772 Winston Churchill Boulevard Oakville, ON L6J 7X4

prepared for

772 Winston Churchill Limited General Partnership 2710-333 Bay Street Toronto, ON M5H 2R2

prepared by

ISA© Certified Arborist Zara Brown, ON-2252A PROJECT NO: 123558/141237

Submission Date: May 10, 2024 **Revision 9**



Arcadis 200 East Wing-360 James Street North ARCADIS Hamilton ON L8L 1H5 Canada tel 905 546 1010 fax 905 546 1011 Arcadis.com

Introduction

Arcadis was retained by 772 Winston Churchill Limited General Partnership to conduct a Tree Inventory, and to prepare a Tree Preservation Plan and Arborist Report, as required by the Town of Oakville, and in support of the proposed industrial development. This report will provide:

- A tree inventory and visual assessment;
- Arborist Report;

Tree Protection Plans (TPP-1 to TPP-4) and Tree Protection Details (TPD-1 to TPD-3) accompany this report, updated May 2024 (Issue 6). Plans must be read in conjunction with this report

Existing Site Conditions

The report investigates the existing site (Appendix A) which comprises 38.53 acres (15.59 ha.) of undeveloped land. The subject lands are located on the west side of Winston Churchill Boulevard, south of the existing CN railway. To the west of the subject lands are Open Space and Low-Density Residential land uses. To the North is the CN railway and to the south is vacant land. To the east of the subject lands, across Winston Churchill Boulevard, there is an industrial building under construction. The subject site has no structures.

Construction on the subject lands requires utility connections in an 8.0m wide easement that currently has a crushed stone and concrete trail, a berm and vegetation that will tie-in to connections at Acacia Court.

Methodology

Tree resources were assessed and are reported using the following attributes:

Tree No. or Groups	identifier assigned to the tree (s) corresponding to those indicated in the Tree Protection Plans (TPP-1 to TPP-4).							
Botanical Name	ormal scientific name.							
Common name	locally known English name.							
DBH	diameter at breast height, in centimetres, measured at 1.4m above the adjacent ground.							
Condition	 condition of the specimen based on the visual assessment of the tree health reported as: Good (G) - dead branches less than 10%; signs of good compartmentalization on any wounds; no structural defects Fair (F) -10-30% dead branches; size or occurrence of wounds present some concerns; minor structural defects Poor (P) - more than 30% dead branches; weak compartmentalization; early leaf drop; presence of insects or disease; major structural defects Dead (D) - tree shows no signs of life 							
Minimum Tree Protection Zone (MPTZ)	Tree Protection zone as defined in the Town of Oakville Procedure EN-TRE- 001-001 'Tree Protection During Construction Procedure' (TPD-3)							
Ownership	Ownership of the tree or tree group							

	S – Subject Property A - Adjacent Property M – Municipal Property
Impacts of Development	 determination of whether or not the specimen is impacted by the proposed construction: None – no construction impact within the dripline Limited – construction activity occurs at or within the dripline (less than 30%) and requires precautionary measures. Impacted – construction activity occurs within a significant portion of the dripline or requires the removal of the specimen.
Recommendation	determination to retain/preserve, remove or transplant the specimen.
Comments	additional information on tree specimen

The tree inventories were conducted on May 13, 2021, September 29, 2021 and May 2, 2024 to include all trees within the disturbed area – 10cm dbh and greater on private lands and all tree regardless of DBH on public lands. Trees were located using an android GIS application MapIt GIS Version 7.6.0.0Core – accuracy of tree locations are within 5m of the actual location, for the first two inventories. Tree locations were updated using surveyed information provided by KRCMAR Surveyors Ltd dated October 25, 2022. The final inventory was complete using the iPhone 14 Field Maps application with an accuracy of 2m. This information is summarized in Existing Tree Identification Table (TPD-1 & TPD-2).

Tree Species

A total of one hundred eighty-five (185) individual trees and fifty-four (54) tree groups were observed for a total of three hundred and forty (340) trees. Species include:

Balsam Fir Trident Maple Manitoba Maple Norway Maple Freeman Maple Red Maple Silver Maple Amur Maple Ohio Buckeye Yellow Birch Hackberry Dogwood	 (Abies balsamea) (Acer buergerianum) (Acer negundo) (Acer platanoides) (Acer x freemanii) (Acer rubrum) (Acer saccharinum) (Acer ginnala) (Aesculus glabra) (Betula alleghaniensis) (Celtis occidentalis) (Cornus spp.)
Honeylocust	(Gleditsia triacanthos)
Kentucky Coffeetree	(Gymnocladus dioicus)
Black Walnut	(Juglans nigra)
Eastern White Cedar	(Juniperus virginiana)
Tamarack	(Larix laricina)
Tulip Tree	(Liriodendron tulipifera)
Mulberry	(Morus alba)
Norway Spruce	(Picea abies)

White Spruce Blue Spruce	(Picea glauca) (Picea pungens)
Austrian Pine	(Pinus nigra)
Eastern White Pine	(Pinus strobus)
American Sycamore	(Platanus occidentalis)
Trembling Aspen	(Populus tremuloides)
Cherry	(Prunus spp.)
Pear	(Pyrus spp.)
White Oak	(Quercus alba)
Swamp White Oak	(Quercus bicolor)
Red Oak	(Quercus rubra)
Columnar Oak	(Quercus spp.)
Common Buckthorn	(Rhamnus cathartica)
Black Locust	(Robinia pseudoacacia)
Japanese Tree Lilac	(Syringa reticulata)
Northern White Cedar	(Thuja occidentalis)
Basswood	(Tilia americana)
Siberian Elm	(Ulmus pumila)

Proposed Development

772 Winston Churchill Limited Partnership has proposed to construct two (2) new industrial buildings on the 38.53 acre parcel. The proposed buildings are 34,490.92 m² and 28,972.27 m², respectively, and the proposed use is industrial. Buildings have been located to act as an acoustical barrier for the adjacent residential uses. The proposed concept is shown in the Site Plan (Appendix B A-1.0, dated December 19, 2023).

The development requires utility connections through an existing easement on public lands with connections at Acacia Court.

Findings and Recommendations

The development impacts one hundred fifty-six (156) existing trees. Of the one hundred fifty-six (156) trees impacted one hundred eighteen (118) are to be removed and thirty-eight (38) trees are proposed to be transplanted. The remaining trees within five (5) metres of disturbance will be retained with tree protection measures in place, in good condition, for the duration of construction.

Management and Quality Assurance

Pre-Construction Phase

1.	TPZ Fencing:	Tree Protection measures shall be installed prior to any site work
2.	TPZ Signage:	Tree Protection Zone barriers shall be clearly marked with signs stating
		that the area within is a TPZ and that no one is allowed to enter or
		disturb this area without authorization from the project Arborist.
3.	Trunk Protection:	Where there is potential mechanical damage to the tree trunk or
		buttress, the exposed are should be protected by thick wood planks on a
		closed cell foam pad (or other protective material), bound in place by
		straps or wires.
4.	Root Pruning:	Standard arboricultural practices shall be employed where root pruning
		is necessary to maintain the tree health and structural stability. Hand

		excavation or other approved methods shall be used for the asphalt removal to minimize root damage.
5.	Grade Changes:	Every effort shall be made to maintain the existing grades after the removal of the asphalt
6.	Soil Decompaction:	New exposed soil shall be manually decompacted to prepare the soil to receive new topsoil and plant material
7.	Irrigation:	Areas within the TPZ shall be watered and maintained to an acceptable level.
8.	Pruning:	Removal of dead, diseased and dying branches before construction is recommended to reduce risk of failure within the subject site during construction.

Construction Phase

Site Monitoring:	Site monitoring is recommended to be completed at least three (3)
	times during construction to detect any decline in plant health. These
	inspections should be no more than six (6) months apart.

Post-Construction Phase:

1.	TPZ Fencing Removal:	All tree protection measures may be removed once all work on the subject site is complete or in order to facilitate propose landscape plantings. All plant material, existing and new must be maintained until the final inspection.
2.	Plant Health Mitigation:	If required, treatments should be prescribed where evidence suggests that it may be beneficial.
3.	Plant Replacement:	Existing trees shall be maintained in an acceptable condition for two (2) years after the completion of construction. Any tree that declines beyond acceptable depreciation, and fails to recover following treatment, shall be replaced with the same or alternate local species appropriate to the site.
4.	Landscape Inspection:	Upon completion of construction an arborist inspection shall be completed to verify that plant health has been maintained. Inspections will be completed annually to the end of the two (2) year warranty period

Compensation Requirements

Replacement trees are required as a condition of all individual private tree removals. The number of replacement trees required within the Town of Oakville will be determined by the DBH of the living tree to be removed, as determine by the Town of Oakville <u>Replacement Trees and Security Deposit</u> requirements. One replacement tree is required for every 10 cm diameter of the private removed. Summary is shown below:

DBH OF TREE TO BE REMOVED IN CENTIMETRES	NUMBER OF REPLACEMENT TREES REQUIRED	NUMBER OF TREES TO BE REMOVED	TREE REPLACEMENT COMPENSATION REQUIRED				
<10	0	36	0				
10-15	1	28	28				
16-25	2	20	40				
26-35	3	8	24				
>35	DBH*0.10	0	0				
	TOTAL	92	92				

A tree valuation was calculated for the public trees proposed for removal within the sanitary easement. The value was calculated using the Trunk Formula Technique as described in the CTLA Guide for Plant Appraisal, 10th Edition (ISA, 2019).

COMPENSATION SUMMARY	
Number of dead trees	8
Number of private trees removed < 10cm DBH (not including dead)	36
Number of private trees removed > 10cm DBH (not including dead)	56
Number of trees required for compensation	92
Number of public trees removed (not including dead)	18
Final appraised values of public trees to be removed (Appendix D)	\$19,115.21

Additional Recommendations

- 1. Layout of the works should be staked out to verify the Impacts to existing trees. Where field adjustments can be made to accommodate tree preservation, it recommended that the adjustments be considered.
- Tree protection barriers shall be erected 1m outside of the minimum tree protection zones of trees proposed to be preserved. Barriers shall be erected prior to construction and shall remain in place, in good condition, for the duration of the project. Field verification is required to determine whether or not construction impact will occur within the MTPZ as shown in the Tree Protection Plans (TPP-1 to TPP-3).
- 3. Any pruning required for branches and roots that may extend past the TPZ must be carried out by a qualified Arborist or other tree professional, only as necessary to prevent damage from construction activity or to prune broken limbs or roots. All pruning of tree roots and branches must be in accordance with good arboricultural standards.
- 4. Construction must be maintained outside of the TPZ or dripline, whichever is greater, as shown on the Tree Protection Details (TPD-1).
- 5. Tree inventory and tree protection are not shown for trees greater than 10cm beyond 6m of the area proposed to be disturbed for construction. Should the works associated with construction

more move more than 5m beyond its current proposed limit of disturbance an additional tree inventory will be taken to determine if additional tree protection will be required.

6. The site design provides opportunities for plantings along the right of way at Winston Churchill Boulevard, within the proposed landscaped areas on the site, and along the edges of the proposed disturbed areas (restoration/enhancement). For the areas adjacent to the creek (to the east and south) enhanced planting to support the existing creek edge and screening of the industrial complex from adjacent uses is recommended.

Regards,

T KEMP

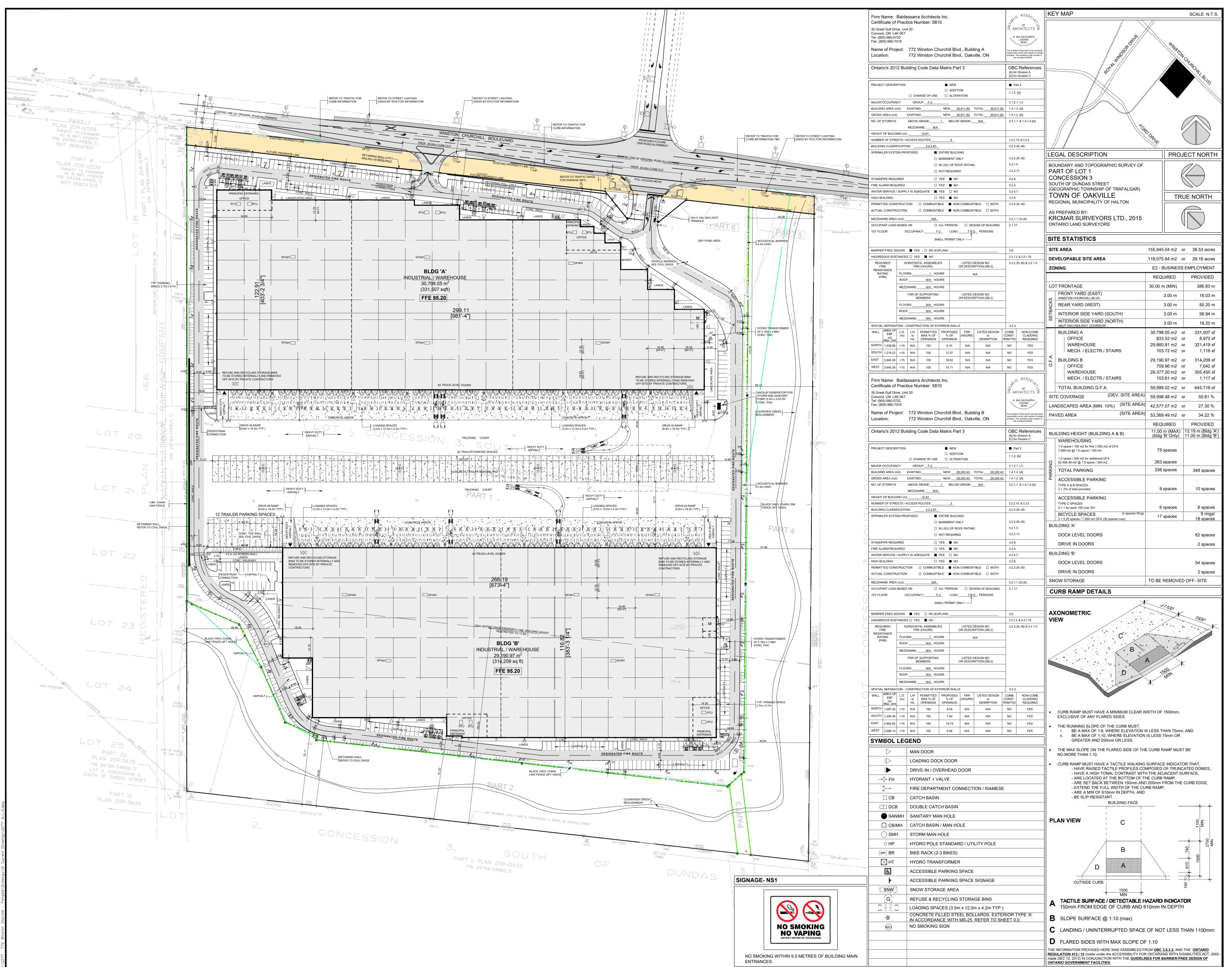
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Nation

Zara Brown, OALA, CSLA, RLA, PMP ISA© Certified Arborist # ON-2252A, Landscape Architect <u>Zara.Brown@Arcadis.com</u> APPENDIX A – EXISTING SITE



APPENDIX B – SITE PLAN



- 772 Winston Churchill - Fenneria/Drawings/Ol Current Drawings/2277 A-L C

No.	ISSUED	DATE
1	ISSUED FOR COORDINATION	MAR. 30, 2021
2	ISSUED FOR SPA	APR. 9, 2021
3	RE-ISSUED FOR SPA	DEC. 15, 2021
4	RE-ISSUED FOR SPA	DEC. 16, 2022
5	ISSUED FOR STEEL AND PRECAST TENDER	FEB. 17, 2023
6	REISSUED FOR SPA	DEC. 19, 2023

No.

REVISION

DATE

BALDASSARRA Architects Inc.

30 Great Gulf Drive, Unit 20 | Concord ON | L4K 0K7 T. 905.660.0722 | **www.baldassarra.ca**



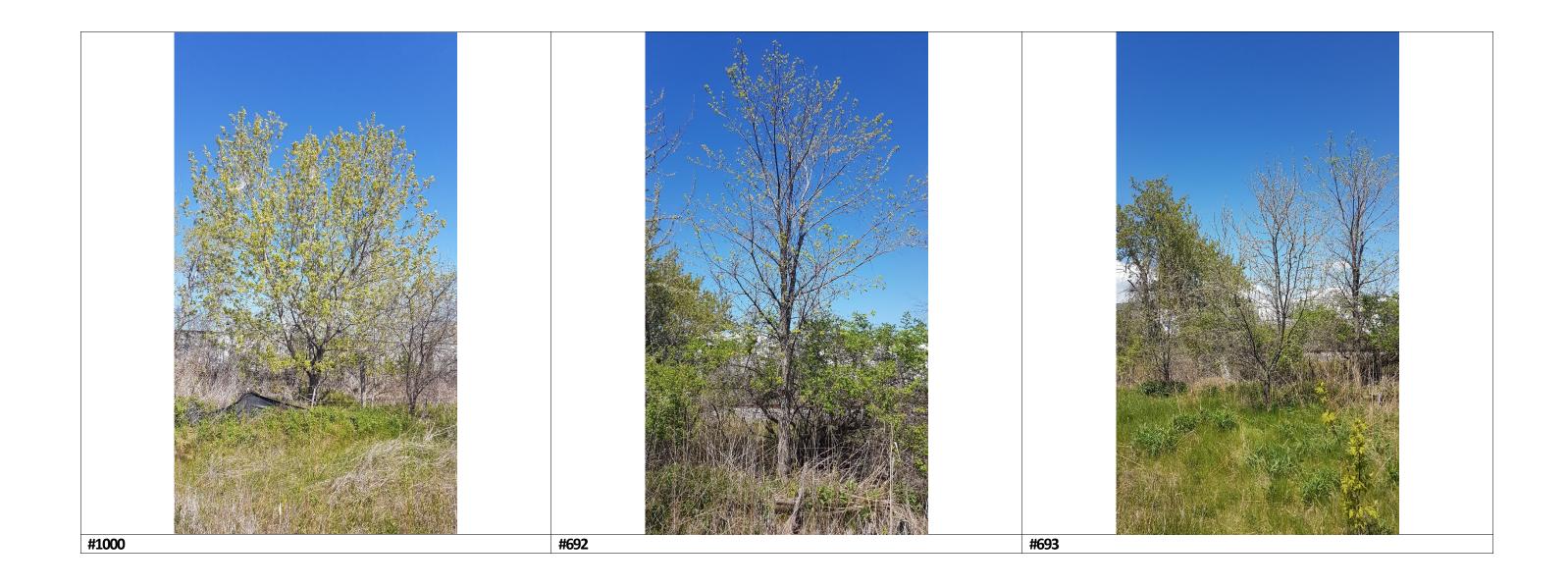
OWNERS INFORMATION:

772 Winston Churchill

Oakville, ONSITE PLANDATE:DRAWN BY:CHECKED:SCALE:FEB. 2021HP1:1000PROJECT NO.DRAWING NO.O:2277A-1.0

APPENDIX C – SITE PHOTOS









APPENDIX D – TREE VALUATION TABLE

					AREA OF										FINAL
					REPLACEMENT TREE	APPRAISED TREE		INSTALLED COST ³	BASIC TREE			COND.		APPRAISED	APPRAISED VALUE⁵
#	BOTANICAL NAME	COMMON NAME	DBH (cm)		(SQ CM) ²	TRUNK INCREASE	\$6.51/SQ CM	COST	COST	RATING ⁴	CONDITION	RATING	RATING	VALUE	VALUE
740	THUJA OCCIDENTALIS	WHITE CEDAR	20.0	314.0	79.0	235.0	1529.9	\$ 607.50	\$ 2,137.35	0.70	G	0.85	0.75	\$ 953.79	\$ 953.79
741	ACER NEGUNDO	MANITOBA MAPLE	23.1	418.9	79.0	339.9	2212.6	\$ 250.53	\$ 2,463.17	0.39	F	0.7	0.75	\$ 504.33	\$ 744.00
742	JUGLANS NIGRA	BLACK WALNUT	27.0	572.3	79.0	493.3	3211.2	\$ 716.67	\$ 3,927.83	0.67	G	0.85	0.75	\$ 1,677.67	\$ 1,677.67
743	ACER SACCHARINUM	SILVER MAPLE	23.1	418.9	79.0	339.9	2212.6	\$ 877.50	\$ 3,090.14	0.61	F	0.7	0.75	\$ 989.62	\$ 989.62
744	ACER X FREEMANII	FREEMAN MAPLE	18.0	254.3	79.0	175.3	1141.5	\$ 925.00	\$ 2,066.46	0.65	G	0.85	0.75	\$ 856.29	\$ 856.29
745	JUGLANS NIGRA	BLACK WALNUT	12.0	113.0	79.0	34.0	221.6	\$ 716.67	\$ 938.27	0.67	F	0.7	0.75	\$ 330.04	\$ 744.00
747	ACER X FREEMANII	FREEMAN MAPLE	16.5	213.7	79.0	134.7	877.0	\$ 716.67	\$ 1,593.67	0.67	G	0.85	0.75	\$ 680.70	\$ 744.00
749	QUERCUS RUBRA	RED OAK	27.0	572.3	79.0	493.3	3211.2	\$ 1,055.00	\$ 4,266.16	0.65	G	0.85	0.75	\$ 1,767.79	\$ 1,767.79
756	QUERCUS ALBA	WHITE OAK	25.1	494.6	79.0	415.6	2705.3	\$ 1,137.50	\$ 3,842.78	0.79	G	0.85	0.75	\$ 1,935.32	\$ 1,935.32
757	ULMUS PUMILA	SIBERIAN ELM	21.5	362.9	79.0	283.9	1848.0	\$ 250.53	\$ 2,098.50	0.39	F	0.7	0.75	\$ 429.67	\$ 744.00
765	ACER X FREEMANII	FREEMAN MAPLE	26.0	530.7	79.0	451.7	2940.3	\$ 925.00	\$ 3,865.31	0.65	F	0.7	0.75	\$ 1,319.04	\$ 1,319.04
771	ACER X FREEMANII	FREEMAN MAPLE	14.5	165.0	79.0	86.0	560.2	\$ 925.00	\$ 1,485.16	0.65	G	0.85	0.75	\$ 615.41	\$ 744.00
772	ACER NEGUNDO	MANITOBA MAPLE	42.0	1384.7	79.0	1305.7	8500.4	\$ 250.53	\$ 8,750.90	0.39	G	0.85	0.75	\$ 2,175.69	\$ 2,175.69
G-09 b	ULMUS PUMILA	SIBERIAN ELM	25.0	490.6	79.0	411.6	2679.7	\$ 250.53	\$ 2,930.21	0.39	F	0.7	0.75	\$ 599.96	\$ 744.00
G-17 b	TILIA AMERICANA	BASSWOOD	12.0	113.0	79.0	34.0	221.6	\$ 847.50	\$ 1,069.10	0.63	G	0.85	0.75	\$ 429.38	\$ 744.00
с	TILIA AMERICANA	BASSWOOD	13.5	143.1	79.0	64.1	417.1	\$ 847.50	\$ 1,264.57	0.63	G	0.85	0.75	\$ 507.88	\$ 744.00
G-20 a	ULMUS PUMILA	SIBERIAN ELM	11.5	103.8	79.0	24.8	161.6	\$ 250.53	\$ 412.08	0.39	F	0.7	0.75	\$ 84.37	\$ 744.00
b	ULMUS PUMILA	SIBERIAN ELM	27.0	572.3	79.0	493.3	3211.2	\$ 250.53	\$ 3,461.69	0.39	F	0.7	0.75	\$ 708.78	
														FINAL VALUE	\$ 19,115.21

1. TA = 0.785(DBH)². Formula based on Table 4.6 Metric Units. Trunk Areas (TA) and Adjusted Trunk Areas (ATA) based on trunk diameter (d) at 1.4m. CTLA Guide for Plant Appraisal, 9th Edition (2000)

2. Based on a 10cm DBH replacement tree size

3. Values based on unit tree costs outlined in Ontario Supplement CTLA Guide for Plant Appraisal, 10th Edition (2021). Species not included

4. Species rating based on Ontario Supplement CTLA Guide for Plant Appraisal, 8th Edition (2003)

5. For trees with appraisal values less than \$744.00 (Town of Oakville's minimum value per tree), values were set to \$744.00.