Arborist Report

1007 Arcadia St.

Esquimalt, BC

Prepared for:

Kahlon Developments

Sunny Kahlon

Prepared by:

Tomahawk Tree Service
Ltd.

May 22, 2024

Revised December 5, 2024

Tomahawk Tree Services Ltd.

6960 Rafiki Way. Brentwood Bay, BC. V8M 1G5 Ph: 250-661-7079

Email: raypraud@tomahawktreeservices.ca

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GST # 86118 5361

WSBC Account # 669 257

Liability and Professional E and O, HSM Insurance - $5 Million

Scope of Work

Tomahawk Tree Services Ltd. (TTS) was contacted by Sunny Kahlon of Kahlon Developments, a local Vancouver Island developer, builder and property owner regarding the demolition and construction of a new multi-unit complex at 1007 Arcadia Street in Township of Esquimalt. The Client indicated they required an Arborist Report and Tree Protection Plan (TPP) to move forward with the permit application.

The Client has requested that TTS provide a Basic Visual Tree Assessment (BVTA) and TPP for the Site. TTS agreed to the complete the assessment and provide findings in an Arborist Report Form including a TPP.

A tree inventory is included as *Appendix 'A'*. Photographs and a Site Plan are included as *Appendix 'B'* of this report.

Methodology

The Site was entered on February 15, 2024 by TTS for the purpose of conducting tree assessments and collecting inventory. Ray Praud, a consulting arborist and representative of TTS, provided the BVTA for the site. The weather that day was 4°C, raining, with a 10km/h NE breeze.

The Site was assessed from grade. No form of diagnostic tools or invasive techniques were used during the assessment, including excavation or assessment of roots below. Tree heights were estimated, crowns were inspected using Ricoh Pentax 10x binoculars and diameters were measured using a Richter Diameter Tape. Diameter at Breast Height (DBH) was measured approximately 1.4m above grade. Measurements and observations were recorded with the intent to provide a static representation of the area. A tree inventory is included as *Appendix 'A'* of this report. Photographs and a Site Plan are included as *Appendix 'B'* of this report.

Trees referenced in *Appendix 'A'* and located on the site have been tagged. Tags are located approximately 1.5-2m above grade on tree stems and were visible at the time of assessment. Trees not tagged are labelled No Tag (NT).

Protected Root Zone calculations are based on the ISA recommended one foot for each one inch of trunk diameter (0.3m for each 2.5 cm). Matheny and Clark's 'Trees and Development' was used to assess relative tolerance to Development Impacts.

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Our Observations

During the assessment, a lot with abandoned house in disrepair with multiple accessory buildings and mass amounts of trash debris scattered throughout the property in a developed urban neighborhood was observed. The Site was observed to be moderately treed in the rear yard with a variety of deciduous and coniferous trees. The Site appears to receive plenty of direct sun.

Construction activities will have a **'Low'** impact on the trees proposed for retention.

Tree Dynamics

A tree inventory is included as ***Appendix 'A'*** of this report.

Observed Tree Impacts:

- One (1) Municipal tree (NT2) is proposed for removal due to driveway impacts.
- Six (6) bylaw protected trees are proposed for protection and retention.
- Five (5) onsite bylaw protected trees are proposed for removal due to location within building and driveway footprints.
- Seven 7) replacement trees are required to be planted on the property.
- One (1) municipal replacement tree to be in the form of cash-in-lieu.
- Construction impact to the retained trees will be **'Low'.**
- Assessment of the site may expose further tree issues or conditions. If this occurs the project arborist will contact Town Staff for further recommendations.

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Common and Latin Names:

Cherry- *Prunus spp.*

Emerald Cedar- *Thuja occidentalis*

Paperbark Maple- *Acer griseum*

Plum- *Prunus spp.*

Western Red Cedar- *Thuja plicata*

Black Hawthorn- *Crategus douglasii*

Douglas Fir- *Pseudotsuga menziesii*

Garry Oak- *Quercus garyanna*

Leyland Cypress- *Cupressus spp.*

Species Relative Tolerance to Construction Impacts:

Cherry/Plum: Moderate-Good – "Tolerates root loss. Intolerant of saturated soils. Intolerant of mechanical injury (poor compartmentalization)."

Emeral Cedar: Good – "Tolerant of root loss, some fill, and saturated soils."

Paperback Maple- Moderate-good –

Western Red Cedar- Poor-Good – "Relatively windfirm. Intolerant of changes in water table/soil moisture." "Response is very site dependent, probably related to soil moisture. Intolerant of fill."

Black Hawthorn- Moderate – "Intermediate tolerance to root loss and saturated soils."

Douglas Fir- Poor-Good – "Tolerant of fill soil if limited to one-quarter of the root zone. However, may decline slowly following addition of fill. Tolerates root pruning. Intolerant of poor drainage. Susceptible to bark beetles following injury."

Leyland Cypress- Good – "Shows considerable resistances to "contractor pressures"."

Garry Oak- Poor-Moderate-

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Tree Protection Plan

i. Provide a detailed sign specifying that tree protection measures are in place and will be followed during the project. Fines will be posted for malicious acts and can be placed on individuals who disregard the tree protection plan and its guidelines. Signs will be placed at each entrance of the project detailing what is expected when working in potentially high impact tree protection zones.

ii. Provide tree protection fencing for all trees identified with protection requirement in this report. This fencing shall be four (4ft) feet in height and made of orange plastic. If required, header and footer boards will be used to secure the protective fencing.

iii. Tree protection and root protection signs will be placed on the fencing. No entry will be allowed, unless specified by the Project Arborist and in their presence while on site.

iv. Restrict vehicle traffic to designated access routes and travel lanes to avoid soil compaction and vegetation disturbances.

v. Make all necessary precautions to prevent the storage of material, equipment, stockpiling of aggregate or excavated soils within tree protection areas. No dumping of fuels, oils or washing of concrete fluids will be allowed in tree protection zones.

vi. Provide an onsite arborist when a risk of root damage, root cutting, or limb removal is required within the tree protection zone.

vii. Avoid alterations to existing hydrological patterns to minimize vegetation impacts to the site.

viii. The use of a Project Arborist is required to provide layout of tree protection zones. The Project Arborist(s) will provide pre-construction information to all parties involved with the project. The Project Arborist must be notified 72hrs prior to construction activities in sensitive areas. The Project Arborist should be used to provide root and branch pruning when diameters are greater than 6cm.

ix. At no time will tree protection zones be removed from the project unless approved by the Project Arborist

Landing/Storage Area

All construction materials will be stored in areas identified as ‘Landing\Storage’ in site plans. These locations are indicated on the Site Plan.

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Access

A single point of access shall be utilized. This shall be in the location marked 'Access' on the Site Plan. Contractors and workers shall be made aware of the Tree Protection Zones and Measures in place. **Tree Protection Zones and areas of the Site not under construction or within the Zone of Impact will be strictly off limits.** It is the responsibility of the Client to schedule a pre-job meeting with the Project Arborist to discuss Tree Protection Plans, Zones and requirements.

Three business days notice required. Project Arborist. 250-661-7079

Root Assessment and Observation

The Project Arborist must be on site for observation and assessment when working within the Protected Root Zone of any Protected Trees.

Tree Pruning

Tree pruning required for access and egress, tree health and safety shall be performed by an International Society of Arboriculture (ISA) Certified Arborist without the use of climbing spurs. All tree pruning shall be performed in accordance with ANSI A-300 Standards for Tree Care Operations. This shall include offsite tree #215.

Blasting

The use of blasting for removal of rock may cause serious damage or death to nearby trees if not managed appropriately. Should blasting become necessary the Project Arborist must be notified. A removal plan for the rock will be developed with the blasting contractor and the Project Arborist. It is recommended that this plan is created prior to the blasting contractor providing a cost estimate.

Excavation Process Plan

1. Provide and schedule Project Arborist to assess site prior to construction.
2. Inventory and identify trees and hazards which could complicate excavation process.
3. Utilize hand tools and cutting equipment when large tree roots are anticipated.
4. When possible, utilize small, rubberized track excavation equipment which will reduce soil compaction.
5. Excavator operator must be well informed about dig site and goal to complete project.
6. Use shallow excavation sweeps across the site to establish a depth which roots can be easily identified. (3cm to 5cm in depth of soil for each sweep across the soil face)
7. Roots greater than 6cm in diameter shall be preserved and inspected by the Project Arborist. The project arborist will determine if roots should be pruned or cut.

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8. All roots greater than 5cm in diameter should be identified and documented for project records.
9. Photos are highly recommended for documentation purposes.

Assessment of the site may expose further tree issues or conditions. If this occurs the project arborist will contact Town Staff for further recommendations.

Role of the Project Arborist

As well as creating the Tree Preservation Plan, the Project Arborist must be on site to supervise work within or immediately adjacent to the tree protection areas identified on the attached tree plan. **This will include sidewalk, driveway and any improvements proposed for the municipal boulevard.**

The Project Arborist will be present to supervise landscaping operations and activity within the tree protection areas.

At completion of the project, the Project Arborist will confirm that any tree protection or remediation related deficiencies have been addressed by the owner and building contractor. Once all deficiencies (if any) have been remedied, the Project Arborist shall prepare a letter to the Township of Esquimalt confirming completion of the project.

The Project Arborist will be on site during the following work within or immediately adjacent to the Tree Protection Areas as indicated on the attached Site Plan:

- demolition
- grading
- excavation
- rock removal or blasting
- trenching for underground services and utilities
- preparation of grade for the proposed driveways and parking areas
- site inspections to insure adherence to Tree Protection Measures

Although this site has been assessed, trees in the landscape are dynamic and changes could occur. This report is a static representation of the site during our assessment.

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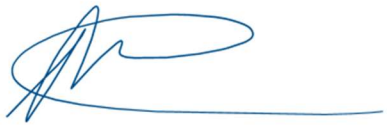
Arborist Disclosure Statement:

Arborists are tree specialists who use their education, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risks.
Arborists cannot detect every condition that could possibly lead to structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below the ground.
Arborists cannot guarantee that the tree will be healthy and safe under all circumstances, or for a specific period of time. Trees are dynamic specimens, not static. Changes in conditions, including the environment, are unknown.
Remedial treatments cannot be guaranteed.
Trees can be managed, but they cannot be controlled. The only way to eliminate all risk is to eliminate all trees.

Arborists will not be held responsible or liable for any activities performed outside of arborist supervised site time or activities performed beyond the work plan provided by the project arborist.

By accepting or using the Services, the customer will be deemed to have agreed to the terms of this Agreement, even if it is not signed.

Ray Praud
Tomahawk Tree Service Ltd.
Raypraud@tomahawktreeservices.ca
250-661-7079
Certified Utility Arborist: 19-TT-20
ISA/TRAQ Certified Arborist- PN-9461A
Wildlife Danger Tree Assessor: 8302



Acknowledged by:

Name of Customer: Kahlon Developments care of Sunny Kahlon. 1007 Arcadia St. Esquimalt, BC.

Authorized Signature:

Date: May 22, 2024 (Revised December 5, 2024)

Appendix 'A'

Figure 1 Tree Inventory

Good - A tree specimen which is exempt defects, branch dieback, moderate insect and fungal identification. This tree has evenly distributed branching, trunk development and flare. The root zone is undisturbed, leaf, bud and flower production and elongation are normal for its distribution.

Fair - A tree specimen which has minor defects, branch dieback, previous limb failure, identification of cavities and insect, or fungal identification. This tree has multiple (2-3) primary stem attachments, previous utility pruning, callus growth and poor wound wood development. Minor root girdling, soil heave and identifiable mechanical damage to the root flare or root zone.

Poor- A tree specimen where 30-40% of the canopy is identifiably dead, large dead primary branching, limited leaf production, bud development and stem elongation. Limb loss or failure, and heavy storm damage leading to uneven weight distribution. Large pockets of decay, multiple cavities, heavy insect, and fungal infection. Root crown damage or mechanical severing of roots. Root plate shifting, heavy lean and movement of soil.

Dead- Tree has been observed to be dead with no leaf, foliar or bud development. No stump sprouts and root suckers are present.

Tomahawk Tree Services Ltd. (TTS)										
Appendix A - Tree Inventory/Hazard Ratings Summary										
Location: 1007 Arcadia St. Esquimalt, BC.										
Date: February 15, 2024								Conditions during TTS inventory visits: 4°C, Rain, 10km/h SE Breeze		
Tag #	Species	DBH (cm)	PRZ (m)	Height (m)	Health/ Structure	Canopy (r) (m)	Bylaw Protected	Action	Observations	Impact Comments
201	Cherry	45	5	6	P/P	3	Yes	Retain	Private Tree. 3x stem AG 9,17,19cm. Pollarded. Epicormic. Fruiting Bodies.	Low
NT1	Emerald Cedar	28	3	5	FP/FP	1	No	Retain	Private Hedgerow. Multi-stem <10cm. Chlorotic.	Low
NT2	Paperbark Maple	11	2	4	F/F	1	Yes	Remove	Municipal Tree. Young. In driveway footprint. 2x stem 1m AG 5,6cm.	High Impact. Driveway.
205	Western Red Cedar	46	6	10	P/P	5	Yes	Remove	Significant decline. <50% live crown. Significant basal decay. In building footprint.	High. Building Footprint.
206	Hawthorn	55	7	12	FP/FP	4	Yes	Remove	Bifuricate 2m AG. Deadwood. Epicormic. In footprint.	High. Building Footprint.
208	Hawthorn	51	6	8	FP/FP	4	Yes	Retain	6x stem AG 20,10,16,15,15,10cm. Root compaction.	Low
209	Douglas Fir	30	4	10	P/P	3	Yes	Remove	Dead.	Low
210	Western Red Cedar	42	5	15	FP/FP	3	Yes	Retain	Bifuricate 3m AG. Narrow angle of attachment. Basal damage 5m AG. Root compaction. Ivy covered.	Low
212	Western Red Cedar	31	4	10	FP/FP	4	Yes	Retain	Bifuricate 3m AG. Narrow angle of attachment. Poor live foliar area. Ivy covered.	Low
214	Douglas Fir	46	6	20	FP/FP	3	Yes	Remove	In brambles. Ivy covered. Broken limbs. Lean to the south. Located edge of footprint.	High. Building Footprint.
215	Garry Oak	est 75	9	18	FP/FP	10	Yes	Retain	Private Tree. Bifuricate 2m AG. 15cm dead wood. Overextended limbs reaching to subject property and touching grade. Pruning required. Tag on fence.	Low
216	Hawthorn	est 42	5	4	FP/FP	3	Yes	Retain	Private Tree. 2x stem AG 20,22cm est. Dead wood. Stubs. Tag on fence.	Low
217	Leyland Cypress	est 25	3	8	FP/FP	3	No	Retain	Private Tree. Possible driveway impacts. Pruning required. Tag on fence.	Low-Mod.

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Appendix 'B' Photos and Site Plan

Figure 1a. Site Plan. Demolition stage.

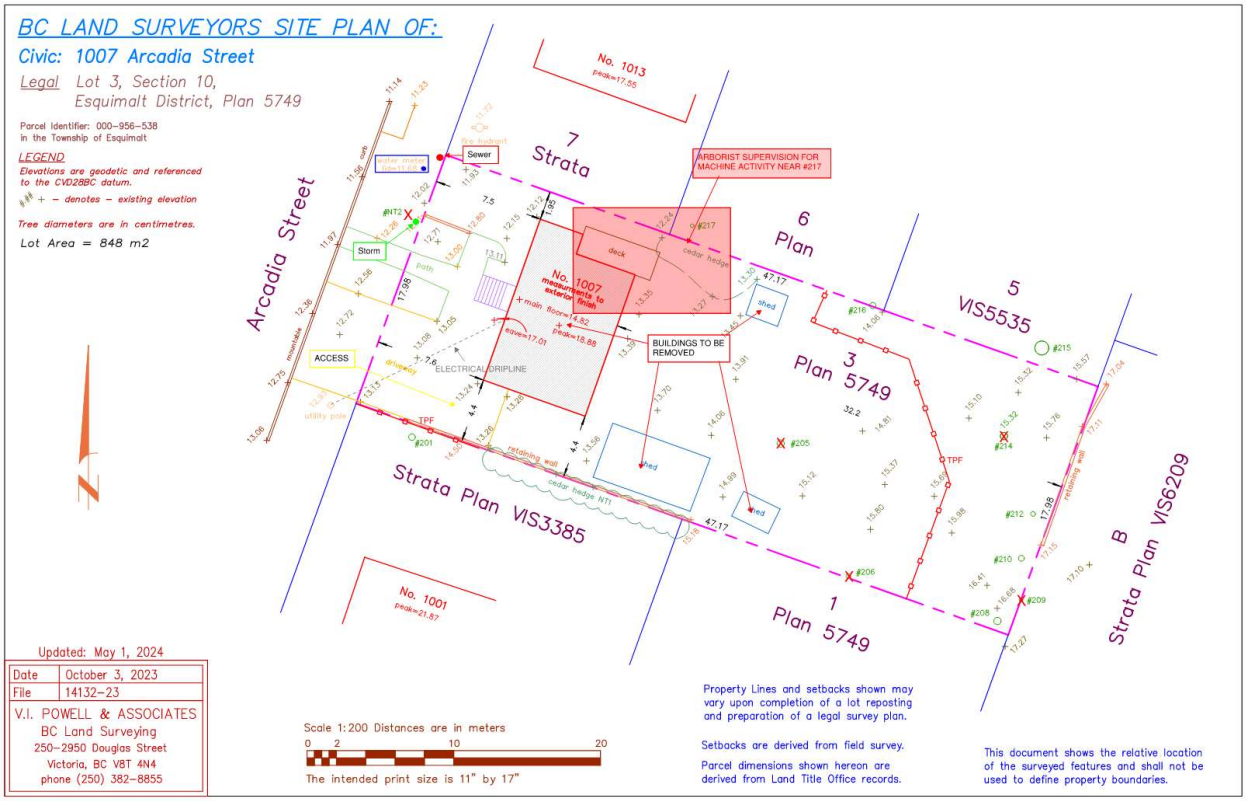

Figure 1b- Site plan. Building permit stage.

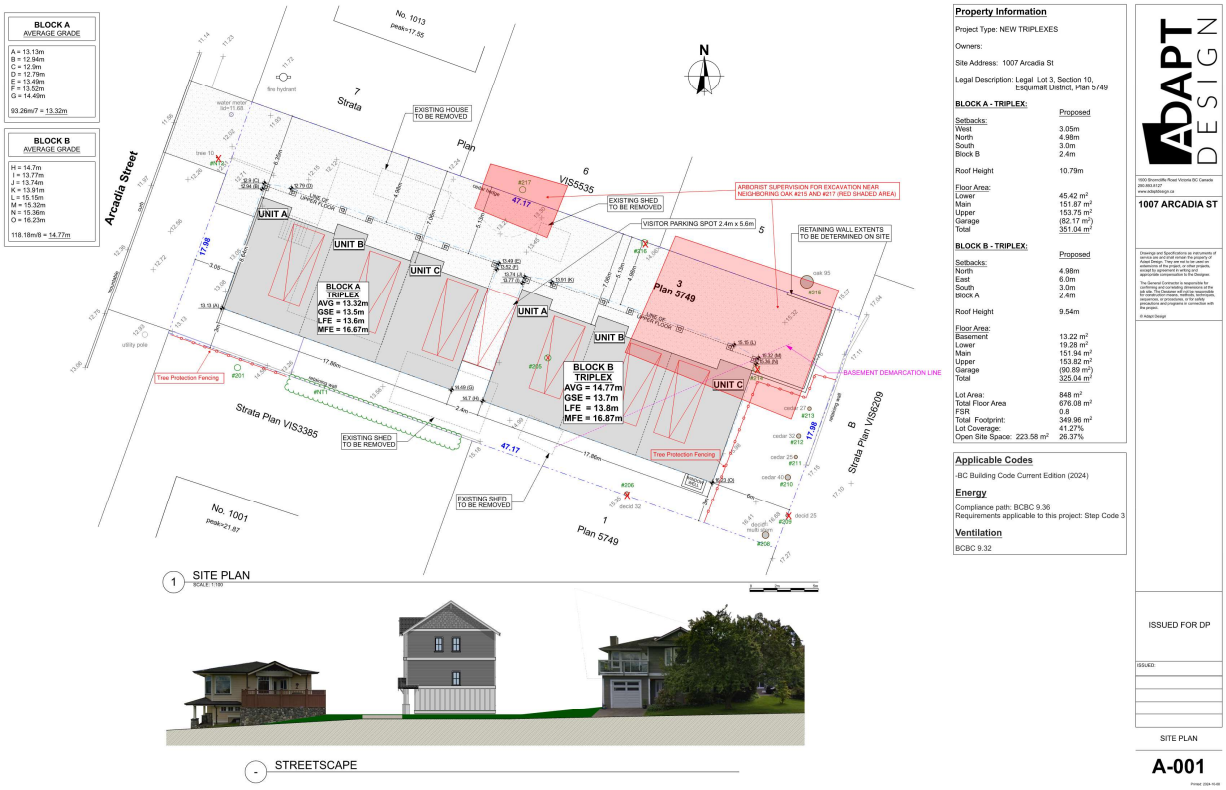

Figure 2- East Facing from Arcadia St frontage.

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Figure 3- Northeast facing from Arcadia St.

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Figure 4- Southeast facing from south side of current house.

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Figure 5- North Facing from south-central PL.

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Figure 6- Northeast facing from south-central PL. Demo Phase.

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Figure 7- East facing from property center.

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Figure 8- West facing from East PL.

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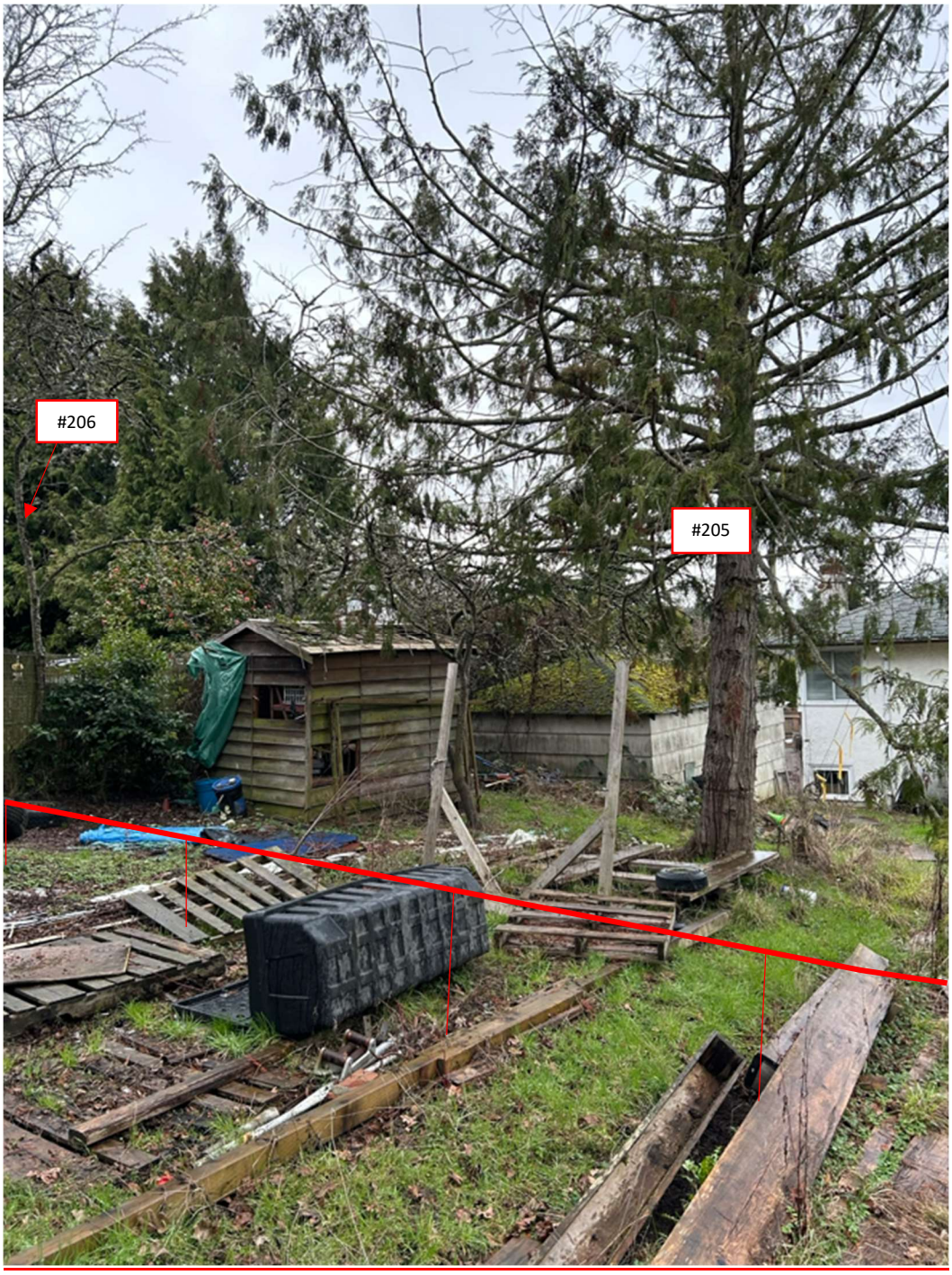
Figure 9- Southwest facing from east PL.



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Appendix 'C' Tree Protection Fencing and Armoring

Figure 1- Fencing Requirements.

Appendix 'C' Tree Protection Fencing

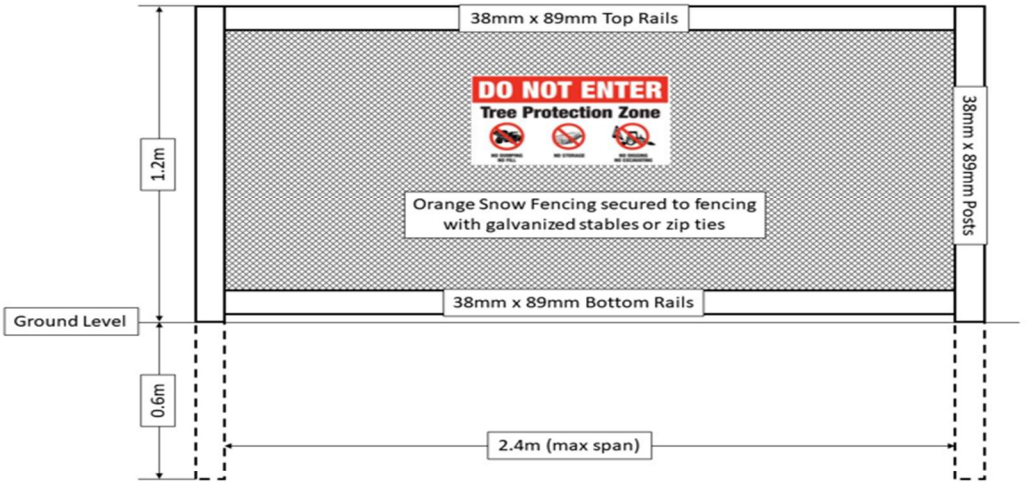

Figure 1. Tree Protection Fencing. In rocky areas, metal (t-posts or rebar) drilled into rick will be accepted instead of wooden posts.

Attach a sign with a minimum size of 407mm x 610mm (16"x24") with the following wording:

a) DO NOT ENTER – Tree Protection Zone (for retained trees) or;
b) DO NOT ENTER – Future Tree Planting Zone (for tree planting sites).

These signs must be affixed on every fence face or at least every 10 linear meters.

Figure 2- Photographic Reference.

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