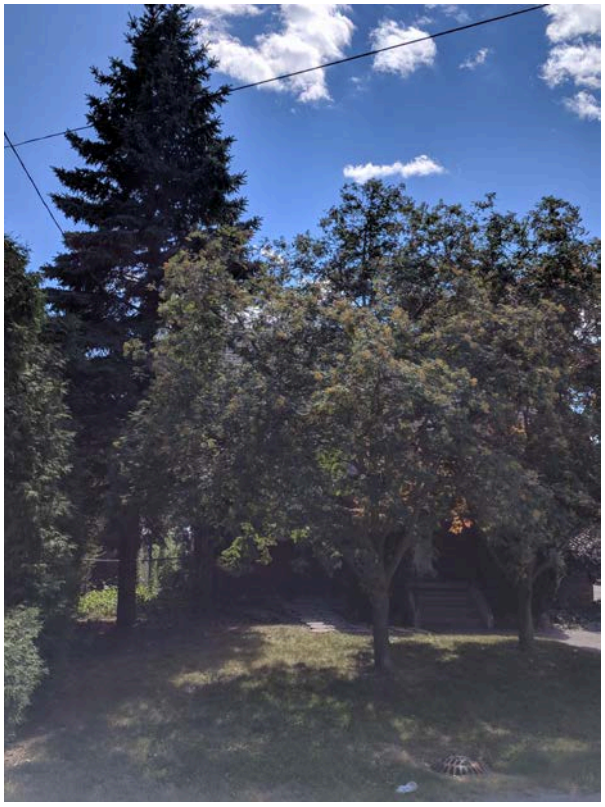
Tree #40 and #41 looking South.



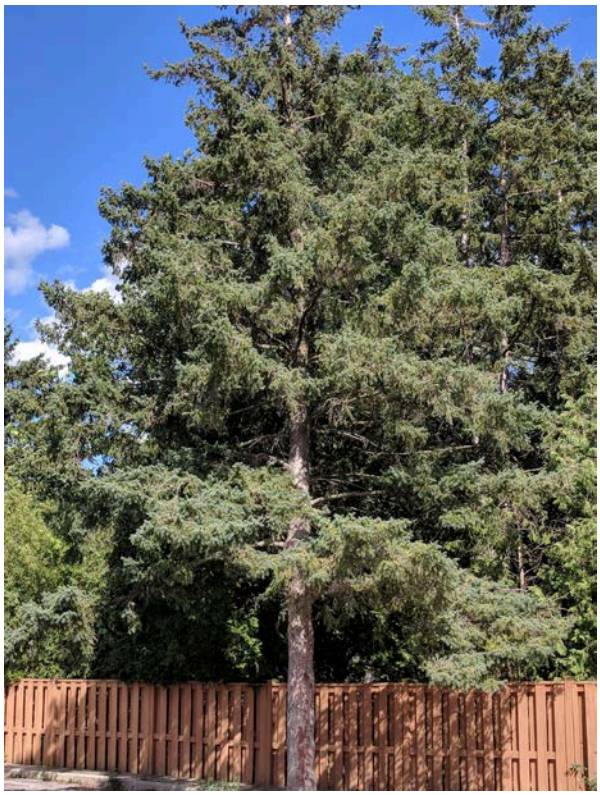
Tree #55 and #39 looking East.



Trees #42 through #44 looking South.



Trees #45 through #47 looking South-West



Trees #49 through #53 looking South-East



Trees #53 looking North-East.

TREE PROTECTION RECOMMENDATIONS

The following standards shall apply to any trees that are identified to be retained. Where the municipality enforces its own standards, those of the governing municipality shall supersede the recommendations contained herein. In all other instances, the following recommendations shall be treated as minimum standards for tree protection and retention.

1.0 ESTABLISH A TREE PROTECTION ZONE

The purpose of the tree protection zone is to prevent root damage, soil compaction and soil contamination during construction activities. Workers and machinery shall not disturb the tree protection zone in any way. In order to prevent access, the following recommendations are offered.

- Install tree protection hoarding as per City of Burlington detail TP-1.
- Allow no fill, equipment, supplies, or waste within the tree protection zone.
- Maintain the tree protection hoarding in good condition for the duration of construction.
- Tree protection hoarding is not to be removed until all construction activities have been completed.

2.0 ROOT PRUNING

Where possible, hand dig areas closest to each tree to prevent any unnecessary tearing or pulling of roots. Removal of roots that are greater than 2.5 centimeters in diameter or roots that are injured or diseased should be performed as follows:

- Preserve the root bark ridge (similar in structure to the branch bark ridge). Directional Root Pruning (DRP) is the recommended technique and should be employed during hand excavation around tree roots. Roots are similar to branches in their response to pruning practices. With DRP, objectionable and severely injured roots are properly cut to a lateral root that is growing downward or in a favorable direction.
- All roots needing to be pruned or removed shall be cut cleanly with sharp hand tools, by a Certified Arborist.
- No wound dressings or pruning paint shall be used to cover the ends of each cut.
- All roots requiring pruning shall be cut using any of the following tools:
  Large or small loppers, Hand pruners, Small hand saws, Woundscribers
- Avoid prolonged exposure of tree roots during construction - keep exposed roots moist and dampened with mulching materials, irrigation or wrap in burlap if exposed for longer than 4 hours.

3.0 FERTILIZATION AND IRRIGATION

The following measures are recommended:

- Aeration and deep root fertilize to ensure that all trees receive the appropriate nutrients for healthy growth.
- Fertilizer must be a low nitrogen formula such as *5-30-30* to promote root growth rather than shoot growth.
- If construction occurs during July and / or August, roots must be irrigated during conditions of drought.

4.0 ESTABLISH MAINTENANCE PROGRAM

Pre-Construction:

- Prune all trees to remove any deadwood and obstruction prune as required.

During Construction:

- Irrigate tree preservation zones during drought conditions (June through September), in an attempt to reduce the effects of drought stress.
- Inspect the site every month to ensure that all tree protection fence / hoarding is in place and in good condition, inspect the trees to monitor condition.

Post-Construction:

- Prune crowns to remove any newly developed deadwood only. Do not remove any live growth.
- Inspect the trees three times per year (May, July, and September) to monitor condition for a minimum period of 2 additional years.

5.0 LANDSCAPING

Any landscaping completed within the tree preservation zones, after construction is completed and tree protection fencing / hoarding has been removed, is to be carried out in such a way that it will not cause damage to any of the trees or their roots. The trees must be protected to the same standards listed earlier in this report, but without the use of tree protection fence or hoarding.

The following guidelines are recommended:

- **No grade changes** are permitted which include adding and/or removing soil.
- **No excavation** is permitted that can cause damage to the roots of the tree.
- **No heavy equipment** can be used to compact the soil within the tree preservation zone.
- Where possible, hard surface paving around trees to be protected should be constructed using permeable products such as interlocking stone. Areas to be paved must be hand dug when encroaching within the tree protection zone.

CONCLUSIONS

Based on our investigations, all trees present within the proposed development site and all City owned trees with the exception for Trees #28, #31, and #32 will be impacted by the proposed construction. All trees requested for removal that fall within the realm of the City of Burlington's tree by-laws are subject to permit approval for their injury or removal, and as such, the appropriate permits shall be in place prior to any removals. For trees to be retained, the City of Burlington's guidelines and the recommendations provided herein shall be followed.

Kindly direct any questions regarding this report to the undersigned.

Respectfully submitted,
MHBC Planning, Urban Design & Landscape Architecture



Nick A. Miele BLA, OALA, CSLA, ISA
Senior Landscape Architect, Partner
ISA Certified Arborist No. ON-1251A