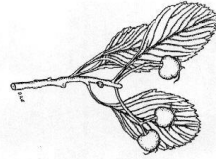


Arborist Report for Queen Street South and Britannia Road West



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1. Introduction

The following is an arborist report for the property at Queen Street South and Britannia Road West Drive, in Mississauga Ontario. The purpose of this report was to ascertain the potential impacts of the proposed construction of a new development on the trees on the site and on adjacent properties.

2. Methods

On-site inspection were made on August 6 and 9, 2021. The sizes of individual trees were measured as diameter at breast height (DBH), breast height being 137 cm from ground level. The locations of these trees are indicated on the modified site plan (Fig. 1). From the data collected plant Condition Rating (CR), Location Rating (LR), Species Rating (SR), and minimum Tree Protection Zones (TPZ), were estimated.^{1,2}

It is necessary to protect all trees designated for preservation during both demolition and construction. This tree protection can be accomplished by protecting the said trees with *tree protection barriers*. The minimum tree protection zone (TPZ) radius is based on the diameter of the tree ($TPZ \approx 0.06_{m/cm} \times DBH_{cm}$). Tree barriers for road allowance areas would be composed of a 1.2 metres (4 ft.) high plastic safety fencing secured on metal T-bar supports as per city “framed hoarding” detail. Usually, tree protection barriers, not on road allowance, are to be “solid board hoarding” at 1.2 metres (4 ft.) high, and composed of plywood.³

TPZ signs must be added to TPZ barriers. Signage, as shown in typical detail drawing ‘Tree Protection Zone (TPZ) Signage NHF-401’, shall be installed on all sides of the TPZ barrier. The distance between individual signs shall not exceed 10 meters on any one side of the barrier. The phone number required to be printed on TPZ signage should be that of the appropriate District of the Tree Protection and Plan Review.

3. Discussion

There are plans to develop the site at Queen Street South and Britannia Road West. Twenty-nine (29) non-exempt trees are proposed to be removed, in order to allow for the proposed development (Table 1, Fig. 1).

3.2 Roadside Trees

Removal

Two (2) city owned trees over 15cm DBH are proposed to be removed. (Table 1, Fig. 1 Trees #1 & 2). These trees are in conflict with the proposed development.

3.3 Private Trees

Removal

Twenty-three (23) non-exempt privately owned trees over 15cm DBH are proposed for removal due to conflict with the proposed development. (Table 1, Fig. 1 Trees # 3 - 26).

3.4 Neighbouring Trees

Preservation:

Seven (7) Neighbouring trees are proposed to remain. Four (4) are at risk of injury and will require the neighbours consent to injure (Table 1, Fig. 1 Trees #28 – 33, 37).

Removal

Four (4) non-exempt privately owned trees over 15cm DBH are proposed for removal (with neighbour's consent) due to conflict with the proposed development. (Table 1, Fig. 1 Trees #27, 34-36).

3.5 Tree Injury Mitigation & Tree Protection:

Majority of the TPZs are to be protected by tree protection fencing as illustrated on the Tree Preservation Plan. Areas within the tree protection zone shall remain undisturbed for the duration of site construction and shall not be used for the storage of excavated fill, building/construction material, structures, or equipment. Any work required adjacent or within TPZ (Tree Protection Zone) must be completed using hand tools to avoid any potential damage of the root zone. All roots found outside the TPZ to be cut (pruned) sharply. Heavy equipment is prohibited within the TPZ. Storage of materials is prohibited within the TPZ. The Contractor shall discuss watering of the roots with the construction manager prior to pruning to ensure that so that optimum soil moisture is maintained during construction and backfilling operations. Backfilling must be completed as soon as practical with clean, uncontaminated native topsoil or mulch. An Arborist should continuously monitor the health of the tree as construction is ongoing and make any recommendations to mitigate stress from construction such as pruning, watering, and deep root feeding. Once construction is complete an Arborist should check to see if there are any tree related issues before the removal of the protection fencing.

All tree "To be Preserved": No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined

above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.

It is necessary to protect all trees designated for preservation during both demolition and construction. This tree protection can be accomplished by protecting said trees with tree protection barriers. The minimum tree protection zone (TPZ) radius is based on the diameter of the tree ($TPZ \approx 0.06_{m/cm} \times DBH_{cm}$). Tree barriers for road allowance areas would be composed of a 1.2 metres (4 ft.) high orange plastic web snow fencing secured on 2"x4" wood frames. Usually, tree protection barriers, not on road allowance, are to be 1.2 metres (4 ft.) high, and composed of plywood (5 Appendix).^{3,4}

4. Conclusion

In order to allow for the proposed construction at the Queen Street South and Britannia Road West Drive, in Mississauga Ontario, several non-exempt trees would be removed or injured as follows.

Twenty-three (23) privately owned trees over 15cm DBH are proposed for removal.

Two (2) city owned trees over 15cm DBH are proposed for removal.

Four (4) neighbouring trees are proposed for removal. (with neighbour's consent)

Four (4) neighbouring trees are at risk of injury (with neighbor's consent)

All of the trees to be retained would be protected by barriers during the demolition and construction work on the site as per the city tree protection detail. *MSLA Landscape Architects* has developed a detailed tree preservation plan and proposed landscape plan for the subject site.

D. Andrew White M. Sc.



August 27, 2021

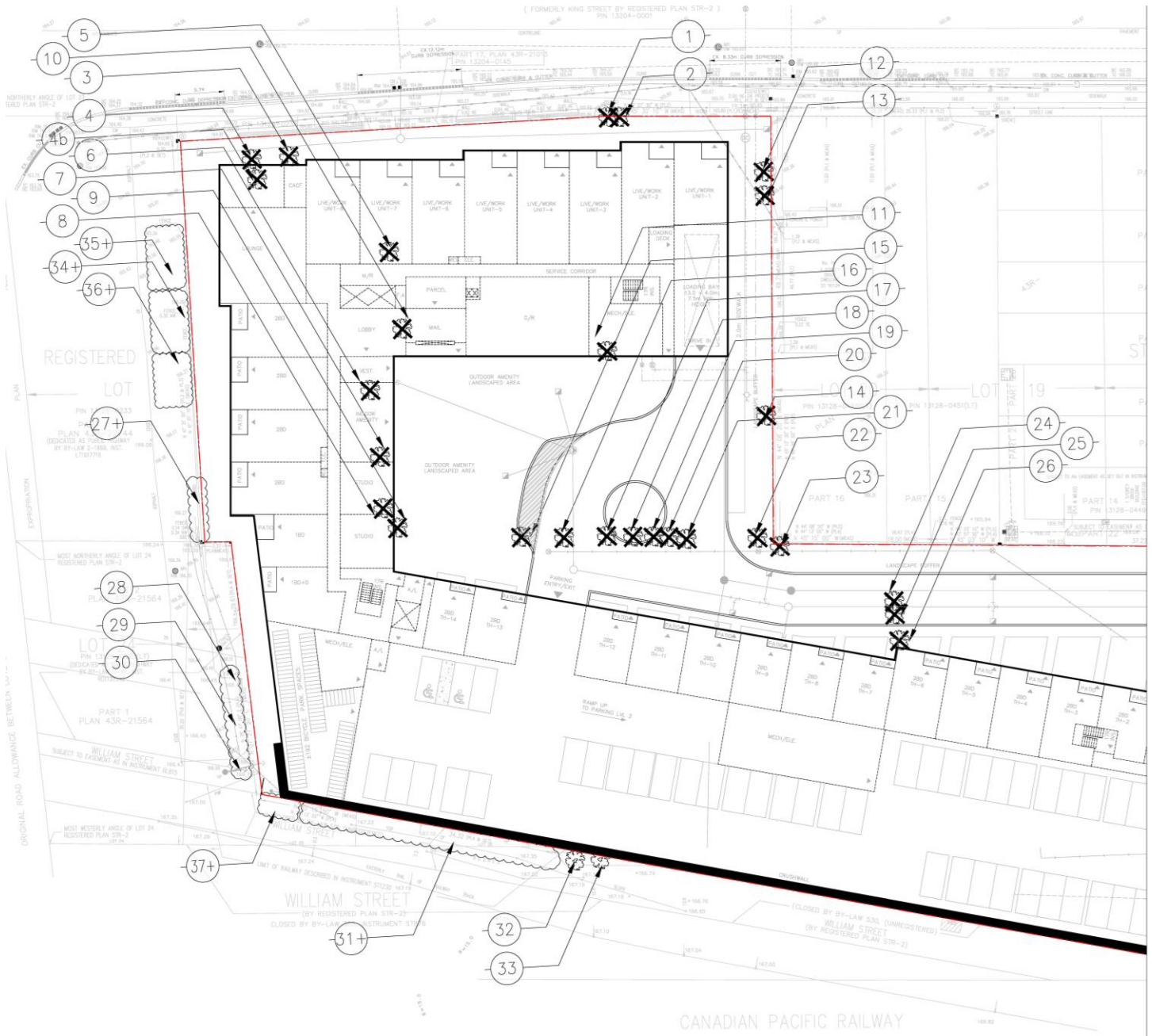
Table #1. Tree number (No.), species, diameter at breast height (DBH), Condition Rating (CR) Tree Category (TC) and comments.

No.	Tree Species	DBH (cm)	CR (%)	TC	Comments	Recommendations
#1 T#401	Norway Maple	54	55	5	Tree with decay at base, crown base at 3 m	To be Removed
#2 T#402	Siberian Elm	19	50	5	Tree close to maple, crooked stem	To be Removed
#3 T#403	Blue Spruce	36	65	1	Tree in fair condition, crown base near 0 m	To be Removed
#4 T#404	Red Oak	23	65	1	Tree in fair condition, crown base at 1.6 m	To be Removed
#4b	Juniper	20	52.5	1	Tree with thin foliage, high-poor condition	To be Removed
#5 T#405	Norway Maple	15-19	65	1	Tree in fair condition	To be Removed
#6 T#070	Manitoba Maple	33	65	1	Tree with 2 leaders at 1 m	To be Removed
#7 T#407	Linden	44	65	1	Tree with crown base at 2.2 m	To be Removed
#8 T:#408	Honey Locust	34	60	1	Tree with crown base at 2.4 m	To be Removed
#9 T:#409	Manitoba Maple	28	60	1	Tree with crown base at 1.8 m	To be Removed
#10 T#410	Catalpa	78	55	1	Tree with crown base at 3 m	To be Removed
#11 T#411	Black walnut	78	55	1	Tree with crown base at 4 m, and deadwood on trunk at 1.6 m	To be Removed
#12 T:#412	Siberian Elm, dead	32-40	0	1	Stump of tree removed, circa 50 cm DBH	To be Removed
#13 T:#414	Norway Maple	17	65	1	Small tree in fair condition	To be Removed
#14 T:#414	Black Walnut	38	65	1	Tree in fair condition, near	To be Removed

					fence, with high crown base at 5 m	
#15 T#415	Manitoba Maples	10-16	20-40	1	Naturalised trees near fence mostly moribund to poor condition	To be Removed
#16 T#416	Manitoba Maples	10-16	20-40	1	Naturalised trees near fence mostly moribund to poor condition	To be Removed
#17 T#422	White Pine	29	55	1	Tree near fence with high crown base, and thin foliage	To be Removed
#18 T#423	White Pine	31	55	1	Tree near fence with high crown base 5-6 m, and thin foliage	To be Removed
#19	Manitoba Maple	125	20	1	Fallen tree with new coppice	To be Removed
#20	Manitoba Maple	115	30	1	Fallen pollard tree with new coppice	To be Removed
#21	Manitoba Maples	10-16	20-40	1		To be Removed
#22	Manitoba Maples	10-16	20-40	1		To be Removed
#23 T#424	Black Walnut	22	55	1	Tree near fence, low-fair condition	To be Removed
#24	Manitoba Maples	10-20	0-50	1	Dead trees near fence, with some new coppice on S end of row	To be Removed
#25	Manitoba Maples	10-20	0-50	1	Dead trees near fence, with some new coppice on S end of row	To be Removed
#26	Manitoba Maples	10-20	0-50	1	Dead trees near fence, with some new coppice on S end of row	To be Removed

#27+	Manitoba Maples	10-14	55-70	2	Small off-site trees near property line	To be Removed (w/ neigh. consent)
#28+	Siberian Elms	10-15	60-70	2	Small off-site trees near property line	To Remain
#29+	Common Firs	12-14	0-20	2	Small off-site trees are dead to moribund	To Remain
#30+	Siberian Spruces	12-16	50-65	2	Off-site trees in poor to fair condition	To Remain
#31+ T#419	Siberian Elms	10-15	55-70	2	Off-site trees in fair to good condition	Risk of Injury (w/ neigh. consent)
#32 T#432	Cottonwood	30	0	2	Border tree, now dead, may be clone of #33	Risk of Injury (w/ neigh. consent)
#33 T#433	Cottonwood	28	0	2	Border tree, now dead, may be clone of #32	Risk of Injury (w/ neigh. consent)
#34+	Siberian Elms	3-10	65-70	2	Off-site trees in fair to good condition	To be Removed (w/ neigh. consent)
#35+	Russian Olives, 2	10-26	65-70	2	Off-site trees in fair to good condition	To be Removed (w/ neigh. consent)
#36+	Siberian Spruce, 3	14-21	50-60	2	Off-site trees in poor to low-fair condition	To be Removed (w/ neigh. consent)
#37+	Willow trees, 2	10-15	65-70	2	Off-site trees in fair to good condition	Risk of Injury (w/ neigh. consent)

Figure #1: Tree locations on the Queen Street South and Britannia Road West development site: Tree numbers (green) & tree protection barriers.



5. References

1- Council of Tree Landscape Appraisers. 2000. Guide for Plant Appraisal. 9th Edition. International Society of Arboriculture.

2- International Society of Arboriculture of Ontario. 1998. Ontario Supplement to Guide for Plant Appraisal 8th Edition. Ontario Chapter, International Society of Arboriculture.

3- City of Mississauga. 2001. THE TREE PERMIT BY-LAW NUMBER 474-05. Corporation of the City of Mississauga, ON.

4- City of Mississauga. 2012. TREE PROTECTION BY-LAW 254-12 (amended by 13-13). Corporation of the City of Mississauga, ON.

5- City of Mississauga. 2021. Application to Permit the Injury or Destruction of Trees on Private Property. City of Mississauga Community Services Department.

6- MMAH. 2005. Greenbelt Plan No. 208/2005. Feb 28, 2005. Ministry of Municipal Affairs & Housing.