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February 03, 2022 [*Revised May 12, 2022*]

ARBORIST REPORT
355 Plains Road & 1010 Downsview Drive, Burlington, Ontario

BACKGROUND

MHBC was retained to conduct an inventory of the existing trees within the subject lands located at 355 Plains Road & 1010 Downsview Drive in the City of Burlington. This investigation examined approximately 104 trees within and around the subject lands. Field work was completed on January 5, 2022, 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 trees within the site boundary and all trees within adjacent public boulevard.

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 vigour 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 No.	Common Name	Botanical Name	DBH (cm)	Canopy Diameter (m)	Condition	Structure	Comments - Condition Related	Recommendation
1	Glenleven Linden	Tilia x flavescens 'Glenleven'	39	11	F	F	Moderate lean	P
2	American Elm	Ulmus americana	12	3	F	F	2 stems, growing in planter box	R
3	Norway Maple	Acer platanoides	14	4	F	F/G	Growing in small opening in asphalt, part of daycare area	R
4	Norway Maple	Acer platanoides	19	6	F	F/G	Growing in small opening in asphalt, part of daycare area	R
5	Norway Maple	Acer platanoides	10	3	D	P	Tree is 100% dead.	R
6	Black Walnut	Juglans nigra	~28	13	F	F/G	On neighbouring property. Growing adjacent to wood fence	P
7	Norway Spruce	Picea abies	~22	7	F	F	Mild/moderate lean, on neighbouring property	P
8	Norway Spruce	Picea abies	~35	8	F/G	F/G	On neighbouring property	P
9	Colorado Spruce	Picea pungens	21	6	F/G	F	Mild lean	R
10	Colorado Spruce	Picea pungens	39	9	F/G	F/G		R
11	Flowering Crabapple Tree	Malus Sp.	16	5	F/P	F/P	Profusion of water shoots, internal rot suspected	R
12	Black Walnut	Juglans nigra	24	9	F/G	F/G		R
13	Colorado Spruce	Picea pungens	26	8	F/P	F	Mild lean	R
14	Black Walnut	Juglans nigra	20	7	F	F/P	Growing in chain link fence	P
15	Norway Spruce	Picea abies	34	10	F	F/G		R
16	Norway Spruce	Picea abies	26	9	F	F		R

17	Horse Chestnut	Aesculus hippocastanum	~35	10	F	P	Signs of rot at main crotch where co-dominant leader has failed. Growing between chain link fence and wood fence	RX
18	Manitoba Maple	Acer negundo	~20	5	F/P	P	Signs of rot at main crotch where co-dominant leader has failed. Growing between chain link fence and wood fence	RX
19	Norway Spruce	Picea abies	14	6	F	F		R
20	Norway Maple	Acer platanoides	31	11	F	F	Crown moderately imbalanced due to adjacent trees	R
21	Silver Maple	Acer saccharinum	57	22	F	F/P	Significant rot evident at main union, one stem has failed in the past	R
22	Silver Maple	Acer saccharinum	57	21	F	F	4 stems	R
23	Norway Maple	Acer platanoides	41	16	F/P	F/P	obvious signs of rot in trunk and some main limbs	R
24	Norway Spruce	Picea abies	28	6	F	F		R
25	Norway Spruce	Picea abies	36	8	F	F/G		R
26	Norway Maple	Acer platanoides	48	23	F	F	Some poor unions in canopy	R
27	Norway Spruce	Picea abies	30	9	F	F	High canopy is more susceptible to wind throw	R
28	Norway Maple	Acer platanoides	42	20	F	F		R
29	Norway Spruce	Picea abies	27	11	F	F		R
30	Norway Maple	Acer platanoides	37	18	F	F		R
31	Silver Maple	Acer saccharinum	44	23	F/P	P	2 Stem at base, Tree is in decline, significant rot and deadwood in canopy with multiple failures	R
32	Silver Maple	Acer saccharinum	37	19	F/P	P	2 stems at base, rot at base, co dominant stem failed	R
33	Silver Maple	Acer saccharinum	54	18	F/P	P	Single stem remains, rot at base, co dominant stem failed	R
34	Silver Maple	Acer saccharinum	45	25	F/P	P	2 stem at base, multiple past failures in upper canopy	R
35	Silver Maple	Acer saccharinum	50	21	F/P	P	2 stem at base, rot in trunk, multiple past failures in upper canopy	R
36	Douglas Fir	Pseudotsuga menziesii	24	7	F	F/P	Mild lean	R
37	Douglas Fir	Pseudotsuga menziesii	33	13	F	F	Mild bow in trunk, mild lean	R

38	Douglas Fir	Pseudotsuga menziesii	29	11	F	F	Mild/moderate lean	R
39	Norway Maple	Acer platanoides	30	13	F	F	Mild/moderate deadwood in canopy	R
40	Norway Maple	Acer platanoides	35	14	F	F/G		R
41	Norway Maple	Acer platanoides	32	12	F	F		R
42	Norway Maple	Acer platanoides	29	10	F	F		R
43	Colorado Spruce	Picea pungens	46	8	F	F/G		R
44	Colorado Spruce	Picea pungens	37	6	F	F		R
45	Colorado Spruce	Picea pungens	27	3	P	F	Tree is in declining health	R
46	Colorado Spruce	Picea pungens	38	5	P	F	Bow in trunk, Tree is in declining health	R
47	Colorado Spruce	Picea pungens	42	7	F	F		R
48	Norway Spruce	Picea abies	34	6	F	F	Mild/moderate needle loss	R
49	Norway Maple	Acer platanoides	29	8	F	F	Mild/moderate deadwood in canopy	R
50	Norway Maple	Acer platanoides	31	9	F	F		R
51	Norway Maple	Acer platanoides	22	7	F/G	F		R
52	Norway Maple	Acer platanoides	36	9	F/G	F	Slightly imbalanced crown	R
53	Colorado Blue Spruce	Picea pungens var. glauca	42	11	F	F	2 stems at base	R
54	Norway Maple	Acer platanoides	27	12	F	F		R
55	Norway Maple	Acer platanoides	30	13	F	F	Mild/moderate deadwood in canopy	R
56	Norway Maple	Acer platanoides	37	15	F	F	Mild/moderate deadwood in canopy	R
57	Norway Maple	Acer platanoides	42	16	F	F		R
58	Colorado Blue Spruce	Picea pungens var. glauca	50	13	F	F/G		R
59	Siberian Elm	Ulmus pumila	24	10	F	F/P	3 stems, adjacent to wood fence, self-seeded, volunteer tree	R
60	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	5	1	F/G	F/G		P
61	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	8	2	F/G	G		P
62	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	9	3	F/G	G		P
63	Flowering Crabapple Tree	Malus Sp.	43	7	F	F	Mild/moderate deadwood in canopy	P
64	Colorado Blue Spruce	Picea pungens var. glauca	37	5	F	F	Moderate needle loss at branch tips	R
65	Colorado Blue Spruce	Picea pungens var. glauca	33	5	F	F		R
66	London Plane Tree	Platanus × acerifolia	54	20	F/G	F/G		R
67	London Plane Tree	Platanus × acerifolia	38	18	F/G	F/G		R

68	London Plane Tree	Platanus × acerifolia	43	19	F/G	F		R
69	London Plane Tree	Platanus × acerifolia	49	20	F	F	Some rot suspected in trunk, some developing structural issues	R
70	Fraser Fir	Abies fraseri	14	5	F	F	Competing with adjacent tree	R
71	London Plane Tree	Platanus × acerifolia	15	4	F/G	F	Self-seeded, Competing with adjacent tree	R
72	London Plane Tree	Platanus × acerifolia	53	25	F/G	G		R
73	London Plane Tree	Platanus × acerifolia	23	6	F	F	Small/elevated crown due to adjacent trees	R
74	London Plane Tree	Platanus × acerifolia	20	21	F/G	F/G		R
75	London Plane Tree	Platanus × acerifolia	36	18	F/G	F/P	Imbalanced crown due to adjacent trees	R
76	Colorado Spruce	Picea pungens	35	7	F	F		R
77	Colorado Spruce	Picea pungens	53	9	F	F/G		R
78	Colorado Spruce	Picea pungens	55	9	F/P	F	Top is dying back, tree is in with beginning stages of decline	R
79	Colorado Spruce	Picea pungens	38	6	F	F		R
80	London Plane Tree	Platanus × acerifolia	43	25	F/G	F		R
81	London Plane Tree	Platanus × acerifolia	27	17	F	F	Imbalanced crown due to adjacent trees	R
82	London Plane Tree	Platanus × acerifolia	34	21	F/G	F	Forked leader in canopy	R
83	London Plane Tree	Platanus × acerifolia	43	23	F/G	F		R
84	Balsam Fir	Abies balsamea	41	12	F/G	F	Mild bow in trunk	R
85	Balsam Fir	Abies balsamea	35	9	F	P	Tree has been topped (possible past structural failure)	R
86	Balsam Fir	Abies balsamea	34	13	F	F/G		R
87	Balsam Fir	Abies balsamea	33	11	F	F	Moderate 's' bow in trunk	R
88	Red Maple	Acer rubrum	26	16	F	F/P	2 stems at base poor form	R
89	Red Maple	Acer rubrum	31	14	F	F/P	Multiple stems with signs of rot, poor form	R
90	White Spruce	Picea glauca	39	16	F	F/G		R
91	White Spruce	Picea glauca	65	21	F/G	F		R
92	White Spruce	Picea glauca	37	14	F/P	F	Tree is in decline	R
93	White Spruce	Picea glauca	40	16	F	F	Moderate bow in trunk	R
94	Red Maple	Acer rubrum	17	12	F/G	F/G		R
95	Red Maple	Acer rubrum	22	15	F/G	F/G		R
96	Colorado Spruce	Picea pungens	49	16	F	F		R
97	Colorado Spruce	Picea pungens	28	8	F	F/P	Moderate bow in trunk	R

98	Manitoba Maple	Acer negundo	~60	26	F	P	Moderate/significant lean, with developing structural issues	R
99	Manitoba Maple	Acer negundo	~32	12	F	F/P	Tree is between wood fences, 2 stem, Appears to be self seeded	R
100	Manitoba Maple	Acer negundo	~14	6	F	P	Tree is between wood fences, Appears to be self seeded	R
101	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	~14	8	F/G	F/G	On neighbouring property	P
102	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	~14	10	F/G	F/G	On neighbouring property	P
103	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	~14	14	F/G	F/G	On neighbouring property	P
104	Autumn Blaze Maple	Acer freemanii 'Jeffersred'	~14	8	F/G	F/G	On neighbouring property	P
	Key to Condition Ratings							
	Structure and Health ratings are measured on a scale of Good (G), Fair (F), Poor (P)							
Key to Recommendation Codes								
P	Retain				R		Remove tree	
					RX		Remove Dead, Dying or Hazard Tree	

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 detail 2 / TI-2.
- 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 centimetres 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

After conducting the site investigation, we believe that 89 trees should be removed due to their conflict with the proposed development and or state of health. In addition, trees 17-18 should be removed due to their condition. All other trees identified for retention can be successfully retained if the recommendations contained herein are followed. Special care shall be taken when working within or near the tree protection zones of trees that are to be retained. Where applicable, permit applications are to be submitted to the City of Burlington pursuant to the relevant Tree By-laws and permits shall be in hand prior to any removals.

Kindly direct any questions regarding this report to the undersigned.

Respectfully submitted,
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