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ISA Certified Arborist
TRAQ/WDTA

Arborist Report for Development
Re: Demolition and Construction

Site Location:
445 Grafton Street, Victoria BC
Darryl Clark
ISA Certified Arborist- PN 6523A TRAQ
December 11, 2025
Revised April 22, 2026
Revised July 13, 2026

July 13, 2026
Attention: MAC Reno Design Build – Margaret Cormode
5285 West Saanich Road
Victoria, BC V9E 2E8

1.0 Scope of Work

MAC Reno-Design-Build has retained D. Clark Arboriculture to provide comments on trees on-site, off-site, and municipally owned that may be impacted by the proposed demolition of an existing structure and construction of a new single-family dwelling. A Tree Management Plan is also provided as required by the Township of Esquimalt Bylaw 2022. no 3076.

2.0 Summary

Tree Impact Summary				
TREE STATUS	**# of Trees**	**# of Trees to be Removed**	**# of Replacement Trees**	**# of Existing Replacement Trees**
On-site trees	18	8	15	0
Off-site Trees	5	0	0	0
Municipal Trees	1	0	0	N/A
TOTAL	24	8	15	0

Demolition and construction activities are anticipated to encroach on the Protected Root Zone (PRZ) of (6) on-site trees. Based on information provided to us at the time this report was produced, (5) on-site bylaw protected trees will require removal due to tree locations conflicting with proposed demolition and construction. (3) on-site trees are dead and require removal.

Summary of Tree removals				
#	Species	cm/DBH	PRZ/m	Reason for removal
152	*Pseudotsuga menziesii*	60	7	Tree is within the area of a new water lateral. Anticipated depth will significantly impact the PRZ of this tree. Additionally, grade changes on the north side ~ 1m deep will severely impact the PRZ.
153	*Pseudotsuga menziesii*	90	11	Tree is within the area of a new water lateral. Anticipated depth will significantly impact the PRZ of this tree. Additionally, grade changes on the north side ~ 1m deep will severely impact the PRZ.
154	*Pseudotsuga menziesii*	36	4	Grade changes, and the removal of two trees and their stumps related to infrastructure improvements will impact the PRZ of this tree.
155	*Pseudotsuga menziesii*	85	10	Tree is within the footprint of the proposed residence, and the location of new water, sewer, and storm laterals. Excavation impacts exceed limits required for retention.
156	*Pseudotsuga menziesii*	77	9	Tree is within the footprint of the proposed residence, and the location of new sewer and storm laterals. Excavation impacts exceed limits required for retention.
164	*Pseudotsuga menziesii*	30	4	Tree is dead.
166	*Pseudotsuga menziesii*	71	9	Tree is dead.
169	*Pseudotsuga menziesii*	71	9	Installation of municipal sidewalk. Tree is nearly dead.

Trees identified for retention in this report require tree protection measures including Tree Protection Zone Fencing, root zone armoring, and arborist supervision of all activities required within the Protected Root Zone (PRZ) of the trees.

Trees To De Disturbed by Construction Activities				
#	Species	cm/DBH	PRZ/m	Construction activities to encroach on PRZ
157	*Pseudotsuga menziesii*	112	13	Landscaping will impact this tree. Impacts may be mild to moderate.
158	*Pseudotsuga menziesii*	90	11	Landscaping will impact this tree. Impacts may be mild to moderate.
159	*Pseudotsuga menziesii*	78	9	Landscaping will impact this tree. Impacts may be mild to moderate.
160	*Pseudotsuga menziesii*	44	5	Landscaping will impact this tree. Impacts may be mild to moderate.
161	*Pseudotsuga menziesii*	62	7	Landscaping will impact this tree. Impacts may be mild to moderate.
162	*Pseudotsuga menziesii*	90	11	Landscaping will impact this tree. Impacts may be mild to moderate.
163	*Pseudotsuga menziesii*	75	9	Landscaping will impact this tree. Impacts may be mild to moderate.
165	*Pseudotsuga menziesii*	67	8	Landscaping will impact this tree. Impacts may be mild to moderate.
167	*Pseudotsuga menziesii*	111	13	Landscaping will impact this tree. Impacts may be mild to moderate.
170	*Chamaecyparis lawsoniana*	31	4	Landscaping will impact this tree. Impacts may be mild to moderate.
Os 1	*Ulmus pumilia*	30	4	Landscaping will impact this tree. Impacts may be mild to moderate.
Os 2	*Ulmus pumilia*	40	5	Landscaping will impact this tree. Impacts may be mild to moderate.
Os 3	*Ulmus pumilia*	15	2	Landscaping will impact this tree. Impacts may be mild to moderate.
Os 4	*Pseudotsuga menziesii*	18	2	Landscaping will impact this tree. Impacts may be mild to moderate.
Os 5	*Salix spp.*	90	11	Landscaping will impact this tree. Impacts may be mild to moderate.
M1	*Pseudotsuga menziesii*	122	15	Retaining wall amendments and landscaping

3.0 Introduction and Methodology

Miche Hachey first visited the site April 4, 2025, and Laura Mantin visited the site on May 23rd, 2025, to assess trees on-site and off-site that have the potential for soil and root zone disturbance or root/tree injury by proposed demolition of the existing structure and construction of a single-family home. A third site visit by Darryl Clark took place April 21, 2026, to verify site changes (removed municipal trees), tree locations (as per the new lot survey) and condition of the trees. The site was again visited on July 1, 2026, to assess municipal-owned tree #M1. This included an overall visual assessment of the tree and its surroundings, and a root collar excavation on the south side of the tree to assess potential root/infrastructure conflicts. The results of this visit are contained in Appendix "A" at the end of this report

This report was completed on July 13, 2026 and includes but is not limited to;

- An aerial site map indicating approximate tree locations. *(See Figure 1)*
- A revised Tree Survey and Tree Management Plan
- An inventory of (18) on-site trees (1) municipal trees, and (5) off-site trees including health and structural condition ratings, and arborist comments.
- Tree height was estimated to the nearest meter. DBH was estimated to the nearest centimeter. All off-site tree measurements are approximate.
- Measurements were collected using a standard fabric diameter tape. Height and canopy spread measurements were collected using a Lasertech 200L laser rangefinder.
- Photos that were captured to document the site are included in this report and were taken using a Google Pixel 7(25mm). *(See Figures 3-14)*

4.0 Tree Survey

445 Grafton Street Tree Inventory										
#	***Species***	**cm/DBH**	**Height**	**Canopy Spread**	**PRZ/m**	**Structure**	**Health**	**Bylaw Protected**	**Retain/Remove**	**Reason for Removal**
152	*Pseudotsuga menziesii*	60	25	13	7	Fair	Fair	Yes	Remove	Refer to summary table
153	*Pseudotsuga menziesii*	90	24	13	11	Fair	Fair	Yes	Remove	Refer to summary table
154	*Pseudotsuga menziesii*	36	16	5	4	Fair	Poor	Yes	Remove	Refer to summary table
155	*Pseudotsuga menziesii*	85	25	19	10	Fair	Fair	Yes	Remove	Refer to summary table
156	*Pseudotsuga menziesii*	77	18	12	9	Fair	Fair	Yes	Remove	Refer to summary table
157	*Pseudotsuga menziesii*	112	30	18	13	Fair	Fair	Yes	Retain	
158	*Pseudotsuga menziesii*	90	12	8	11	Fair	Poor	Yes	Retain	
159	*Pseudotsuga menziesii*	78	27	15	9	Fair	Fair	Yes	Retain	
160	*Pseudotsuga menziesii*	44	10	6	5	Fair	Poor	Yes	Retain	
161	*Pseudotsuga menziesii*	62	21	7	7	Fair	Poor	Yes	Retain	
162	*Pseudotsuga menziesii*	90	22	9	11	Fair	Fair	Yes	Retain	
163	*Pseudotsuga menziesii*	75	13	5	9	Fair	Poor	Yes	Retain	
164	*Pseudotsuga menziesii*	30	14	2	4	Fair	Dead	Yes	Remove	Dead.
165	*Pseudotsuga menziesii*	67	28	10	8	Fair	Fair	Yes	Retain	
166	*Pseudotsuga menziesii*	71	22	10	9	Fair	Dead	Yes	Remove	Dead.
167	*Pseudotsuga menziesii*	111	20	13	13	Fair	Fair	Yes	Retain	
169	*Pseudotsuga menziesii*	71	25	13	9	Fair	Poor	Yes	Remove	Refer to summary table
170	*Chamaecyparis lawsoniana*	31	7	3	4	Fair	Good	Yes	Retain	
Os 1	*Ulmus pumilia*	30	9	6	4	Fair	Poor	Yes	Retain	
Os 2	*Ulmus pumilia*	40	9	6	5	Fair	Poor	No	Retain	
Os 3	*Ulmus pumilia*	15	7	5	2	Fair	Poor	No	Retain	
Os 4	*Pseudotsuga menziesii*	18	9	12	2	Fair	Fair	No	Retain	
Os 5	*Salix spp.*	90	8	12	11	Poor	Dead	Yes	Retain	Previously listed as tree #168
M1	*Pseudotsuga menziesii*	122	28	18	15	Fair	Fair	Municipal Owned	Retain	
M2	*Arbutus menziesii*	0	0	0	0	n/a	n/a	Municipal Owned	n/a	Removed by Esquimalt
M3	*Pseudotsuga menziesii*	0	0	0	0	n/a	n/a	Municipal Owned	n/a	Removed by Esquimalt

DBH - Diameter at Breast Height. Measured at 1.4 meters from the point of germination. Where the tree is multi-stemmed at 1.4 meters, the DBH shall be considered 100% of the (3) largest stems.
PRZ- Protected Root Zone will be calculated as 12x the diameter of the tree radially.

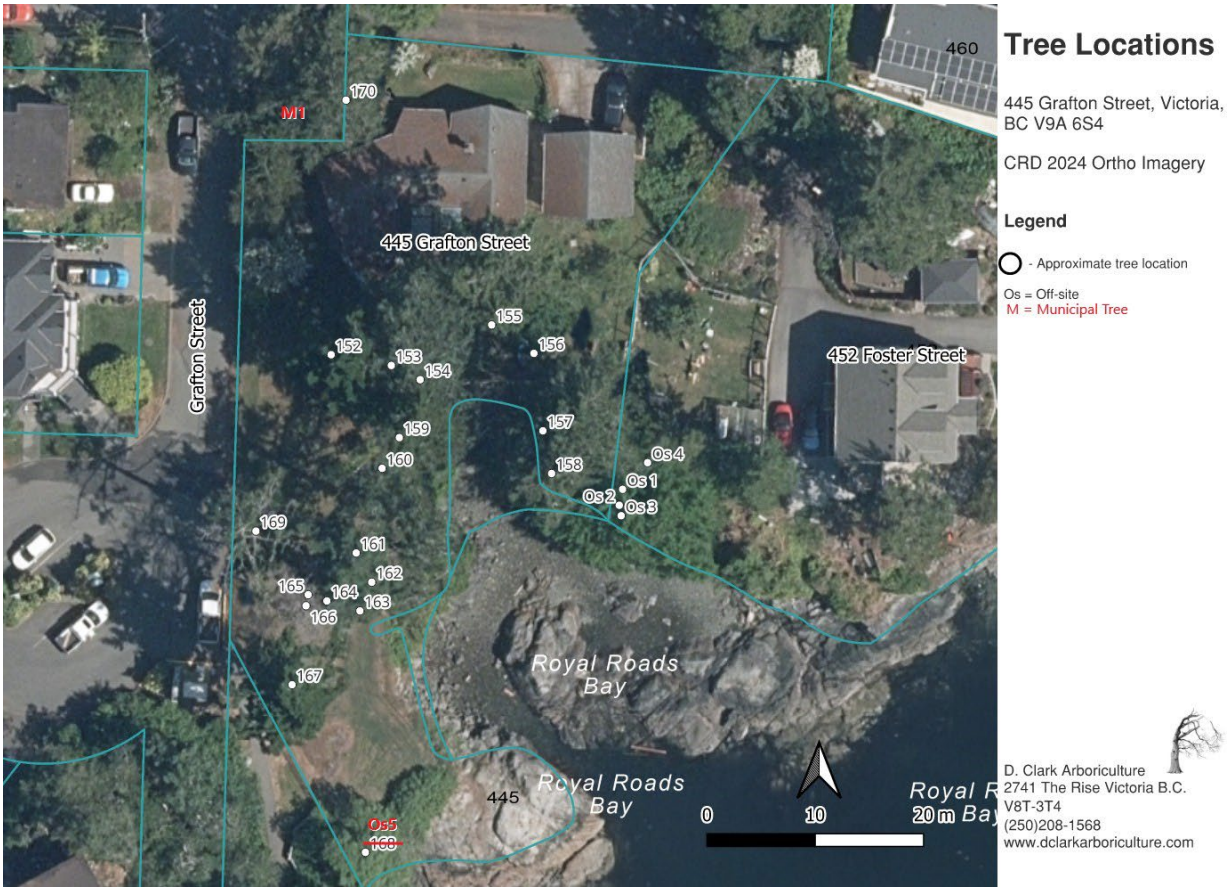


Figure 1. Orthographic photo of property and tree locations.

5.0 Site Description

The property at 445 Grafton Street currently features a single-family bungalow-style home. The oceanfront site has multi-terraced topography, with a 1 m high retaining wall separating a semicircular lower lawn area to the south of the house. An additional 3 m high retaining wall separates the lawn from the waterfront and is accessible by a metal staircase at low tide (*Figures 11 & 13*). The western portion of the property extends 79 metres from north to south, culminating at a public right-of-way. The property is landscaped with maintained grass and several mature *Pseudotsuga menziesii (*Douglas-fir). A cluster of municipally owned trees are in a raised garden bed at the northwest corner of the property within the property fence (*Figure 12*). Other off-site trees are located at the southwestern corner of the property (*Figure 9*).

6.0 Tree Removal Requirements

Based on information provided at the time this report was completed, (8) bylaw protected on-site trees will require removal to accommodate excavator access and demolition/construction activities including building footprints, site servicing, grade changes, and landscaping.
(*Refer to 1.0 Summary of Removals and 4.0 Tree Inventory Table*)

With regards to trees #152, 153, and 154, additional anticipated impacts were considered in their removal. A municipal sewer easement exists on the south side of the property near to the trees. This existing clay tile sewer line is beyond its expected lifespan and overdue for renewal. Esquimalt

engineering has indicated that it will be in use until failure, at which point it will be considered for replacement/renewal. Due to the pipe material and condition, it is unlikely that the pipe would simply be repaired. Because the pipe services multiple properties it is also unlikely to be abandoned. Whether the issues with this pipe and it's known condition are addressed during this project, or sometime after, it is understood that the impact of that work would also require the removal of these trees due to root and available soil volume conflicts. Even if the pipe were to be abandoned, the next option for the house services is understood to be westerly towards Grafton, and considering the water line in this area already affects these trees unfavorably, adding sewer and storm laterals further into the Protected Root Zone strengthens the case for removal of these trees.

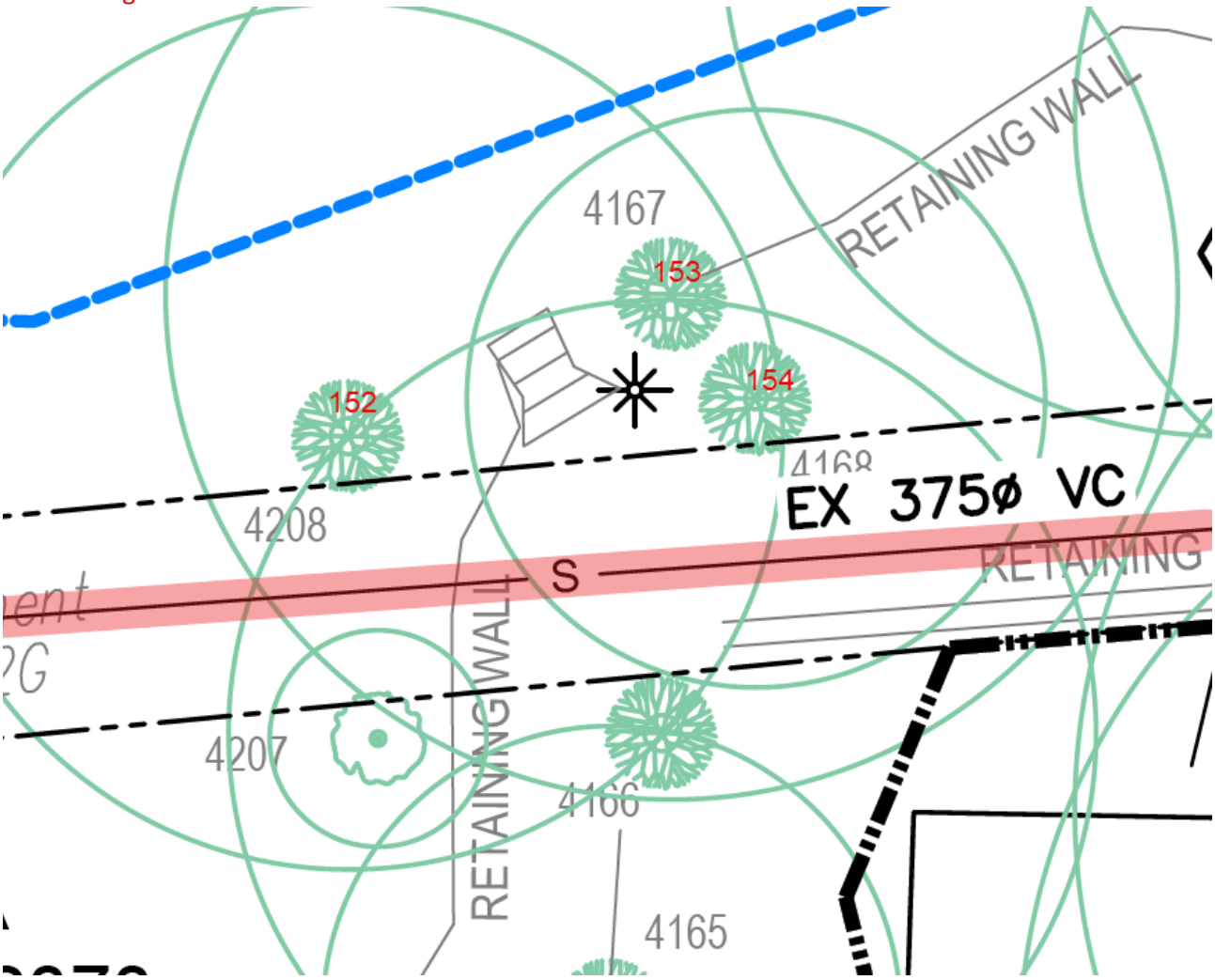


Figure 2. Detail from civil submission showing municipal sewer (highlighted in red), easement boundaries (black dashed lines parallel to sewer) and trees #152, 153, and 154 relative to existing sewer and proposed water service (blue dashed line).

Douglas fir is a species native to the area. It is rarely planted as a landscape feature tree on smaller urban lots. Locally in areas where they are abundant, they are prone to regular windthrow (branch breakage) because their branches typically have long lever arms and low taper. This is a particular concern in coastal areas with full exposure to prevailing winds, and the cost and need for preventative maintenance can increase substantially. Additionally, stressed trees become susceptible to root and butt rots. Added stress and long-term maintenance was considered in the viability of retention for these three trees. Based on the existing and anticipated future impacts of the plan detailed above, they are

not suitable candidates for retention based on the targets that exist and are proposed and are recommended for removal.

7.0 Tree Protection Plan

7.1 Role of the Project Arborist

7.1.1. No aspect of this Tree Protection Plan will be amended in whole or in part without the permission of the Project Arborist.

7.1.2. Any amendments to the plan must be documented in memorandums to the Municipality and the Developer.

7.1.3. A site meeting including the Project Arborist, Developer, Project Supervisor, and any other related parties to review the tree protection plan will be held at the beginning of the project.

7.1.4. The Project Arborist must approve all tree protection measures before excavation begins in or near areas defined as Protected Root Zone on the Tree Management Plan.

7.1.5. The Project Arborist is responsible for ensuring that all aspects of this plan, including violations, are documented in memorandums to the Municipality and the Developer.

7.2 Limitations

7.2.1 An assessment of off-site tree health and structure was restricted by field of view due to difficulty of access. Assessment was based entirely at ground level and to the property of 445 Grafton Avenue and Grafton Avenue.

7.3 Tree Protection Measures

7.3.1. Fencing for Protected Root Zones[1] will be installed as per dimensions and location indicated on the Tree Management Plan (TMP).

7.3.2. Fencing for the TPZ must be either securely anchored 2x4 posts and framing, paneled with securely affixed orange snow fence or plywood, or continuous temporary job site fencing (metal) secured with bailing wire or zip ties. Fencing will incorporate highly visible signs that include “TREE PROTECTION AREA- NO ENTRY” (See appendix for an example).

7.3.3. The area inside fenced TPZs is off-limits to workers, equipment, and storage of materials. Areas outside the tree protection fence but still within the Protected Root Zone (PRZ) may be left open for access, as work areas and for storage of materials. These areas will be protected by root zone armoring consisting of either 3/4” plywood or a minimum of 20 centimeters of coarse wood chips (see Tree Management Plan for locations of each).

7.3.4. Tree protection measures will remain in place for the duration of the project unless they are amended and documented by the Project Arborist.

[1] Matheny et al. (2023). Managing Tree During Site Development and Construction: Best Management Practices, Third Edition

7.3.5. Tree protection measures will not be amended in any way without approval from the Project Arborist. Any additional tree protection measures will be documented in a memo to the Client and Municipality.

7.3.6. Work inside the established TPZ of any retained tree identified in this plan for any reason will take place under the supervision of the Project Arborist or their designate. Root disturbance and injury mitigation techniques may be specified by the Project Arborist including but not limited to the use of a hydro-vac or Airspade® or digging using hand tools to expose roots for inspection.

7.3.7. For excavation activities using an excavator, the operator will work radially inward toward the tree. The excavator will remove the soil incrementally with a non-toothed shovel allowing any exposed roots to be pruned to an acceptable standard by the Project Arborist. Exposed roots that are to remain exposed for any duration outside of the day of excavation are to be covered with a layer of burlap and kept damp for the duration of the project. A memo to summarize these activities will be provided to the Municipality and Developer once the activities are completed.

7.3.8. Any excavation of plant vegetation inside a PRZ of a retained tree using machinery must be supervised by the Project Arborist.

7.3.9. Any roots damaged or injured inside TPZs may prompt the requirement for a tree risk assessment to evaluate tree stability.

7.4 General Requirements

7.4.1. Any pruning of protected trees will be performed by an ISA (International Society of Arboriculture) Certified Arborist, by industry-recognized best management practices[2]. At the time this report was completed, no on-site or off-site trees were anticipated to require pruning.

7.4.2. Equipment traffic in and out of the site is anticipated to utilize the asphalt driveway. Any access for machinery (such as excavators) will employ the use of root zone armoring to reduce the likelihood of soil compaction and root damage to nearby on-site and off-site trees where required.

7.4.3. Material staging and storage (ex. bins for loading demolition debris) will be in a location that does not encroach on the PRZ of any retained trees. It is anticipated that bins will utilize the asphalt driveway. The location will be approved by the Project Arborist before construction activities begin. There is ample room for staging construction materials outside of the PRZ's of retained trees.

7.5 Demolition and Construction Activities

7.5.1. Tree Stump Removal and Grading During Demolition
Excavation for the removal of tree stumps #155 and #156 may impact (1) on-site tree #157 as tree PRZs are shared. Supervision will be required for the removal of these tree stumps, and the Project Arborist will conduct root pruning if deemed necessary. Additionally, it is anticipated

[2] Lilly, S.J. et al. (2019) Best Management Practices: Pruning (Third Edition).

that existing retaining walls will be removed during demolition and some regrading in the area of tree #157 will occur.

To minimize root damage and soil compaction from occurring, mitigation recommendations include the use of root zone armoring for foot and machinery access that occurs through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs. All excavation and grading activities in the PRZ of tree #157 will be supervised by the project arborist.

7.5.2. Capping of Existing Residence Civil Services

7.5.2a Storm
The capping of the existing residence's storm services is anticipated to occur near the easement to the south and is not expected to encroach on any trees on or off site.

7.5.2b Sewer
The capping of the existing residence's sewer services is anticipated to occur near the easement to the south and is not expected to encroach on any trees on or off site.
7.5.2c Water

Capping of water services may occur at the property line to the and is not expected to encroach on any trees on or off site.

7.5.3. Residence Demolition
Construction activities and machinery access for the demolition of the residence are not anticipated to encroach on the PRZs of any trees. Where access for machinery is required to impact the PRZ of retained trees, to minimize root damage, and soil compaction from occurring for machinery/foot access, mitigation recommendations include the use of root zone armoring through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs, and supervision by Project Arborist for all excavator access, where it impacts the PRZ of protected trees.

7.5.4. Installation of Civil Services
A civil servicing plan has been proposed.

7.5.4a Storm

Installation of the existing residence's sewer services is anticipated to the easement main to the south and is not expected to encroach on any retained trees on or off site. Trees # 155 and 156 require removal.

7.5.4b Sewer
Installation of the existing residence's sewer services is anticipated to the easement main to the south and is not expected to encroach on any retained trees on or off site. Trees # 155 and 156 require removal.

7.5.4c Water
Installation of water services will occur at the property line to the west, running southerly to an entry point near the middle of the building footprint and is not expected to encroach on any retained trees on or off site. Trees #152, 153, and 155 require removal.

7.5.5. Residence Construction
Construction activities are anticipated to encroach on the PRZ of tree #M1.

In the event of construction activities creeping into the PRZ of retained trees, mitigation recommendations include the use of root zone armoring for foot and machinery access that occurs through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs. Where excavation is in the PRZ of any retained trees these activities will be supervised by the Project Arborist.

7.5.6 Landscaping
A Landscape Plan has been proposed. Foot traffic, machinery, and planting locations have the potential to disrupt the PRZ of retained trees. Tree #169 will require removal for the installation of a new municipal sidewalk.

To minimize root damage and soil compaction from occurring, mitigation recommendations include the use of root zone armoring for foot and machinery access that occurs through PRZs of trees that do not have TPZ fencing enclosing the entire extent of their PRZs. Where excavation is in the PRZ of any retained trees these activities will be supervised by the Project Arborist.

It is likely that landscaping will require an amended Tree preservation site plan. Any amendments to the plan will be coordinated and approved by the Project Arborist and will be submitted to the municipality for approval before, installation activities begin.

8.0 Replacement Trees

8.1. Trees to be Replaced
As of the date of this report, (8) on-site bylaw protected trees are proposed to be removed to facilitate construction activities. As stated in the Township of Esquimalt Bylaw 2022. no 3076, section 9 sub. 2, the removal of these bylaw protected trees triggers the requirement for replacement trees. As they are all Douglas Fir species are greater than 12m tall, (3) trees are required to replace each tree, for a total of (18) trees. The present Landscape Plan locates 15 replacement trees on the property. Cash-in-lieu may be required for the additional replacement trees if suitable locations can not be found.

8.2. Planting Requirements and a Restrictive Covenant
In accordance with Township of Esquimalt Bylaw 2022. no 3076, section 9 sub. 4: "*Replacement trees shall not be planted:*
(a) in the case of trees having a mature height of eight (8) metres or less, within two (2) metres of a building foundation wall; or
(b) in the case of trees having a mature height greater than eight (8) metres, within three (3) metres of a building foundation wall; or
(c) within one (1) metre of a property line."

Additionally, there is a restrictive covenant on the property limiting the height of trees on the foreshore side of the property. A landscape plan has been developed with this covenant in mind and appropriate replacement trees have been proposed.

8.3. Maintenance Requirements

In accordance with Township of Esquimalt Bylaw 2022. no 3076, section 9 sub. 6, "*All Replacement Trees must be planted and maintained in accordance with sound arboricultural practices as set out in the latest edition of the BCSLA/BCLNA "BC Landscape Standard" and must be planted substantially in accordance with the tree planting diagram in Figure 1 of Schedule "B"."*

Thank you for the opportunity to comment on this tree.

Regards,

Darryl Clark
ISA Certified Arborist- PN 6523A
TRAQ/BCWDTA

Disclosure Statement

An arborist uses their education, training, and experience to assess trees and provide prescriptions that promote health and well-being and reduce the risk of trees.
The prescriptions set forth in this report are based on the documented indicators of risk and health noted at the time of the assessment and are not a guarantee against all potential symptoms and risks.
Trees are living organisms and subject to continual change from a variety of factors including but not limited to disease, weather and climate, and age. Disease and structural defects may be concealed in the tree or underground. It is impossible for an arborist to detect every flaw or condition that may result in failure, and an arborist cannot guarantee that a tree will remain healthy and free of risk.
To live near trees is to accept some degree of risk. The only way to eliminate the risks associated with trees is to eliminate all trees.

Assumptions and Limiting Conditions

- Altering this report in any way invalidates the entire report.
- The use of this report is intended solely for the addressed client and may not be used or reproduced for any reason without the consent of the author.
- The information in this report is limited to only the items that were examined and reported on and reflects only the visual conditions at the time of the assessment.
- The inspection is limited to a visual examination of the accessible components without dissection, excavation, or probing unless otherwise reported. There is no guarantee that problems or deficiencies may not arise in the future, or that they may have been present at the time of the assessment.
- Sketches, notes, diagrams, etc. included in this report are intended as visual aids, are not considered to scale except where noted, and should not be considered surveys or architectural drawings.
- All information provided by owners and or managers of the property in question, or by agents acting on behalf of the A assumed to be correct and submitted in good faith. The consultant cannot be responsible or guarantee the accuracy of information provided by others.
- It is assumed that the property is not in violation of any codes, covenants, ordinances, or any other governmental regulations.
- The consultant shall not be required to attend court or give testimony unless subsequent contractual arrangements are made.

The report and any values within are the opinion of the consultant, and fees collected are in no way contingent on the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, or any finding to be reported.

Figure 3 – tree #152 facing South

Figure 4 – Trees #153, #154, and #155, facing northeast with retaining wall in foreground

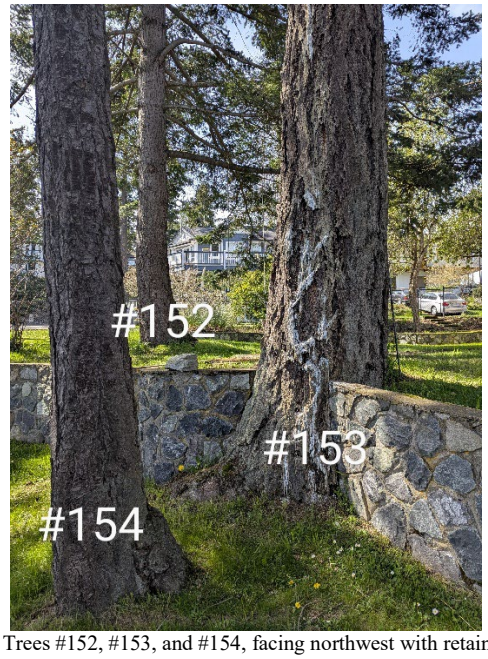


Figure 5 – Trees #152, #153, and #154, facing northwest with retaining wall in foreground

Figure 6 – Tree #155 facing northeast

Figure 7 – Tree #156 facing northeast

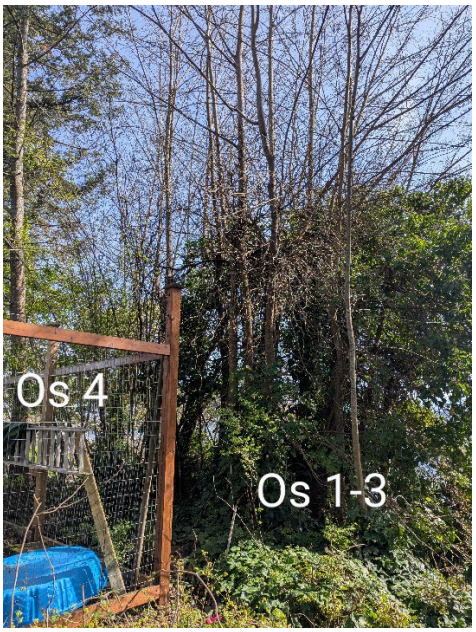


Figure 8 – Trees OS 1, OS 2, OS 3, and OS 4 facing southeast

Figure 9 – Trees #157, #158, OS 1, OS 2, OS 3, and OS 4 facing east

Figure 10 – Tree #161, #162 facing southeast

Figure 13 – View of front yard, retaining walls, and existing structure

Appendix A

Additional assessment of Tree #M1

Introduction

A virtual meeting took place on June 25, 2026, attended by Noah Alexander (arborist) from the Township of Esquimalt, Darryl Clark (D Clark Arboriculture), Ryan Wylie (Latitude 48), and Margaret Cormode (MAC Reno and Build), on behalf of the project at 445 Grafton St. Among the items discussed, it was requested by Noah Alexander that in place of a hydrovac excavation, a simple excavation by shovel to determine the potential path of roots toward the proposed areas of excavation for the future house footprint and landscape features including new retaining walls be undertaken. A site visit, visual assessment of the tree and excavation by hand/shovel was undertaken by Darryl Clark on July 1, 2026.

Summary of Assessment

- At a depth of ~45cm no large structural roots were noted on the south side of the tree.
- Buttress roots appear to move easterly and westerly away from the trunk.

- The south side of the tree has evidence of decay/hollow areas.
- No pavements or retaining walls in the immediate area show signs of conflict with the tree.
- Structural root impacts are not expected with the proposed construction.

Scope of Work

The scope of this assessment was limited to an assessment of the tree's current condition, exposure to impacts existing and anticipated, and identifying the anticipated direction of structural roots, visually and by excavation with a shovel on the south aspect of the tree's trunk.

Limitations

As per the scope of work, this assessment is limited to identifying the potential path of structural roots, and the potential for conflict with construction. While some observations indicate possible tree defects, no assessment of risk, specifically or overall, was undertaken.

Observations

My in-person assessment took place July 1, 2026, at approximately 1:30 pm and lasted approximately 1 hour. Weather conditions at the time of the assessment were sunny with light cloud, and winds NNE ~20km/h.

The tree is located within the municipal frontage on the northwesterly corner of the subject property. It is in fair condition with structure that is average for the species. Two smaller municipal trees, an Arbutus (west side) and another fir (north side) have recently been removed.

The north side of the tree is bare of branches just over halfway up, due to the presence of the former fir tree, which was located only 1m away. Also, just above the halfway point of the trunk is a lag bolt and dangling piece of cable, indicating that the two stems were previously mechanically connected. The reason for this intervention is unknown but was likely installed to mitigate a suggested risk. It does not appear to have been installed to an acceptable standard and may predate current best management practices.

The tree has some long lever arms in all areas and some small windthrow was observed during this visit. It was previously topped, though it is unclear if that was mechanical or natural, and the co-dominant tops appear to be structurally sound overall as observed from the ground.

The tree leans and sweeps southeasterly toward the existing house. This appears to be a result of phototropic growth, and it was likely the less dominant of the two original stems.

Surrounding the tree is a retaining wall that is an average of 3m away from the trunk on the west, south, and east sides. Beyond the wall on the west side is a set of concrete stairs and two pillars. The stairs descend from Grafton St., and a sidewalk continues west to east towards the

front door. The pillars are not straight and lean outwards in opposite directions. While this may be from soil subsidence, the equal lean in opposite directions indicates this is more likely related to poor base materials. There are otherwise no cracks, heaves, or other deformities in any of the concrete features in this area. The retaining wall is well constructed on the west side but as it wraps around the south side it has been deconstructed and rebuilt. Google Street View images back to 2011 show this same lay of the wall. There are no roots present at the surface of the soil in the elevated area, and none present in the surface area of the lawn to the east as well.

The south side of the trunk appears flat and there is a significant flow of sap emitting from the bark in this area to a height between 4 and 5m. The bark buckles in places and is separating from the tree. I used a plastic mallet to sound the south side of the trunk to a height of ~2m and found that hollow areas may exist within the trunk of the tree on the south side.

My excavation by shovel was limited to the south side of the tree and to an overall depth of ~ 40-45cm. on the west side, the stump of the arbutus interfered with any excavation, but appears to wrap around a significant buttress root to the west. Along the southerly aspect, the flattened area of the trunk continued below grade, and excavations began to creep inward toward the tree's interior. Continuing the excavation easterly, another buttress root was encountered that extends easterly.

Presently the grade change from the street to the top of the retaining wall is ~70-80cm. The retaining wall drops ~1m to the lawn. On the north side, based on the exposed flare of the removed fir and on the west side with the exposed flare of the removed Arbutus, this appears to be the natural grade. The original grade on the south side is less clear. The tree has poor taper in this area, and the grade may have dropped here significantly at some point in the past. Any significant grade change impacting the roots of the tree would have likely occurred during the construction of the existing house, and further impacts would have occurred no less than 15 years ago, which is the earliest photo available of the front of the property.

Conclusion

Based on my findings during this site visit, it is unlikely that structural roots from tree #M1 are likely to be significantly impacted by excavation and construction activities.

Recommendations

It is recommended that during either the demolition phase or the excavation for the new building footprint, some further exploration of the area with a machine, under supervision of the project arborist be undertaken to further identify and potentially mitigate any impacts.

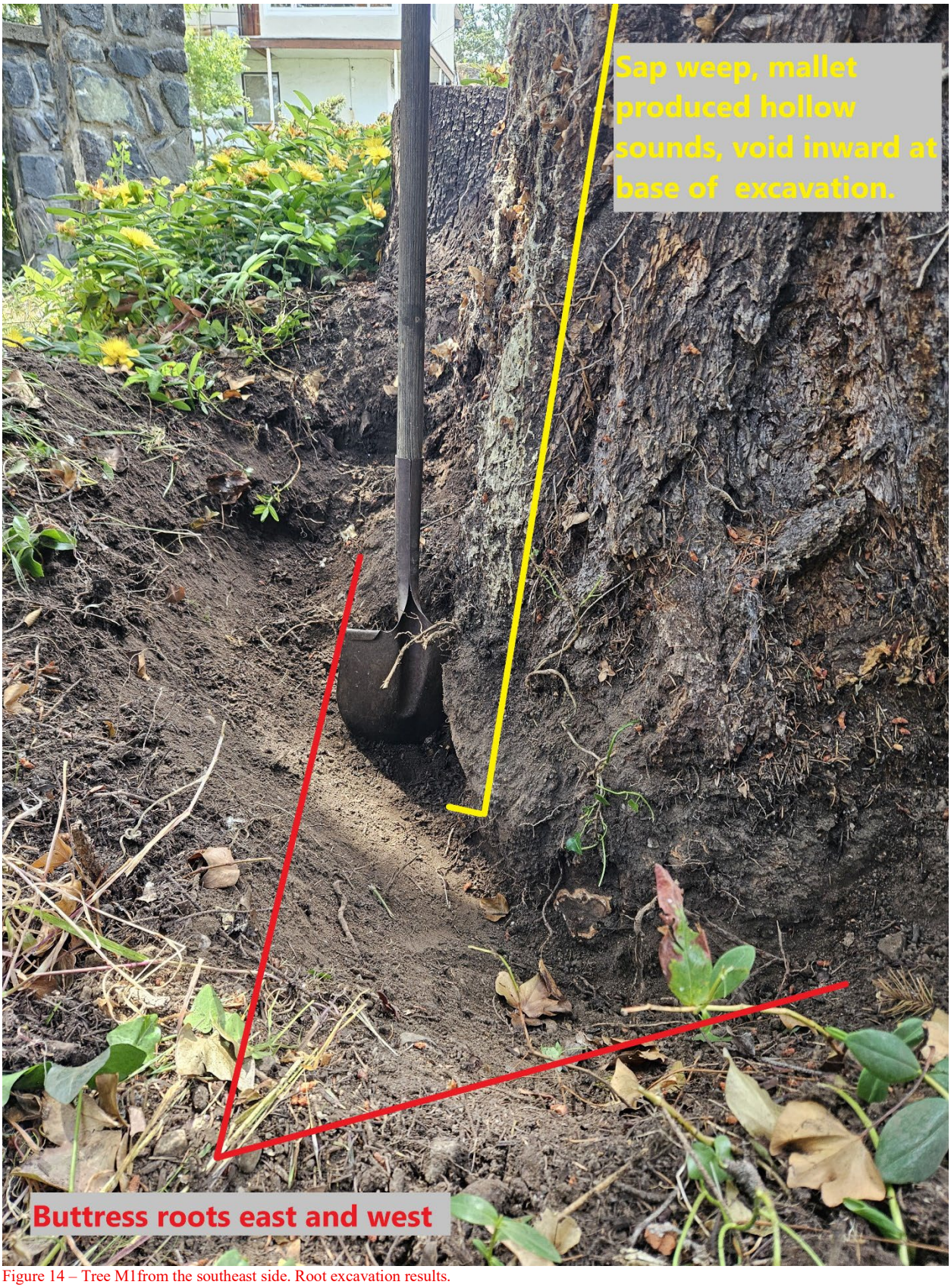
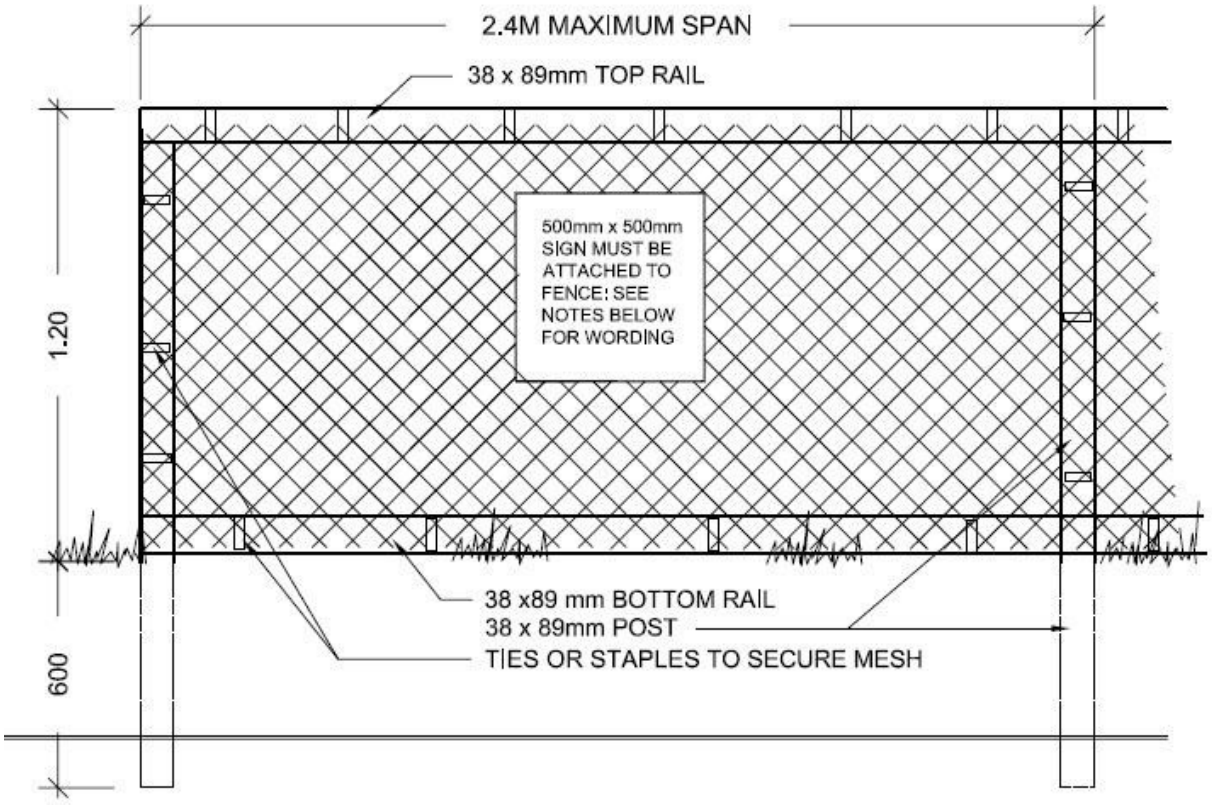


Figure 14 – Tree M1from the southeast side. Root excavation results.

Appendix B



TREE PROTECTION FENCING

Tree Protection Fencing Specifications:

1. The fence will be constructed using 38 x 89 mm (2” x 4”) wood frame:
    - Top, Bottom, and Posts. In rocky areas, metal posts (T-bar or rebar) drilled into rock will be accepted.
    - Use orange snow fencing mesh and secure to the wood frame with “zip” ties or galvanized staples. Painted plywood or galvanized fencing may be used in place of snow fence mesh.

Attach a roughly 500 mm x 500 mm sign with the following wording: **TREE PROTECTION AREA-NO ENTRY**. This sign must be affixed on every fence face or at least every 10 linear meters.