



1961 Douglas Street / 710 Caledonia Street

Tree Protection Plan Report

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Summary

Caledonia Equity Limited Partnership will be re-developing a property located at 1961 Douglas Street / 710 Caledonia Street in Victoria, BC. As part of the design review process, the City of Victoria requests a tree preservation plan. Caledonia Equity Limited Partnership asked Bartlett Tree Experts to perform a tree inventory and prepare a Tree Preservation Report for the property as part of their submission to the City of Victoria.

Of the 29 trees included in our inventory, 12 are municipally owned or shared trees and 8 trees are protected and cannot be removed without approval from the City of Victoria. Of those 14 protected trees, 2 are of a diameter at breast height (DBH) above 30 cm (Deodar cedars – *Cedrus deodora* #475-476).

The 12 municipally owned trees are as follows: 1 Sweetgum (*Liquidambar styraciflua*) #481 which is a shared tree, 4 Callery Pear (*Pyrus calleryana*) #486-489, 2 European white birch (*Betula pendula*) #494-495, 2 River birch (*Betula nigra* 'dura-heat') #496 & 500, 1 Japanese cherry (*Prunus serrulata*) #497, 1 Purple leaf plum (*Prunus cerasifera*) #498 and 1 Paper birch (*Betula papyifera*) #499.

The plans include demolishing the existing structures on both properties and parking lots to build a larger three-building structure, re-orient the parking lots, and relocate the driveways. Impacts to each tree are listed in the Tree Inventory (Appendix II). Based on my evaluation of the plans:

- 29 trees will need to be removed (12 are municipally owned street trees).
- The 8 protected trees will be replaced with an additional 69 on site trees (as per Schedule D Part 3 Replacement species –see Page 8 below) needing to be planted to meet the 34 tree minimum for the property. This is based off of the approximate 6721 m² total development area and a 1:1 replacement strategy. The Landscape architect may make the necessary calculations and replacements to ensure minimum is met as the project evolves further. 17 Municipal replacement trees are expected to be planted as well.

To help protect the preserved trees from excessive construction impacts, I recommend following the Tree Preservation Guidelines found within this report. However, the current plans show no trees to be retained.

Introduction

In October 2021, Caledonia Equity Limited Partnership retained Bartlett Tree to perform a tree inventory and prepare a Tree Preservation Report for the two properties at 1961 Douglas Street and 710 Caledonia Street in Victoria, BC. The intended purpose of this report is to provide recommendations based on the impacts to the trees from my interpretations of the provided site plans provided, as part of their submission to the City of Victoria.

Assignment

This report communicates impacts to trees from construction to the city and to the client. The City of Victoria requires a Tree Protection Plan as part of their design review process. The report is designed to provide the design team with the tree related details they will need to prepare a Tree Preservation Plan to meet that requirement, including:

- observations of the health and structural condition of the trees,
- evaluation of the impacts to trees based on development plans, and
- guidelines for tree preservation throughout the development process

Limits of the Assignment

The tree assessment was performed from the ground for visual conditions. This tree inventory was not a tree risk assessment. As such, no trees were assessed for risk in accordance with industry standards, nor are there any tree risk ratings or risk mitigation recommendations provided within this report.

Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

Illustrations, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

Information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plans of the property in question may not arise in the future.

City Bylaw Regulations

The City of Victoria (Protection Bylaw #21-035) protects trees that meet the following criteria:

- 1) Any tree of the following species over 50 cm in height:
 - a) Garry oak (*Quercus garryana*)
 - b) Arbutus (*Arbutus menziesii*)
 - c) Pacific yew (*Taxus brevifolia*)
 - d) Pacific dogwood (*Cornus nuttallii*)
- 2) Any tree with a diameter at breast height (DBH) greater than 30 cm
- 3) A hedge that contains any single stem with a diameter at breast height (DBH)
- 4) A replacement tree
- 5) A tree that is protected by a restrictive covenant in favour of the City
- 6) A tree that is on a slope where the slope grade is greater than 33 percent over 10 metres
- 7) A tree that is within 15 metres of the natural boundary of a watercourse

Methods

Trees were assessed on October 4, 2021. The assessment included all trees 10 cm and greater in diameter and Street Trees of any size on, or with canopies overhanging, the site.

1. Affix a sequentially numbered tag to the main trunk of each accessible tree;
2. Identifying the species of tree;
3. Measuring the trunk diameter at a point 1.4 m above grade;
4. Evaluating the health and structural condition:

Good	A healthy tree that may have a slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected;
Fair	Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care;
Poor	Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated;

Observations

On the site was a restaurant with an asphalt parking lot covering most of the site, and a hotel comprised of several buildings with a bar, outdoor pool and deck. 29 trees surround the perimeter of the site. Of the 29 trees, two were in good condition, 19 were fair, and 8 were poor at the date of the site visit (Table 1). 12 are municipally owned or shared trees: 1 Sweetgum (*Liquidambar styraciflua*) #M-481 which is a shared tree, 4 Callery Pear (*Pyrus calleryana*) #M-486-489, 2 European white birch (*Betula pendula*) #M-494/M-495, 2 River birch (*Betula nigra* 'dura-heat') #M-496 & M-500, 1 Japanese cherry (*Prunus serrulata*) #M-497, 1 Purple leaf plum (*Prunus cerasifera*) #M-498 and 1 Paper birch (*Betula papyifera*) #M-499.

TABLE 1: TREE CONDITION AND ABUNDANCE

Common Name	Scientific Name	Dead	Poor	Fair	Good	Total
Cedar-Deodar	<i>Cedrus deodora</i>	-	-	2	-	2
<i>Prunus lusitanica</i>	<i>Prunus lusitanica</i>	-	-	1	-	1
Maple-Japanese	<i>Acer palmatum</i>	-	-	2	-	2
Willow-Bebb's	<i>Salix bebbiana</i>	-	-	1	-	1
Sweetgum	<i>Liquidambar styraciflua</i>	-	1	2	-	3
Firethorn-Scarlet	<i>Pyracantha coccinea</i>	-	1	-	-	1
Photinia	<i>Photinia Glansmispel x frseri</i>	-	1	-	-	1
Pear-Callery	<i>Pyrus calleryana</i>	-	-	4	-	4
Dogwood-Red osier	<i>Cornus sericea</i>	-	-	1	-	1
Cherry-Japanese	<i>Prunus serrulata</i>	-	2	-	-	2
Camellia-Species	<i>Camellia</i> -Sp.	-	1	1	-	2
Birch-European white	<i>Betula pendula</i>	-	-	2	-	2
Plum-Purple leaf	<i>Prunus cerasifera</i>	-	1	-	-	1
Birch-Paper	<i>Betula papyrifera</i>	-	1	-	-	1
Birch-River	<i>Betula nigra</i> 'dura-heat'	-	-	-	2	2
Maple-Silver	<i>Acer saccharinum</i>	-	-	3	-	3
Total		-	8	19	2	29

Tree Impacts



Photo 1. Callery pear #M-486 was in fair condition with a dense, slightly unbalanced canopy.

The four Callery pear trees #M-(486-489) will require removal. These trees are municipally owned. It would be difficult to establish protective fencing around them due to the adjacent sidewalk. Instead, a pedestrian corridor should be constructed between the site and the roads to ensure public safety during construction. The trees could then be replaced with larger canopy sized trees in accordance with the City of Victoria Bylaw 21-035 Replacement Tree Guidelines.

Municipally owned white birch trees (*Betula pendula*) #M-(494-495) require removal due to the proximity of their canopies to the structure and their roots are likely to be impacted because of how close they are to the proposed building. Birch trees do not respond well to impacts from construction that infringed upon their critical root zones. As such these municipal trees should be removed and replaced.

The smaller City of Victoria owned River birches (*Betula nigra*) #M-496 and M-500 will require removal based on their proximity to proposed driveway locations.

Municipally shared trees #M-497 Japanese cherry (*Prunus serrulata*) and #M-498 purple leaf plum (*Prunus cerasifera*) will require removal due to their location. Tree #M-498 is also within vicinity to proposed underground utility service entry. Both trees fall within the building envelope.

Municipally owned paper birch (*Betula papyrifera*) #499 will require removal due to its canopy's proximity to the proposed building structure driveway and expected root loss. This species of tree is intolerant of root pruning or injury.

Sweetgum (*Liquidambar styraciflua*) #M-481 is a shared tree which also requires removal. It is also within the envelope of the proposed structure.

The two deodar cedar (*Cedrus deodora*) #475-476 are within the building envelope and will require removal. These trees are protected due to their DBH. A permit will be required from the City of Victoria.

All remaining trees included in the inventory are located on private property and do not meet the minimum size requirement to be protected. No permit will be required to remove these trees, all of which fall within the envelope of the proposed structure.

Responsibilities of Project Arborist

The duties of the project arborist include:

- Reviewing site plans and establishing tree protection zones.
- Make recommendations in relation to the retention, pruning, removal and protection of bylaw protected trees on site.
- Determining the location of tree protection fencing and plywood and ensuring that they are properly installed prior to construction commencing.
- Supervising all work performed within tree protection zones or within the protected root zones of trees.

Note: it is the responsibility of the contractor to ensure that the project arborist is on site for all work performed within the protected root zones.

I reviewed the *Site Plans* created by J. Kelly (dated October 27, 2021) to evaluate impacts to trees. I estimated the locations of trees being removed from the *Preliminary Site Plan Layout*.

The *Site Plan* includes demolishing the existing structures and parking lot in order to install a larger multi-building residential and commercial structure with lower levels for a grocery store, offices and plaza, and to construct an underground parkade. Impacts to each tree are listed in the Tree Inventory (Appendix II). Based on my evaluation of the plans:

- 29 trees should be removed (including 12 street trees).

To protect the remaining trees from construction impacts, I recommend following the Tree Preservation Guidelines provided in this report.

City of Victoria Tree Impact Summary

	A	B	C	D
Tree Status	Total # of Protected Trees	# of Trees to be Removed	# of New or Replacement Trees to be Planted	# of Existing Non-protected Trees Counted as Replacements
Onsite trees	8	8	69	0
Offsite trees	0	0	0	0
Municipal trees	12	12	17	N/A
Total	20	20	86	0

City of Victoria Replacement Tree Summary

Onsite Minimum replacement tree requirement	Count	Multiplier	Total
A. Protected trees removed	8	X 1	8
B. Replacement trees proposed per schedule "E" Part 1	0	X 1	0
C. Replacement trees proposed per schedule "E" Part 2	0	X 0.5	0
D. Replacement trees proposed per schedule "E" Part 3	69	X 1	69
E. Total Replacement trees proposed (B+C+D) <i>Round down to the nearest whole number</i>	N/A	N/A	69
F. Onsite replacement tree deficit (A-E) <i>Record 0 if negative</i>	N/A	N/A	0
G. Onsite tree minimum lot requirement	N/A	N/A	34
H. Protected trees retained (other than specimen trees)	0	X 1	0
I. Specimen trees retained	0	X 3	0
J. Trees per lot deficit (G – (B+C+H+I)) <i>Record 0 if negative number</i>	N/A	N/A	0
K. Offsite Protected trees removed	0	X1	0
L. Replacement trees proposed per	0	X1	0
M. Replacement tree proposed from Schedule "E" Part 2	0	X 0.5	0
N. Total replacement trees proposed (L+M) <i>Round down to nearest whole number</i>	N/A	N/A	0
O. Offsite replacement tree deficit (K-N) <i>Record 0 if negative</i>	N/A	N/A	0
P. Onsite trees proposed for cash-in-lieu <i>Enter F. or J., whichever is the greatest number</i>	N/A	N/A	0
Q. Offsite trees proposed for cash-in-lieu <i>Enter 0</i>	N/A	N/A	0
R. Cash-in-lieu proposed ((P+Q) x \$2000)	N/A	N/A	0

City of Victoria Soil Volume Summary

Minimum soil volumes is as follows: 8.0 m³ for small, 20 m³ for medium and 35 m³ for large. This is also to include the spacing of 2 m for small, 4 m for medium and 6 m for large to ensure future retention as the plants grow.

Planting ID AREA	Area (m ²)	Soil volume multiplier	A. Estimated soil volume m ³	B. #Small	C. #Medium	D. #Large	E. Small X8	F. Medium X20	G. Large X35	Total
900mm Deep Planting Area	614	900mm	552.6	49	0	0	392.0	0	0	392.0
600mm Deep Planting Area	752	600mm	451.2	20	0	0	160.0	0	0	160.0
450mm Deep Planting Area	297	450mm	133.7	0	0	0	0	0	0	0
150mm Deep extensive Green Root Tray System	386	150mm	57.9	0	0	0	0	0	0	0
										552.0

In total 69 replacement trees will be planted on site. This includes 9 trees within the Plaza / Upper Ground Level, 36 trees in the Office/Roof Amenity Level and 24 trees in the Roof Top Amenity Level.

These calculations were done based off of the provided reference material:

PWL Drawings – Proposed trees as replacement trees L2.02 (dated 11-Jul-22)

PWL Drawings – Soil depth coordination plan L2.03 (dated 11-Jul-22)

City of Victoria Acceptable Replacement Tree Table

Section D. Part 3 – Replacement species acceptable for 1:1 replacement for trees above structures; where the soil volume available on structure is 6.0m³ per tree or more.

Genus	Species	Cultivated Variety	Common Name	Class
<i>Acer</i>	<i>griseum</i>		Paperbark maple	Deciduous
<i>Chitalpa</i>	<i>tashkentensis</i>		Chitapla	Deciduous
<i>Cornus</i>	<i>kousa</i>	<i>Satomi</i>	Satomi dogwood	Deciduous
<i>Cornus</i>	<i>X Venus</i>	<i>Venus</i>	Venus dogwood	Deciduous
<i>Crataegus</i>	<i>douglasii</i>		Black hawthorn	Deciduous
<i>Maackia</i>	<i>amurensis</i>		Amur mackia	Deciduous
<i>Magnolia</i>	<i>X Galaxy</i>		Galaxy magnolia	Deciduous
<i>Magnolia</i>	<i>grandiflora</i>	<i>Victoria</i>	Victoria magnolia	Broadleaf evergreen
<i>Oxydendrum</i>	<i>arboreum</i>		Sourwood	Deciduous
<i>Parrotia</i>	<i>persica</i>		Persian ironwood	Deciduous
<i>Parrotia</i>	<i>persica</i>	<i>Ruby Vase</i>	Ruby Vase Persian ironwood	Deciduous
<i>Sorbus</i>	<i>X hybridia</i>		Oakleaf mountain ash	Deciduous
<i>Styrax</i>	<i>obassia</i>		Fragrant snowbell	Deciduous
<i>Taxus</i>	<i>brevifolia</i>		Pacific yew	Deciduous

Tree Preservation Guidelines

Tree preservation is intended to not only foster tree survival during development, but also to promote maintenance of tree health and beauty into the future. Retained trees that are injured or damaged during construction or are insufficiently maintained afterward become a liability rather than an asset. How individual trees respond to disturbances will depend on the extent of excavation and grading, the care with which demolition is undertaken, and the construction methods employed. Coordinating any construction activity inside the Tree Protection Zone (TPZ) can minimize these impacts.

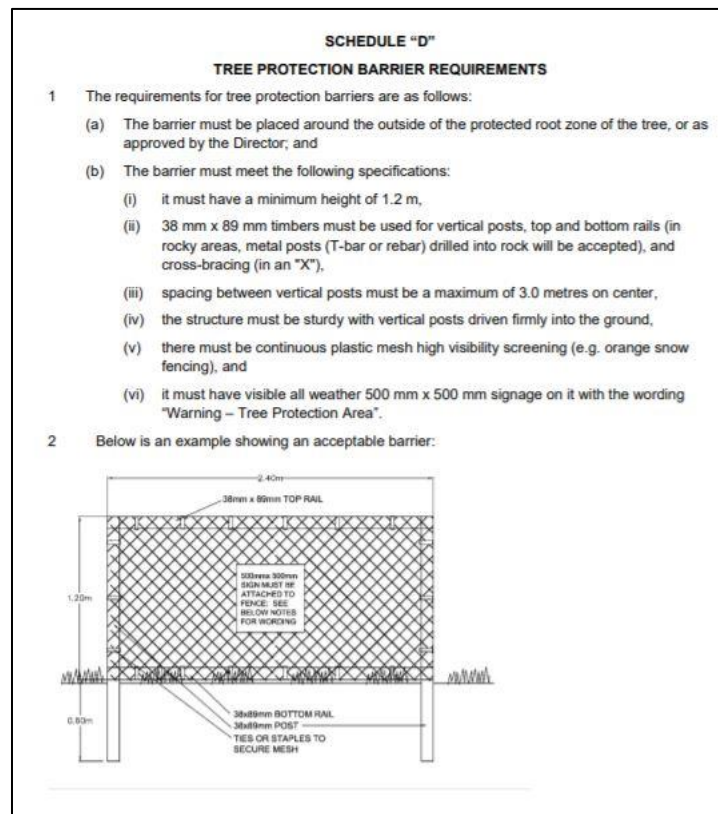
The following recommendations will reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design Recommendations

1. Any changes to the plans involving the trees should be reviewed by the Project Arborist with regard to tree impacts. These include, but are not limited to, site plans, improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans.
2. **Tree Preservation Guidelines** prepared by the Project Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
3. Provide a pedestrian corridor around the perimeter of the site for the duration of the project. This will act as a safe place for pedestrians to travel.
4. Ensure adequate, but not excessive, water is supplied to trees to be retained. In most cases, occasional irrigation will be required. Avoid directing runoff toward trees.

Tree Protection Zone

1. **A TREE PROTECTION ZONE** shall be identified for each tree to be preserved on the Tree Protection Plan prepared by the project arborist. Tree Protection Zones are shown on Appendix I - Tree Inventory Map with ideal distances from the trunk listed as PRZ (radius) in Appendix II - Tree Inventory Data.
 - a. Tree protection fences shall be installed to encompass the **TREE PROTECTION ZONE**. As detailed in this image below:



- b. Fences must be installed prior to beginning demolition and must remain until construction is complete.
- c. No grading, excavation, construction or storage or dumping of materials shall occur within the **TREE PROTECTION ZONE**. Any excavation, grading or digging within a retained tree's Protected Root Zone (TPZ) must be monitored at the time of work by the Project Arborist.
- d. No underground services including utilities, sub-drains, water or sewer shall be placed in the **TREE PROTECTION ZONE**.

Pre-demolition and Pre-construction Treatments and Recommendations

1. The demolition and construction superintendents shall meet with the Project Arborist before beginning work to review all work procedures, access routes, storage areas, and tree protection measures.
2. Fence all trees to be retained to completely enclose the Tree Protection Zone prior to demolition, grubbing or grading. Fences are to remain until all grading and construction is completed. The trees will require protective tree fencing to be erected around their Protected Root Zones (PRZ). However, due to the presence of the sidewalk and road, the fencing will not be able to fully protect the entire PRZ as described limitations of space available between the sidewalk and road the fencing may not include the complete PRZ as described in the Tree Inventory (Appendix II).
3. Prune trees to be preserved to remove dead branches 5 cm and larger in diameter, raise canopies as needed for construction activities.
 - a. All pruning shall be done by an ISA Certified Arborist® or ISA Certified Tree Worker® in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2019) and adhere to the most recent editions of the American National Standard Z133.1 Safety Requirements 2017 for Tree Care Operations and ANSI A300 (Part 1)- Pruning 2017.
 - b. While in the tree the arborist shall perform an aerial inspection to identify any defects, weak branch and trunk attachments and decay not visible from the ground. Any additional work needed to mitigate defects shall be reported to the property owner.
 - c. Trees to be removed shall be felled so as to fall away from **TREE PROTECTION ZONE** and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Project Arborist may require first severing the major woody root mass before extracting the trees, or grinding the stump below ground.

Recommendations for Tree Protection during Construction

1. Any approved grading, construction, demolition or other work within the **TREE PROTECTION ZONE** should be monitored by the Project Arborist.
2. All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved.
3. Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Project Arborist.
4. Construction trailers, traffic and storage areas must remain outside **TREE PROTECTION ZONE** at all times.
5. Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Project Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2 cm in diameter should be avoided.
6. If roots are 2 cm and greater in diameter are encountered during site work and must be cut to complete the construction, the Project Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.

7. Prior to grading or trenching, trees may require root pruning outside the **TREE PROTECTION ZONE**. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Project Arborist.
8. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Project Arborist so that appropriate treatments can be applied.
9. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
10. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of Impacted Trees

Preserved trees will experience a physical environment different from that of the pre-development conditions. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. Inspect trees annually and following major storms to identify conditions requiring treatment to manage risk associated with tree failure.

Our procedures included assessing trees for observable defects in structure. This is not to say that trees without significant defects will not fail. Failure of apparently defect-free trees does occur, especially during storm events. Wind forces, for example, can exceed the strength of defect-free wood causing branches and trunks to break. Wind forces coupled with rain can saturate soils, reducing their ability to hold roots, and blow over defect-free trees. Although we cannot predict all failures, identifying those trees with observable defects is a critical component of enhancing public safety.

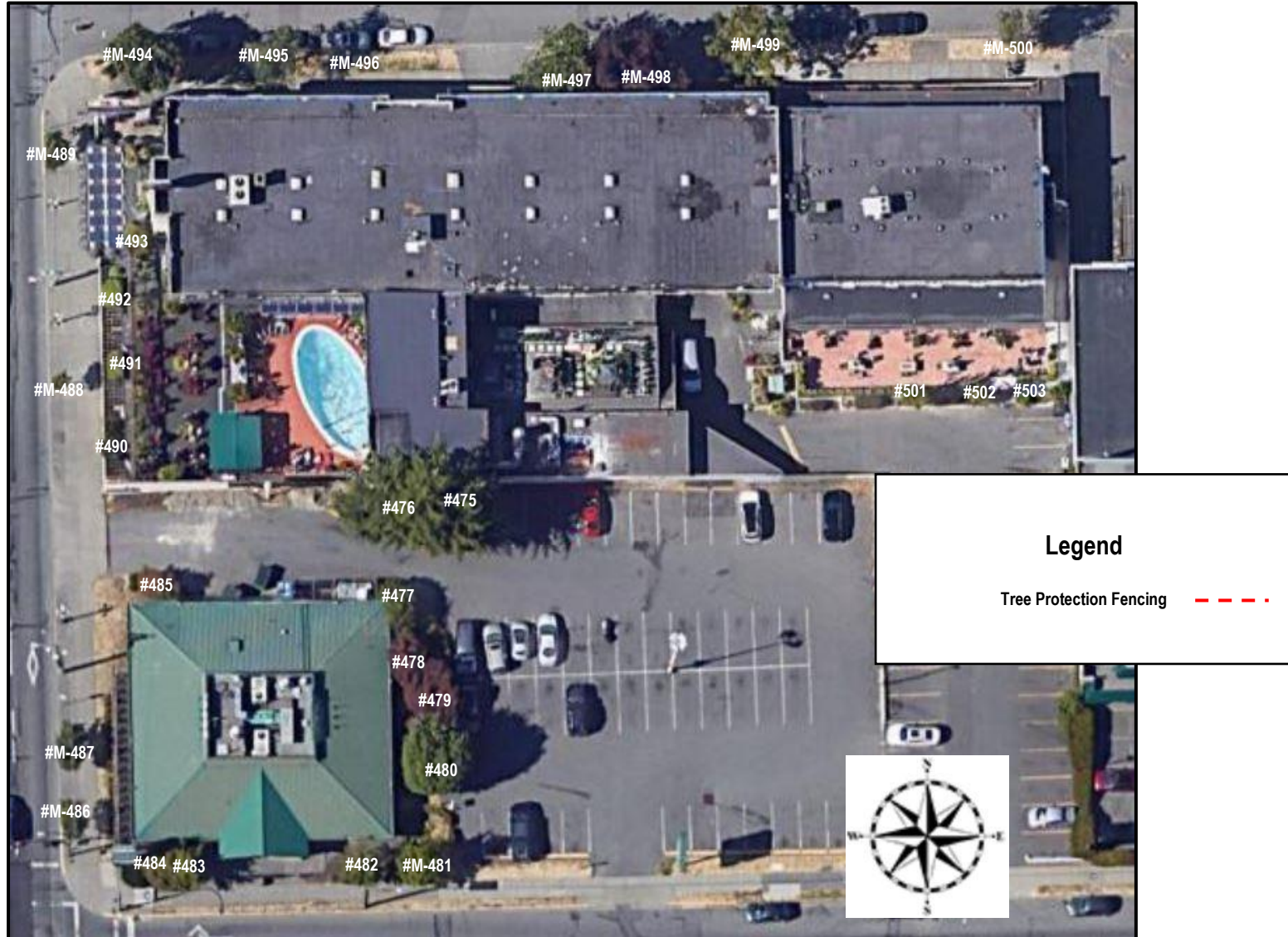
Furthermore, trees change over time. Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

If you have any questions about my observations or recommendations, please contact me.

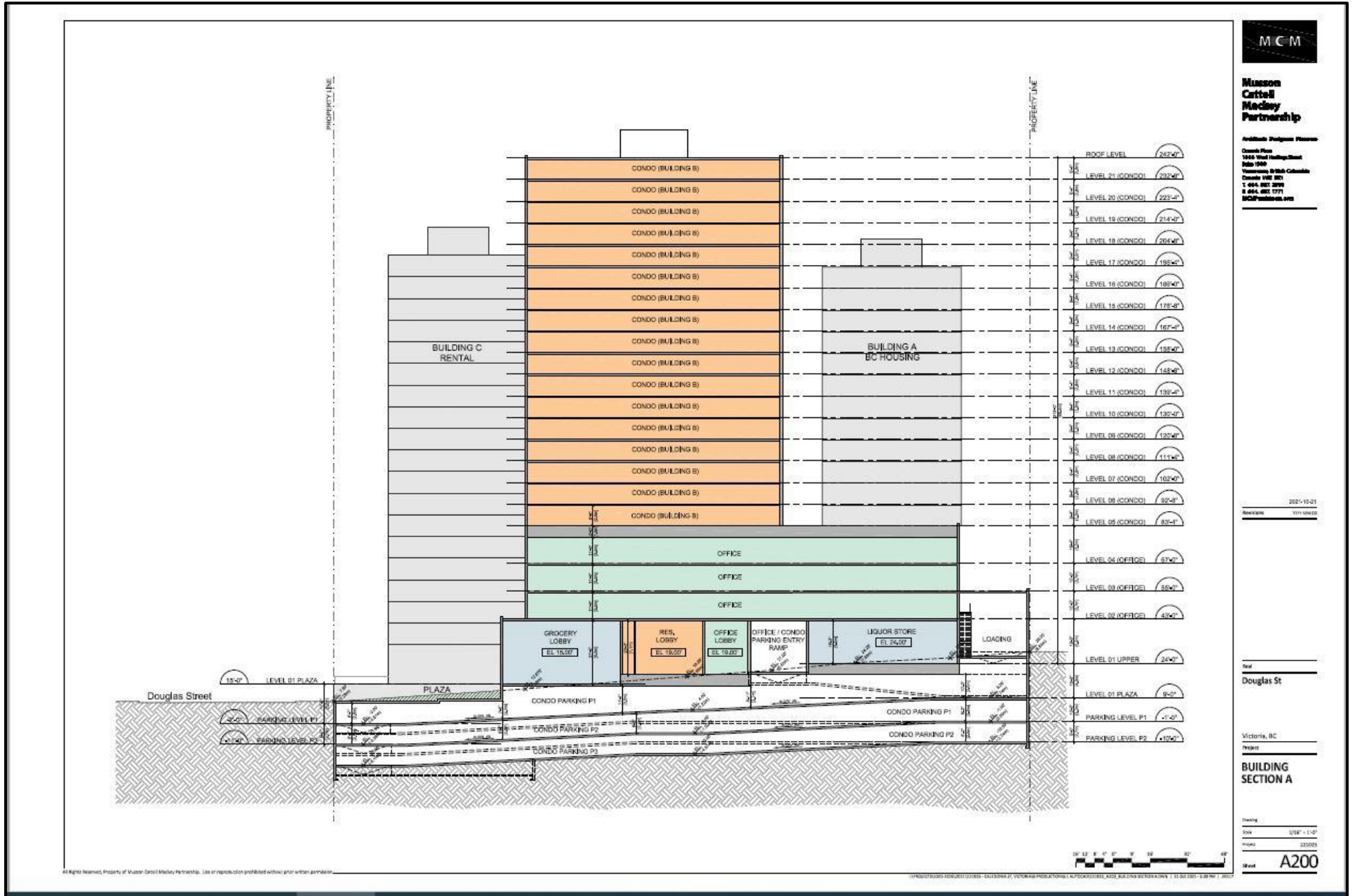


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Appendix I – Site Plans



Tree Inventory Map - provided by a satellite image



Building Section A Plan Layout

Appendix II – Tree Inventory Table

Tree ID	Species	Status	DBH (cm)	PRZ (m)	Canopy Radius (m)	Structural Condition	Health Condition	Retention Suitability	Species Tolerance to Disturbance	Disposition	Comments
475	Cedar-Deodar <i>Cedrus deodora</i>	Protected	58, 44	11	6.0	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
476	Cedar-Deodar <i>Cedrus deodora</i>	Protected	51	9.2	6.0	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
477	Laurel-Portuguese <i>Prunus lusitanica</i>	Unprotected	15, 10, 10	2.7	1.0	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
478	Maple-Japanese <i>Acer palmatum</i>	Protected	13, 10, 8	2.3	1.5	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
479	Maple-Japanese <i>Acer palmatum</i>	Protected	8, 8, 8	1.4	1.5	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
480	Willow-Bebb's <i>Salix bebbiana</i>	Unprotected	18, 16, 16	3.2	2.0	Good	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
M-481	Sweetgum <i>Liquidambar styraciflua</i>	Municipal	24	4.3	2	Fair	Fair	Unsuitable	Poor	Remove	Close proximity to proposed building envelope
482	Sweetgum	Unprotected	16	2.9	2.0	Fair	Poor	Unsuitable	Poor	Remove	Within proposed building envelope

	<i>Liquidambar styraciflua</i>											
483	Sweetgum	Unprotected	18	3.2	2.0	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope	
	<i>Liquidambar styraciflua</i>											
484	Firethorn-Scarlet	Unprotected	15, 12, 12	2.7	1.5	Fair	Poor	Unsuitable	Poor	Remove	Within proposed building envelope	
	<i>Pyracantha coccinea</i>											
485	Photinia	Unprotected	12, 12, 6	2.2	1.0	Fair	Poor	Unsuitable	Poor	Remove	Within proposed building envelope	
	<i>Photinia Glansmispel x frseri</i>											
M-486	Pear-Callery	Municipal	13	2.3	1.5	Good	Fair	Suitable	Moderate	Remove	Tree would require structural pruning to enable construction of pedestrian corridor. Limited area for Tree Protection fencing and intolerant to root pruning if required.	
	<i>Pyrus calleryana</i>											
M-487	Pear-Callery	Municipal	17	3.1	1.5	Good	Fair	Suitable	Moderate	Remove	Tree would require structural pruning to enable construction of pedestrian corridor. Limited area for Tree Protection fencing and intolerant to root pruning if required.	
	<i>Pyrus calleryana</i>											
M-488	Pear-Callery	Municipal	12	2.2	1.0	Good	Fair	Suitable	Moderate	Remove	Tree would require structural pruning to enable construction of pedestrian corridor. Limited area for Tree Protection fencing and intolerant to root pruning if required.	
	<i>Pyrus calleryana</i>											
M-489	Pear-Callery	Municipal	18	3.2	1.0	Good	Fair	Suitable	Moderate	Remove	Tree would require structural pruning to enable construction of pedestrian corridor. Limited area for Tree Protection fencing and intolerant to root pruning if required.	
	<i>Pyrus calleryana</i>											
490	Dogwood-Red osier	Unprotected	10, 8, 8	1.8	1.0	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope	
	<i>Cornus sericea</i>											
491	Cherry-Japanese	Protected	18, 14	3.2	0.5	Poor	Poor	Unsuitable	Poor	Remove	Within proposed building envelope	
	<i>Prunus serrulata</i>											

492	Camellia-Species	Unprotected	18	3.2	0.5	Fair	Poor	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Camellia-Sp.</i>										
493	Camellia-Species	Unprotected	23	4.1	0.5	Fair	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Camellia-Sp.</i>										
M-494	Birch-European white	Municipal	31	5.6	4.5	Fair	Fair	Unsuitable	Poor	Remove	Poor tolerance to excavation for foundation with expected significant root loss.
	<i>Betula pendula</i>										
M-495	Birch-European white	Municipal	22	4.0	3.0	Fair	Fair	Unsuitable	Poor	Remove	Poor tolerance to excavation for foundation with expected significant root loss.
	<i>Betula pendula</i>										
M-496	Birch-River	Municipal	8	1.4	1.5	Good	Good	Suitable	Poor	Remove	Tree is located within proximity to the location of building driveway. The species have a variable tolerance to root loss depending on severity and overall condition of tree.
	<i>Betula nigra</i> 'dura-heat'										
M-497	Cherry-Japanese	Municipal	43	7.7	6.0	Fair	Poor	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Prunus serrulata</i>										
M-498	Plum-Purple leaf	Municipal	29, 28	5.2	4.0	Fair	Poor	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Prunus cerasifera</i>										
M-499	Birch-Paper	Municipal	37	6.7	3.5	Poor	Poor	Unsuitable	Poor	Remove	Tree is located within proximity to the location of building driveway. The species of tree is intolerant of root pruning or injury.
	<i>Betula papyrifera</i>										
M-500	Birch-River	Municipal	5	0.9	0.5	Good	Good	Suitable	Poor	Remove	Small diameter tree in good overall condition. Tree to be in location of future driveway entrance. The species have a variable tolerance to root loss depending on severity and overall condition of tree.
	<i>Betula nigra</i> 'dura-heat'										

501	Maple-Silver	Protected	14	2.5	1.5	Good	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Acer saccharinum</i>										
502	Maple-Silver	Protected	13	2.3	1.0	Good	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Acer saccharinum</i>										
503	Maple-Silver	Protected	14	2.5	2.0	Good	Fair	Unsuitable	Poor	Remove	Within proposed building envelope
	<i>Acer saccharinum</i>										

*Protected Root Zone (PRZ) is calculated using DBH x 18

Appendix III – Photographs



Trees #475-476 as viewed with a north facing perspective (10/04/2021).

*The F.A. Bartlett Tree Expert Company
4370 Interurban Road, Victoria, BC V9E 2C4 • 250-479-3873 • www.bartlett.com*



Trees #483-484 as viewed with a west facing perspective (10/04/2021).

*The F.A. Bartlett Tree Expert Company
4370 Interurban Road, Victoria, BC V9E 2C4 • 250-479-3873 • www.bartlett.com*




Tree #494 as viewed with a west facing perspective (10/04/2021).

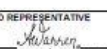


Trees #501 as viewed with a northwest facing perspective (10/04/2021).

Appendix IV – Additional Information

CSIO		CERTIFICATE OF INSURANCE			DATE (YYMMDD) 21/11/23	
BROKER The Magnes Group Inc. 1540 Cornwall Road Suite #100 Oakville ON L6J 7W5 BROKER'S CLIENT ID: FABARD1				This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies below.		
INSURED'S FULL NAME AND MAILING ADDRESS The F.A. Bartlett Tree Expert Company 4370 Interurban Rd. Victoria BC V9E 2C4				COMPANIES AFFORDING COVERAGE COMPANY A Travelers Insurance Company COMPANY B COMPANY C COMPANY D		
COVERAGES						
This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated, notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain. The insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.						
LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.						
TYPE OF INSURANCE	CO LTR	POLICY NUMBER	POLICY EFFECTIVE DATE (YYMMDD)	POLICY EXPIRATION DATE (YYMMDD)	LIMITS OF LIABILITY (Canadian dollars unless indicated otherwise)	
<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input checked="" type="checkbox"/> CLAIMS MADE OR <input checked="" type="checkbox"/> OCCURRENCE <input checked="" type="checkbox"/> PRODUCTS AND/OR COMPLETED OPERATIONS <input type="checkbox"/> EMPLOYER'S LIABILITY <input checked="" type="checkbox"/> CROSS LIABILITY <input checked="" type="checkbox"/> TENANT'S LEGAL LIABILITY <input checked="" type="checkbox"/> NON-OWNED <input checked="" type="checkbox"/> HIRED <input type="checkbox"/> POLLUTION LIABILITY EXTENSION	A	UX9NA030144	21/02/01	22/12/01	EACH OCCURRENCE	\$ 2,000,000
					GENERAL AGGREGATE	\$ 5,000,000
					PRODUCTS - COMPOF AGG	\$ 4,000,000
					PERSONAL INJURY	\$ 1,000,000
					TENANT'S LEGAL LIABILITY	\$ 1,000,000
					MED EXP (Any one person)	\$ 10,000
					NON-OWNED AUTO	\$ 1,000,000
					OPTIONAL POLLUTION LIABILITY EXTENSION	\$
					(Per Occurrence)	\$
					(Aggregate)	\$
<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> DESCRIBED AUTOMOBILES <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> LEASED AUTOMOBILES <small>* ALL AUTOMOBILES LEASED IN EXCESS OF 30 DAYS WHERE THE INSURED IS REQUIRED TO PROVIDE INSURANCE</small>					BODILY INJURY PROPERTY DAMAGE COMBINED	\$
					BODILY INJURY (Per person)	\$
					BODILY INJURY (Per accident)	\$
					PROPERTY DAMAGE	\$
<input type="checkbox"/> EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM (Specify)					EACH OCCURRENCE	\$
					AGGREGATE	\$
ADDITIONAL INSURED			DESCRIPTION OF OPERATIONS/LOCATIONS/AUTOMOBILES/SPECIAL ITEMS All Limits of Insurance and Deductibles are stated in US Currency. All operations usual to the business of the Named Insured. EVIDENCE OF INSURANCE ONLY			
CERTIFICATE HOLDER To Whom It May Concern			CANCELLATION Not Applicable			
SIGNATURE OF AUTHORIZED REPRESENTATIVE 			PRINT NAME INCLUDING POSITION HELD Ana Warren - Commercial Account Manager			
FAX NUMBER 905-845-9149	EMAIL ADDRESS awarren@magnesgroup.com	COMPANY The Magnes Group Inc.	DATE 21/11/23			
CSIO CERT (6/00)						

The F.A. Bartlett Tree Expert Company
 4370 Interurban Road, Victoria, BC V9E 2C4 • 250-479-3873 • www.bartlett.com

CSIO		CERTIFICATE OF INSURANCE			DATE (YYMMDD)
BROKER The Magnes Group Inc. 1540 Cornwall Road Suite #100 Oakville ON L6J 7W5		This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies below.			21/11/23
BROKER'S CLIENT ID: FABAR01		COMPANIES AFFORDING COVERAGE			
		COMPANY A Travelers Insurance Company			
INSURED'S FULL NAME AND MAILING ADDRESS The F.A. Bartlett Tree Expert Company 4370 Interurban Rd. Victoria BC V9E 2C4		COMPANY B			
		COMPANY C			
		COMPANY D			
COVERAGES					
This is to certify that the policies of insurance listed below have been issued to the insured named above for the policy period indicated, notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain. The insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.					
LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.					
TYPE OF INSURANCE	CO LTR	POLICY NUMBER	POLICY EFFECTIVE DATE (YYMMDD)	POLICY EXPIRATION DATE (YYMMDD)	LIMITS OF LIABILITY (Canadian dollars unless indicated otherwise)
<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE OR <input type="checkbox"/> OCCURRENCE <input type="checkbox"/> PRODUCTS AND/OR COMPLETE OPERATIONS <input type="checkbox"/> EMPLOYER'S LIABILITY <input type="checkbox"/> CROSS LIABILITY <input type="checkbox"/> TENANT'S LEGAL LIABILITY <input type="checkbox"/> NON-OWNED <input type="checkbox"/> HIRED <input type="checkbox"/> POLLUTION LIABILITY EXTENSION					EACH OCCURRENCE \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ PERSONAL INJURY \$ TENANT'S LEGAL LIABILITY \$ MED EXP (Any one person) \$ NON-OWNED AUTO \$ OPTIONAL POLLUTION LIABILITY EXTENSION \$ (Per Occurrence) \$ (Aggregate) \$
<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> DESCRIBED AUTOMOBILES <input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> LEASED AUTOMOBILES <input checked="" type="checkbox"/> OPCF 5SEF 5 <input checked="" type="checkbox"/> OPCF 603/5SEF#00 <input checked="" type="checkbox"/> OPCF #01B <small>* ALL AUTOMOBILES (OWNED OR LEASED) OF 30 DAYS WHERE THE INSURED IS REQUIRED TO PROVIDE INSURANCE</small>	A	UXFLT00127	21/12/01	20/12/01	BODILY INJURY AND PROPERTY DAMAGE COMBINED \$2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$ Collision Ded. 1,000 Comprehensive Ded. 1,000
<input type="checkbox"/> EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM <small>(Specify)</small>					EACH OCCURRENCE \$ AGGREGATE \$
<input type="checkbox"/> OTHER LIABILITY (SPECIFY)					
ADDITIONAL INSURED			DESCRIPTION OF OPERATIONS/LOCATIONS/AUTOMOBILES/SPECIAL ITEMS All operations usual to the business of the Named Insured. EVIDENCE OF INSURANCE ONLY Automobile Liability Continued: \$2,000,000 Third Party Liability - Applies to Ontario & Alberta units only \$1,000,000 Excess Third Party Liability - Applies to British Columbia units only		
CERTIFICATE HOLDER To Whom it May Concern			CANCELLATION NOT APPLICABLE		
SIGNATURE OF AUTHORIZED REPRESENTATIVE 			PRINT NAME INCLUDING POSITION HELD Ana Warren - Commercial Account Manager		
FAX NUMBER 905-845-9149		EMAIL ADDRESS a.warren@magnesgroup.com		COMPANY The Magnes Group Inc.	
CSIO CERT (6/00)				DATE 21/11/23	

List of report version changes:

Version 1.0 – Original inventory report as no plans were provided. Submitted: 10/06/2021

Version 1.1 – Updated report based on building plan provided. Pages: 3, 4, 12, and 13. Submitted: 12/03/2021

Version 1.2 – Updated trees to be removed based on revised plan layout. Pages: 3, 4, 12, and 13. Submitted: 03/24/2022

Version 1.3 – Updated tree numbers, trees to be removed, and report based on bylaw 21-035. Pages: 3, 4, 12, 13 and 14-17. Added: Project Arborist Duties Pages: 4 Submitted: 06/01/2022

Version 1.4 – Added tables for tree deficiency, tree replacement and soil volume calculations after getting the latest Landscape Plan. Pages: 5, 6 and 7. Added general liability and auto liability forms at end of report. Pages: 22 and 23. Submitted: 06/13/2022

Version 1.5 – Added list of report version changes. Pages: 24 Submitted: 06/20/2022

Version 1.6 – Updated Tree Impact Summary (Page 5), Tree Replacement Table (Page 6) and Soil Volume Table (Page 7). Based on latest provided information provided 07/11/2022. Added City of Victoria Acceptable Replacement Tree Table (Page 8). Submitted 07/11/2022