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1899 COCHRANE STREET

SAANICH, BC

CONSTRUCTION IMPACT ASSESSMENT

&

TREE MANGEMENT PLAN

PREPARED FOR: Seba Construction
204-2590 Cadboro Bay Road
Victoria, BC
V8R 5J2

PREPARED BY: Talmack Urban Forestry Consultants Ltd.
Craig Charlton – Consulting Arborist
ISA Certified # PN-9812A
Tree Risk Assessment Qualification

DATE OF ISSUANCE: August 21st , 2025

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APPENDICES

REVISIONS

REVISION	DESCRIPTION	DATE (YYYY-MM-DD)	ISSUED BY
R0	Original TPP report	2024-02-26	CC + TT
R1	Revision based on new plans & City comments	2024-03-08	CC + TT
R2	Revision based on new plans & City comments	2024-06-14	CC + TT
R3	Revision based on new plans, exploratory excavation & City comments	2025-02-04	CC + TT
R4	Revisions based on new plans	2025-03-18	CC + TT
R5	Revisions based on design changes	2025-08-19	CC + TT
R6	Revisions based on exploratory excavations	2025-08-21	CC + TT

1. INTRODUCTION

Talmack Urban Forestry Consultants Ltd. was engaged to complete a tree inventory, construction impact assessment and tree management plan for the trees at the following proposed project:

Site:	1899 Cochrane Street
Municipality	District of Saanich
Client Name:	Seba Construction – Mike Jones
Dates of Site Visit(s)	February 7th, February 09th, 2024, January 22 & 24, 2025
Site Conditions:	One residential lot with a pre-existing single family-dwelling
Weather During Site Visit:	Cloudy

The purpose of this report is to address requirements of the District of Saanich arborist report terms of reference and Tree Protection Bylaw No. 9272. The construction impact assessment section of this report (section 8) is based on plans reviewed to date, including site survey by Powell & Associates (dated November 6th, 2023), site plans (dated August 11th, 2025) prepared by Outline Home Design, landscape plans prepared by Ladr landscape Architects (dated August 6th, 2025) and a civil plan (dated August 21st, 2025) prepared by McElhanney. This report reflects our current level of project understanding and may be subject to change as new information becomes available.

2. TREE INVENTORY METHODOLOGY

The size, health, and structural condition of onsite and offsite trees within influencing distance of the proposed construction were documented. For ease of identification in the field, metal numerated tags were attached to the trunk of on-site and municipal trees. Each tree was visually examined on a limited visual assessment basis (level 1), in accordance with Tree Risk Assessment Qualification (TRAQ) methods (Dunster et al. 2017) and ISA Best Management Practices.

3. EXECUTIVE SUMMARY

A total of seven (7) trees were documented for this proposed project. Two (2) trees are located onsite, of which both are bylaw protected. Four (4) trees are located on municipal property and one (1) tree is located where it is shared with the municipality.

Two (2) on-site bylaw protected trees #2254 & 2255 are selected for removal based on the proposed plans (see ***section 8.2.1***)

Two (2) municipal protected trees #2250 & 2251 are selected for removal based on the proposed plans (see ***section 8.1.1***)

Two (2) municipal protected trees #2252 & 2253 are located where retention may be possible given the mitigations and recommendations outlined in this report are followed. These trees have been given the retention status of retain* (see ***section 8.1.1***)

One (1) tree #2249 is located where it is shared with the municipality. This tree may be possible for retention given the mitigation measures and recommendations outlined in this report are followed. This tree has been given the retention status of retain* (see ***section 8.3.1***)

The remainder of the trees within the property are not protected by size or species under the current tree protection bylaw. These trees are on the survey but were not documented within our tree inventory and are proposed to be removed.

Based on the District of Saanich tree bylaw No. 9272, four (4) replacement trees are required to be planted for the removal of two (2) on-site bylaw protected trees (2254, & 2255) under section 19h). The District of Saanich is to determine the compensation required for the municipal tree removals and for any of the trees listed as Retain*, if it is determined that they are not possible to retain.

4. TREE INVENTORY DEFINITIONS

Tag: Tree identification number on a metal tag attached to tree with nail or wire, generally at eye level. Trees on municipal or neighboring properties are not tagged.

NT: No tag due to inaccessibility or ownership by municipality or neighbour.

DBH: Diameter at breast height – diameter of trunk, measured in centimetres at 1.4m above ground level. For trees on a slope, it is taken at the average point between the high and low side of the slope.

* Measured over ivy

~ Approximate due to inaccessibility or on neighbouring property

Dripline: Indicates the radius of the crown spread measured in metres to the dripline of the longest limbs.

Relative Tolerance Rating: Relative tolerance of the tree species to construction related impacts such as root pruning, crown pruning, soil compaction, hydrology changes, grade changes, and other soil disturbance. This rating does not consider individual tree characteristics, such as health and vigor. Three ratings are assigned based on our knowledge and experience with the tree species: Poor (P), Moderate (M) or Good (G).

Critical Root Zone: A calculated radial measurement in metres from the trunk of the tree. It is the optimal size of tree protection zone and is calculated by multiplying the DBH of the tree by 10, 12 or 15 depending on the tree's Relative Tolerance Rating. This methodology is based on the methodology used by Nelda Matheny and James R. Clark in their book "Trees and Development: A Technical Guide to Preservation of Trees During Land Development."

- 13 - 15 x DBH = Poor Tolerance of Construction
- 09 - 12 x DBH = Moderate
- 08 - 10 x DBH = Good

To calculate the critical root zone, the DBH of multiple stems is considered the sum of 100% of the diameter of the three largest stems. It should be noted that these measures are solely mathematical calculations that do not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean).

Health Condition:

- Poor – significant signs of visible stress and/or decline that threaten the long-term survival.

  of the specimen
- Fair – signs of stress
- Good – no visible signs of significant stress and/or only minor aesthetic issues

Structural Condition:

- Poor – Structural defects that have been in place for an extended period of time to the point that mitigation measures are limited.
- Fair – Structural concerns that are possible to mitigate through pruning.
- Good – No visible or only minor structural flaws that require no to very little pruning.

Suitability ratings are described as follows:

Rating: Suitable.

- A tree with no visible or minor health or structural defects, is tolerant to changes to the growing environment and is a possible candidate for retention provided that the critical root zone can be adequately protected.

Rating: Conditional.

- A tree with good health but is a species with a poor tolerance to changes to its growing environment or has a structural defect(s) that would require that certain measures be implemented, in order to consider it suitable for retention (i.e., retain with other codominant tree(s), structural pruning, mulching, supplementary watering, etc.)

Rating: Unsuitable.

- A tree with poor health, a major structural defect (that cannot be mitigated using ANSI A300 standards), or a species with a poor tolerance to construction impacts, and unlikely to survive long term (in the context of the proposed land use changes).

Retention Status:

- Remove (X) – Not possible to retain given proposed construction plans.
- Retain – It is possible to retain this tree in the long-term given the proposed plans and information available. This is assuming our recommended mitigation measures are followed.
- Retain * - See report for more information regarding potential impacts.
- TBD - Retention status “to be determined” at the time of construction.

1899 Cochrane Street Tree Inventory

Table 1. Tree Inventory

Tag #	Surveyed ? (Yes/No)	Location (On, Off, Shared, City)	Bylaw protected ? (Yes/No)	Name		DBH (cm)	crown radius (m)	Critical root zone radius (m)	Condition		Relative tolerance	General field observations/remarks	Tree retention/location comments	Retention status
				Common	Botanical				Health	Structural				
2249	**Yes**	**Shared**	**Yes**	Ponderosa pine	Pinus ponderosa	120.00	8	12	Good	Good	Good		See section 8.3.1	Retain*
2250	**Yes**	**City**	**Yes**	Western Red cedar	Thuja plicata	46.00	6	6.9	Fair	Poor	Poor	Dieback and decline in canopy. Leaders topped for hydro clearance	See section 8.1.1	Remove
2251	**Yes**	**City**	Yes	English hawthorn	Crataegus monogyna	2x20,3x15,3x10	7	4.92	Good	Fair	Moderate	Canopy asymmetry. Side of canopy pruned for hydro line clearance	See section 8.1.1	Remove
2252	**Yes**	**City**	**Yes**	Douglas-fir	Pseudotsuga menziesii	49.00	4	7.35	Good	Fair	Poor	Side pruned for hydro clearance	See section 8.1.1	Retain*
2253	**Yes**	**City**	Yes	Norway maple	Acer platanoides	59.00	7	5.9	Good	Fair	Good	Side pruned for hydro clearance	See section 8.1.1	Retain*
2254	**Yes**	**On**	**Yes**	Western Red cedar	Thuja plicata	43.00	5	6.45	Good	Fair	Poor	Topped historically	See section 8.2.1	Remove
2255	Yes	On	Yes	Western Red cedar	Thuja plicata	64.00	6	9.6	Good	Poor	Poor	Topped historically. Weakness and decay at union	See section 8.2.1	Remove

5. Site Information & Project Understanding

The subject site consists of a single-family lot with an existing dwelling. The tree inventory consists of native and non-native tree species throughout the property. To our understanding the proposed plans include

- Demolishing the existing house
- Constructing townhouses
- Upgrading utility services
- Creating outdoor patios for each proposed townhouse
- New municipal frontage upgrades (sidewalk, curb and gutter)

6. Field Observations

The Site is located in an urban residential area, where the tree resource consists of primarily native tree species with a few non-native ornamentals throughout the site.

Figure 1: *Site context air photo. The approximate boundary of the subject site is outlined and shaded in blue.*

7. TREE RISK ASSESSMENT

During our January 24th, 2025, site visit and in conjunction with the tree inventory, on-site trees were assessed for risk on a limited visual basis (level 1), in the context of the existing land uses. The time frame used for the purpose of our assessment is one year (from the date of this report). Unless otherwise noted herein, we did not conduct a detailed (level 2) or advanced (level 3) risk assessment, such as resistograph testing, increment core sampling, aerial examinations, or subsurface root/root collar examinations.

Existing Land Uses

We did not observe any trees that were deemed to be moderate, high, or extreme risk (in the context of the existing land uses, which would require hazard abatement to eliminate present and/or future risks) within a 1-year timeframe.

Targets considered during this TRAQ assessment include occupants of the existing residences on-site and neighbour's (constant use), occupants of vehicles travelling on Cochrane Street, and Dean Avenue (frequent use), pedestrians travelling along the roadside of Cochrane Street and Dean Avenue (frequent use), occupants of rear, and side yards on-site and neighbor's (occasional use), hydro lines (constant use).

Matrix 1. Likelihood matrix.

Likelihood of Failure	Likelihood of Impact			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2. Risk rating matrix.

Likelihood of Failure & Impact	Consequences of Failure			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Figure 2: Likelihood and Risk Rating Matrices used to evaluate tree risk in the ISA Tree Risk Assessment Manual, Second Edition (Dunster et al. 2017).

8. CONSTRUCTION IMPACT ASSESSMENT

8.1. RETENTION AND REMOVAL OF MUNICIPAL TREES

The following municipal trees (indicated by ID#) are located where they may be possible for retention, however their retention is dictated by the ability to accurately follow the mitigation measures and recommendations outlined in this report. The following trees are listed as Retain* (shown on the tree management plan, ***Appendix A, T1***):

Two (2) municipal trees listed as Retain*:

- 2252, 2253

The following municipal trees (indicated by tag #) are located where they are likely to be severely impacted by construction and are proposed for removal (shown on the tree management plan, ***Appendix A, T1***):

Remove (2) municipal trees:

- 2250, 2251

8.1.1. Mitigation Measures and Additional Information for Municipal Trees

Tree ID's: 2252, 2253 - Are located on the municipal boulevard along Dean Avenue. These trees are likely to be impacted by the proposed storm and sewer utility lines, and the sidewalk/boulevard municipal frontage upgrades.

Services:

The proposed sanitary service line is ~2.4m south of tree 2253 with the storm service line being approximately 2m south of the sanitary line. We anticipate roots will be encountered during the excavation required for these service connections. During our on-site review in this area with Saanich's parks department on January 22nd, 2025, it was noted that the existing service lines were ~1-1.5m deep. It is to our understanding that these new services will have to be tied into the existing mains at this depth. Because of this depth required, we believe it may be possible to preserve critical rooting structures if encountered during excavation, as long as they are located above the required depth. These services are to be excavated using a hydro-vac and under arborist supervision. See **Appendix A, T1**.

Clearance pruning of tree 2253 is likely to be necessary to accommodate working room for the above-mentioned service utility lines. We anticipate 3x7cm and 1x~14cm branches in diameter will require removal to accommodate the proposed works. These branches are located on the south side of the lower canopy (roughly from the base to 2-2.5m agl). All pruning is to be done by an ISA certified arborist and done to the industry's best current management practices. We do not anticipate this pruning required to significantly impact this tree

Sidewalk/Curb & Gutter:

A new sidewalk with a curb and gutter is proposed within the CRZ of these trees. Based on plans viewed to date the curb is approximately .5m east of the existing asphalt curb and the sidewalk extends west approximately 1.5-2m from the root collar of these trees. During excavation, alternative designs of the sidewalk such as reducing the width by .4-.5m, bridging the curb (using rebar to connect two sections of curb and limiting excavation beneath the bridge), and limiting the depth of the sidewalk excavation so that it is elevated above the large critical rooting structures (if encountered) may be required. Limiting the depth of the sidewalk excavation may be possible by reducing the amount of sub-base prep and concrete thickness, using a geo-textile such as Combigrid 3030 as a base layer and reinforcing the concrete using rebar. These techniques may be required in various areas where the concrete sidewalk footprint encroaches within the root zone of these trees.

The project arborist is to supervise the excavation required for the sidewalk & curb and gutter locations within the CRZ of this tree. A bucket excavator can be used to remove the existing hardscape in areas where the curb and gutter is proposed, however a mix of hydro-vac and hand-digging will be necessary for the sidewalk, curb & gutter excavations within the CRZ of this tree. See **Appendix A, T1**.

There is an existing fence along the eastern property line at 1899 Cochrane Street. This fencing is to remain in place and be maintained throughout the demolition and construction phase of this project.

Tree barrier fencing is to be installed according to **Appendix A, T1**. This fencing will have to be adjusted throughout the construction phase of this project. The project arborist is to be consulted and notified prior to it being moved.

Tree ID's: **2250, 2251** – Are located on the municipal boulevard along Dean Avenue. These trees are located where they are likely to be impacted by the proposed construction. These trees are selected for removal based on a combination of impacts and their pre-existing condition.

General Notes:

There is an existing fence along the eastern property line at 1899 Cochrane Street. This fencing is to remain in place and be maintained throughout the demolition and construction phase of this project.

Tree barrier fencing is to be installed according to **Appendix A, T1**. This fencing will have to be adjusted throughout the construction phase of this project. The project arborist is to be consulted and notified prior to it being moved.

The Retention status of trees listed as Retain* is primarily influenced by the ability to follow the mitigation measures outlined in this report, along with the feasibility of using alternative construction methods to preserve critical rooting structures.

8.2. Retention and Removal of On-site Trees

The following on-site bylaw protected trees (indicated by tag #) are located where they are likely to be severely impacted by construction and are proposed for removal (shown on the tree management plan, ***Appendix A, T1***):

Remove two (2) on-site bylaw protected trees:

- 2254, 2255

8.2.2. Mitigation Measures and Additional Information for On-site Trees

Tree ID's: 2254, 2255 – Are located within the building footprint and are proposed for removal under District of Saanich's tree bylaw 9272, section 19 h).

8.3. Retention and Removal of Shared Trees

The following shared bylaw-protected tree (indicated by tag #2249) is located where it may be possible for retention, however its retention is dictated by the ability to accurately follow the mitigation measures and recommendations outlined in this report. The following tree is listed as Retain* (shown on the tree management plan, ***Appendix A, T1***):

One (1) bylaw-protected shared tree listed as Retain*:

- 2249

8.3.1. Mitigation Measures and Additional Information for Shared Trees

On the day of January 22nd, and January 24th, 2025, an exploratory excavation was conducted within the CRZ of this pine tree to better assess the impacts from the proposed construction.

During the January 22nd, 2025, exploratory excavation, we supervised and monitored hydro-vac excavation to expose roots along the middle of the proposed sidewalk along the Cochrane Street and Dean Avenue frontages. Excavation in this area was ~5-6m east and north from the root collar of this tree and to a depth of ~18 inches by ~8-12 inches wide.

The following roots were encountered along middle of the proposed sidewalk exploratory excavation):

- High density of roots 1cm and under
- 3x ~5cm in diameter were exposed and preserved
- 6x ~2cm in diameter were exposed and preserved
- 4x ~3.5cm in diameter were exposed and preserved
- 1x ~16-20cm in diameter were exposed and preserved
- 1x ~14cm in diameter were exposed and preserved
- 7x ~8-10cm in diameter were exposed and preserved. These roots were concentrated around the existing catch basin area.

We also supervised the hydro-vac excavation of a trench across the existing driveway. Excavation was approximately 3.5m southeast from the root collar of this tree and was to a depth of 35 inches and ~8-12 inches wide.

The following roots were encountered:

- Moderate density of roots 1cm and under
- 2x 8cm in diameter were exposed and preserved
- 3x 3.5cm in diameter were exposed and preserved
- 6x 2cm in diameter were exposed and preserved
- 3x 4.5-6cm in diameter were exposed and preserved

On August 21st, 2025, an additional exploratory excavation was conducted by hand and completed in the estimated location of the proposed back edge of sidewalk (closet to tree 2249) where it extends along the Dean and Cochrane Street frontages. This trench was approximately 10 cm wide and to a depth of 30 cm. The roots previously exposed during the January 22nd, 2025, hydro-vac exploratory excavation along the existing curb were encountered in this new trench along with an additional 1x~12-14cm diameter root. The larger roots (1x~16-20cm & 3x~8-10cm in diameter) that were previously exposed near the existing catch basin were found to be approximately 20-25cm below the existing boulevard grade. Another large root previously exposed (~14cm) was found at the base of the existing “no parking” sign. This root was found to be approximately 25-30cm below the existing boulevard grade. An additional root roughly 12-14cm in diameter was exposed roughly .25m west of the existing stop sign and to a depth of approximately 20cm below the existing boulevard grade. 1x~4-6cm root was exposed at the edge of the existing driveway and was found to be approximately 8cm below the existing grade. Along with the roots exposed and preserved, a moderate density of roots 1cm and under were encountered during this exploratory and were pruned back to sound tissue. See **Appendix D**, Exploratory Excavation Photographs.

Tree ID: 2249 – Is a large Ponderosa pine tree located at the corner of the Cochrane Street and Dean Avenue. This tree is likely to be impacted by the building foundation, parking stall, fence and building clearance required for unit 1, along with the municipal frontage upgrades (sidewalk, curb and gutter) at the corner of Cochrane Street and Dean Avenue.

Sidewalk, curb and catch basin – On the east (Dean Avenue side of the tree), where the existing catch basin is located, the back edge of the proposed sidewalk extends roughly .5m west into the existing boulevard. Larger rooting structures (1x~16-20cm, 1x~14cm & 3x~8-10cm in diameter) that were encountered during the exploratory excavation were mainly concentrated in the location of the existing catch basin. The new proposed catch basin has been moved further south to lessen the impacts to these encountered roots.

The proposed curb location on the east side of the tree is approximately 1.5m east of the existing asphalt curb, while the curb on the north side is approximately .5m north of the existing asphalt curb. Larger rooting structures were encountered at a depth of roughly 20-25cm below the existing boulevard grade near the north/northeastern corner of the existing boulevard. The roots encountered are at a grade that should permit conventional curb construction over most of its length. In localized areas particularly near the catch basin on Dean Avenue, alternative construction methods may be required and can be located and determined at the time of excavation. These include bridging sections of the curb above rooting structures encountered and using rebar in between the bridge to reinforce it. This should be possible, as the proposed top of the curb is anticipated to be 15 cm above the existing roadway grade and the roots are located below the existing roadway grade. This type of alternative construction would only have to be utilized in a few sections of the proposed concrete curb.

The roots encountered during all of the exploratory excavations on the east side of the tree were found to be ~20-25cm below the existing grade of the boulevard. The depth of these roots may be closer to the surface beneath the existing pavement within the existing road footprint. During our excavation we noted that the grade slopes away from the curb as it gets closer to the tree, therefore it should be possible to elevate the sidewalk above the roots and use conventional construction techniques within most of the sidewalk footprint. With the proposed top of curb being roughly 15 cm above the roadway grade, this puts it approximately 2.5-3.8cm above the existing boulevard grade. The sidewalk surface has to match the height of the concrete curb. With the roots being approximately 20-25cm below the existing boulevard grade, this gives and estimated 22.5-27.5cm of depth before the upper surface of any larger critical roots would be encountered. Typically, sidewalk installations require an excavation depth of 20cm for sub-base prep and concrete thickness. It is in our opinion that the use of alternative construction methods such as floating the sidewalk by using a geo-textile (e.g. Combigrid 30.30 – See **Appendix B)** over top of the larger rooting structures should be possible. In locations where excavation depth is required to reach material suitable for the sub-base prep and roots are encountered above this depth, these roots can be exposed by hand digging and the covered with a geotextile fabric prior to installing the base materials around the roots.

During our August 21st, 2025, exploratory excavation we found one root roughly 6cm in diameter at the edge of the existing driveway that may require pruning for the sidewalk due to its shallow depth (roughly 8cm below existing grade). We also encountered the previously exposed ~12-14cm root at the base of the existing “no parking” sign. This root was approximately 25-30cm below the existing boulevard grade. This root may be impacted by the let down area of the sidewalk. Slightly shifting the let down area of the sidewalk that connects to the roadway grade at the corner of Cochrane Street and Dean Avenue may be required to preserve this root. Based on our findings this should be feasible and involve little impacts to rooting structures.

Clearance pruning for the sidewalk and curb will likely be required. We anticipate that 1x12cm & 1x13cm branches will require pruning. During this pruning the option to also remove and additional 2x10cm dead branches and further pruning the 12cm branch back to where it attaches to the trunk of the tree could be done.

Pruning the 12cm branch back to where it attaches to the trunk will result in a pruning cut that is approximately 14cm in diameter. We do not anticipate this pruning would have a significant impact on this tree. It is recommended the project arborist be on-site to coordinate the branches that will require removal.

The project arborist is to supervise the excavation required for the sidewalk & curb and gutter locations within the CRZ of this tree. A bucket excavator can be used to remove the existing hardscape in areas where the curb and gutter is proposed, however a mix of hydro-vac and hand-digging will be necessary for the sidewalk, curb & gutter excavations within the CRZ of this tree. Alternative construction methods mentioned above are likely to be required in certain areas to preserve larger rooting structures. See **Appendix A, T1**.

Building footprint – The building footprint of unit (1) one has been re-designed to increase the distance between the tree and the building by relocating the building footprint corner roughly 4.8 metres (at nearest) from the surveyed location of tree 2249. Over-excavation for perimeter drains and form work of .5-1m would bring this distance closer to 3.8-4.3m from the surveyed location of this tree. This anticipated excavation (with over excavation) is within the footprint of the trench that was exposed during our exploratory excavations, conducted on January 24th, 2025. The roots encountered ranged from the size of 2-8cm in diameter (see above). In our opinion pruning the roots in this location is unlikely to have a detrimental impact on the future health and survival of this tree long term.

The project arborist is to supervise the excavation for the proposed building foundation of unit 1 within the CRZ of this tree, over excavation may have to be limited to .5m.

Parking stall – The parking stall is approximately 5.3m from the surveyed location of tree 2249. Plans reviewed to date indicate the final grade of the stall is approximately 20cm above the existing grade. Excavation may have to be limited in this area if rooting structures are being encountered. The project arborist is to supervise the excavation for the parking stall within CRZ of this tree, if at this time large critical rooting structures are encountered, the using an alternative material such as asphalt and limiting the excavation may be required. **Appendix A, T1**.

Patio – The current drawings have omitted hardscape within the patio area, however, it is to our understanding that there is small let down area from the eastern proposed door. This let down area to our understanding will be constructed using pavers. The project arborist is to be on-site during the excavation for this let down area within the CRZ of tree 2249.

Landscaping – Landscape plans reviewed to date indicate a cedar panel fencing around the proposed soft landscaping area of unit 1. The project arborist is to supervise the fence post locations for this fencing within the critical root zone of tree 2249. The plantings within the enclosed area will have to be small shrubs and excavation with have to accommodate rooting structures if encountered.

Tree barrier fencing is to be installed according to **Appendix A, T1**.

Canopy Pruning Requirements:

With the re-design of the building footprint in this corner, the expected pruning is less than what was previously thought and the large 1x~40cm diameter limb should be retainable. It is anticipated that the pruning will require the removal of 1x 25cm scaffold limb, 1x 13cm scaffold limb and 2x ~18-20cm scaffold limbs in order to provide building clearance for unit 1. Pruning to remove the above-mentioned limbs and any additional pruning for sidewalk & the proposed patio clearance is likely to be less that 20% of the live canopy growth.

All pruning is to be done by an ISA certified Arborist and done to the industries best current management practices. It is recommended that the project arborist be on-site during the pruning to ensure the proper branches are removed. See **Appendix A, T1**.

General Notes:

An existing asphalt driveway currently resides less than 2m west from tree 2249. It is recommended that this driveway remain in place for the duration of the demolition phase and for as long as possible during the construction phase of this project.

Tree 2249 is currently in good health. We anticipate that the root and canopy pruning related to the proposed construction may result in short term indicators of health stress, however based on the trees current condition we anticipate that there may not be a significant long-term impact on its health or stability. As a pro-active measure, we highly recommend mulching as much as the root zone as possible, using organic material primarily consisting of pine needles or a high-quality compost. In addition to the mulch, supplemental watering during the hot summer months for the first year or two during and following construction is recommended, as the compounded impacts and removal of the existing catch basin may result in a change of water uptake for this tree.

The Retention status of trees listed as Retain* is primarily influenced by the ability to follow the mitigation measures outlined in this report, along with the feasibility of using alternative construction methods to reduce impacts to an acceptable level in which the tree or trees can be retained.

8.4. TREE IMPACT SUMMARY

Quantity of Existing Trees	# of Trees Retained	# of Trees Removed	Relevant Bylaw Section (if applicable)	Replacement Tree Ratio	Replacement Trees Required
On-site (Bylaw Protected)					
2	0	2	Section 19. h)	2:1	4
Municipal Trees					
4	+2 Retain*	2	DoS to Determine	DoS to Determine	Dos to Determine
Shared with Municipality (Bylaw Protected)					
1	+1 Retain*	0	DoS to Determine	DoS to Determine	DoS to Determine
				Total:	4

Based on the District of Saanich tree bylaw No. 9272, four (4) replacement trees are required to be planted for the removal of two (2) on-site bylaw protected trees (2254, & 2255) under section 19h). The District of Saanich is to determine the compensation required for municipal trees and any of the trees listed as Retain*, if it is determined that they are unsuitable for retention.

9. IMPACT MITIGATION

Tree Protection Barrier: The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, fencing should be erected at the perimeter of the critical root zone. The barrier fencing to be erected must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with flexible snow fencing. The fencing must be erected prior

to the start of any construction activity on site (i.e., demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

Arborist Supervision: All excavation occurring within the critical root zones of protected trees should be completed under supervision by the project arborist. Any severed or severely damaged roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. In particular, the following activities should be completed under the direction of the project arborist:

- Any excavation or fill required for the building footprints and municipal curb and sidewalk installation within the critical root zone of trees 2249, 2252 and 2253.

Methods to Avoid Soil Compaction: In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one of the following methods:

- Installing a layer of hog fuel or coarse wood chips at least 20 cm in depth and maintaining it in good condition until construction is complete.
- Placing medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15-20 cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

Mulching: Mulching can be an important proactive step in maintaining the health of trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces and be 5-8cm deep. No mulch should be touching the trunk of the tree. See “methods to avoid soil compaction” if the area is to have heavy traffic.

Scaffolding: This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders, or platforms. Methods to avoid soil compaction may also be recommended (see “Minimizing Soil Compaction” section)

Landscaping and Irrigation Systems: The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must consider the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technician consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on tree health and can lead to root and trunk decay.

Arborist Role: It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

- Locating the barrier fencing
- Reviewing the report with the project foreman or site supervisor
- Locating work zones, where required

- Supervising any excavation within the critical root zones of trees to be retained
- Reviewing and advising of any pruning requirements for machine clearances

Review and site meeting: Once the project receives approval, it is important that the project arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any site clearing, tree removal, demolition, or other construction activity occurs and to confirm the locations of the tree protection barrier fencing.

10. DISCLOSURE STATEMENT

This arboricultural field review report was prepared by Talmack Urban Forestry Consultants Ltd. for the exclusive use of the Client and may not be reproduced, used, or relied upon, in whole or in part, by a party other than the Client without the prior written consent of Talmack Urban Forestry Consultants Ltd. Any unauthorized use of this report, or any part hereof, by a third party, or any reliance on or decisions to be made based on it, are at the sole risk of such third parties. Talmack Urban Forestry Consultants Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, in whole or in part.

Arborists are professionals who examine trees and use their training, knowledge, and experience to recommend techniques and procedures that will improve a tree's health and structure or to mitigate associated risks. Trees are living organisms whose health and structure change and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. The arborist's review is limited to a visual examination of tree health and structural condition, without excavation, probing, resistance drilling, increment coring, or aerial examination. There are inherent limitations to this type of investigation, including, without limitation, that some tree conditions will inadvertently go undetected. The arborist's review followed the standard of care expected of arborists undertaking similar work in British Columbia under similar conditions. No warranties, either express or implied, are made as to the services provided and included in this report.

The findings and opinions expressed in this report are based on the conditions that were observed on the noted date of the field review only. The Client recognizes that passage of time, natural occurrences, and direct or indirect human intervention at or near the trees may substantially alter discovered conditions and that Talmack Urban Forestry Consultants Ltd. cannot report on, or accurately predict, events that may change the condition of trees after the described investigation was completed.

It is not possible for an Arborist to identify every flaw or condition that could result in failure, nor can he/she guarantee that the tree will remain healthy and free of risk. The only way to eliminate tree risk entirely is to remove the entire tree. All trees retained should be monitored on a regular basis. Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

Immediately following land clearing, grade changes or severe weather events, all trees retained should be reviewed for any evidence of soil heaving, cracking, lifting or other indicators of root plate instability. If added information is discovered in the future during such events or other activities, Talmack Urban Forestry Consultants Ltd. should be requested to re-evaluate the conclusions of this report and to provide amendments as required prior to any reliance upon the information presented herein.

11. In Closing

We trust that this report meets your needs. Should there be any questions regarding the information within this report, please do not hesitate to contact the undersigned.

Yours truly,

Talmack Urban Forestry Consultants Ltd.

Prepared by:

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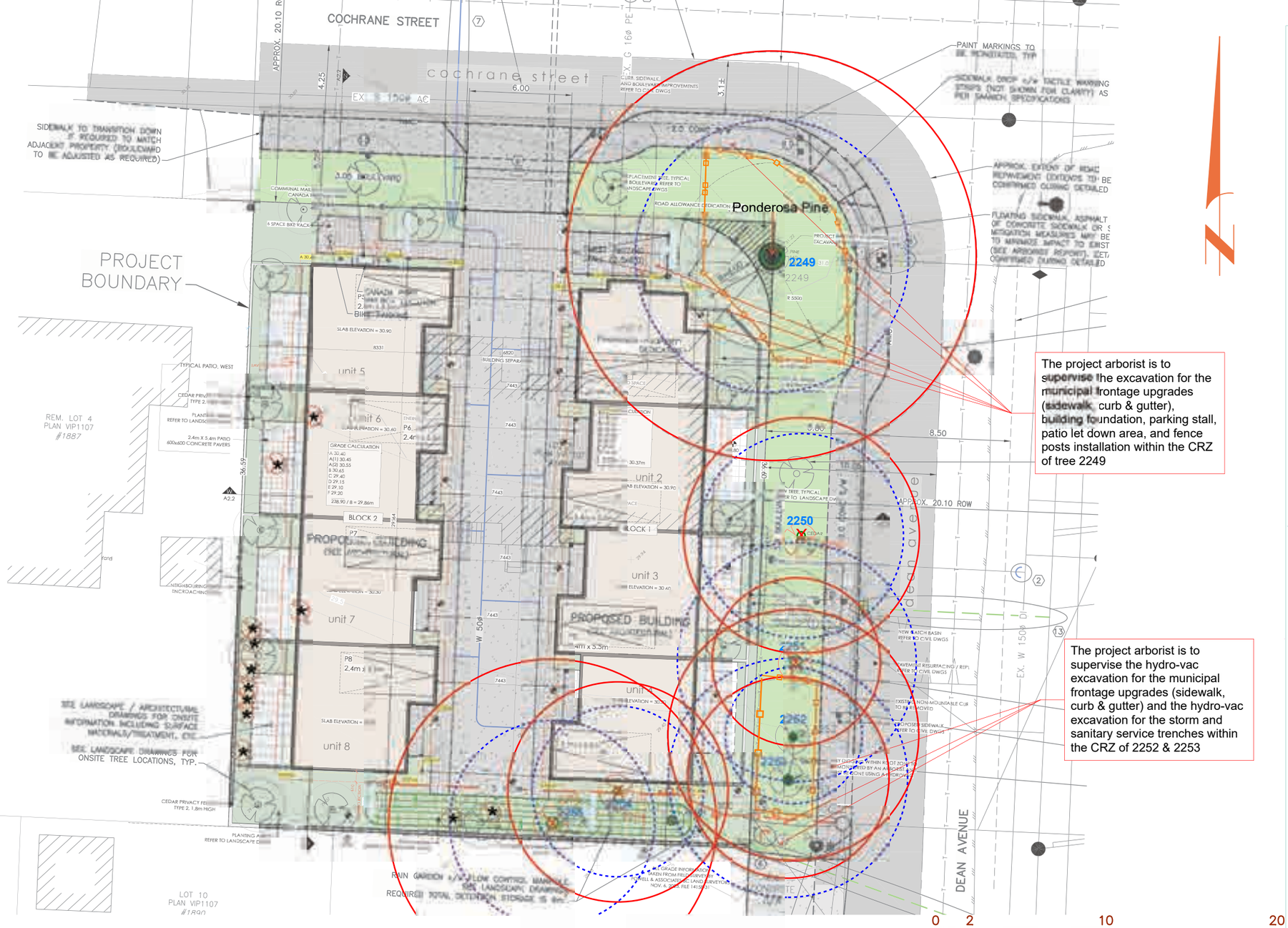
12. References

Dunster, J.A., E.T. Smiley, N. Matheny, and S. Lily. 2017. Tree Risk Assessment Manual, International Society of Arboriculture (ISA).
The District of Saanich Tree Protection Bylaw No. 9272
District of Saanich Maps GIS software

13. Company Information

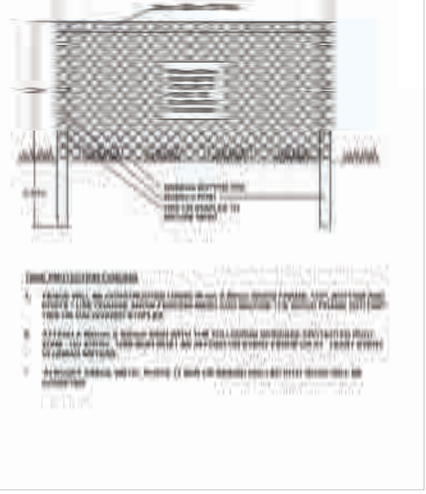
General Liability: Intact Insurance, Policy No. 5V2147122: $5,000,000

APPENDIX A – TREE MANAGEMENT PLAN (T1)



LEGEND

- DRIPLINE OF TREE
- CRITICAL ROOT ZONE
- X — TREE TO BE REMOVED
- TREE
- * — NON-BYLAW PROTECTED TREE TO BE REMOVED
- TREE BARRIER FENCING



TREE PROTECTION NOTES

Tree protection barrier: The areas, surrounding the trees to be retained, should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zone. The barrier fencing to be erected must be a minimum of 1200mm in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

Arborist supervision: All excavation occurring within the critical root zones of protected trees must be completed under the supervision of the project arborist. Any severed or severely damaged roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound.

Demolition: The demolition of the existing houses, driveways, and any services that must be removed or abandoned must take the critical root zone of the trees to be retained into account. If any excavation or machine access is required within the critical root zones of trees to be retained, it must be completed under the supervision of the project arborist. If temporarily removed for demolition, barrier fencing must be erected immediately after the supervised demolition.

Methods to avoid soil compation: In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one of the following methods:

- Installing a layer of hog fuel or coarse wood chips at least 20cm in depth and maintaining it in good condition until construction is complete.
- Placing medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

Mulching: Mulching can be an important protective step in m… health or trees and mitigating construction related impacts a… stress. Mulch should be made from a natural material such … or bark pieces and be 5-8cm deep. No mulch should be tou… trunk of the tree. See "methods to avoid soil compaction" if … have heavy traffic.

Pruning: We recommend that any pruning of bylaw-protected trees be performed to ANSI A300 standards and Best Management Practices.

Paved surfaces above tree roots: Where paved areas cannot avoid encroachment within critical root zones of trees to be retained, construction techniques, such as floating permeable paving, may be required. The "paved surfaces above tree roots" detail above offers a compromise to full depth excavation (which could impact the health or structural stability of the tree). The objective is to avoid root loss and to instead raise the paved surface above the existing grade (the amount depending on how close roots are to the surface and the depth of the paving material and base layers). Final grading plans should take this potential change into account. This may also result in soils which are high in organic content being left intact below the paved area. To allow water to drain into the root systems below, we also recommend that the surface … material (instead of conventional asphalt or …able asphalt, paving stones, or other porous …igns such as those utilitzed by Grasspave, … and open-grid systems.

…l:Care must be taken to ensure that the area of …disting does not extend beyond the necessary footprints and into the critical root zones of surrounding trees. The use of small low-concussion charges and multiple small charges designed to pre-shear the rock face will reduce fracturing, ground vibrations and overall impact to the surrounding environment. Only explosives of low phytotoxicity and techniques that minimize tree damage should be used. Provisions must be made to ensure that blasted rock and debris are stored away from the critical root zones of trees.

Scaffolding:This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders or platforms. Methods to avoid soil compaction may also be recommended (see "Minimizing Soil Compaction" section).

Landscaping and irrigation systems: The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technical consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on the tree health and can lead to root and trunk decay.

Arborists role: It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

- Locating the barrier fencing.
- Reviewing the report with the project foreman or site supervisor.
- Locating work zones and machine access corridors where required.
- Supervising excavation for any areas within the critical root zones of trees to be retained including any proposed retaining wall footings and review any proposed fill areas near trees to be retained.

DRAFT TREE MANAGEMENT PLAN

1899 Cochrane Street
Saanich, BC
August 21st, 2025
Prepared for: Seba Construction
Scale: 1:250 @11" X 17"
Drawn By: CC
Reference Drawings: Civil Plans(McElhanney Ltd; August 21st, 2025), Site plan (Outline Home Design; August 11th, 2025)

TALMACK URBAN FORESTRY
Victoria, BC V8Z 7H6
TEL: 250-479-8733
EMAIL: trees@talmack.ca
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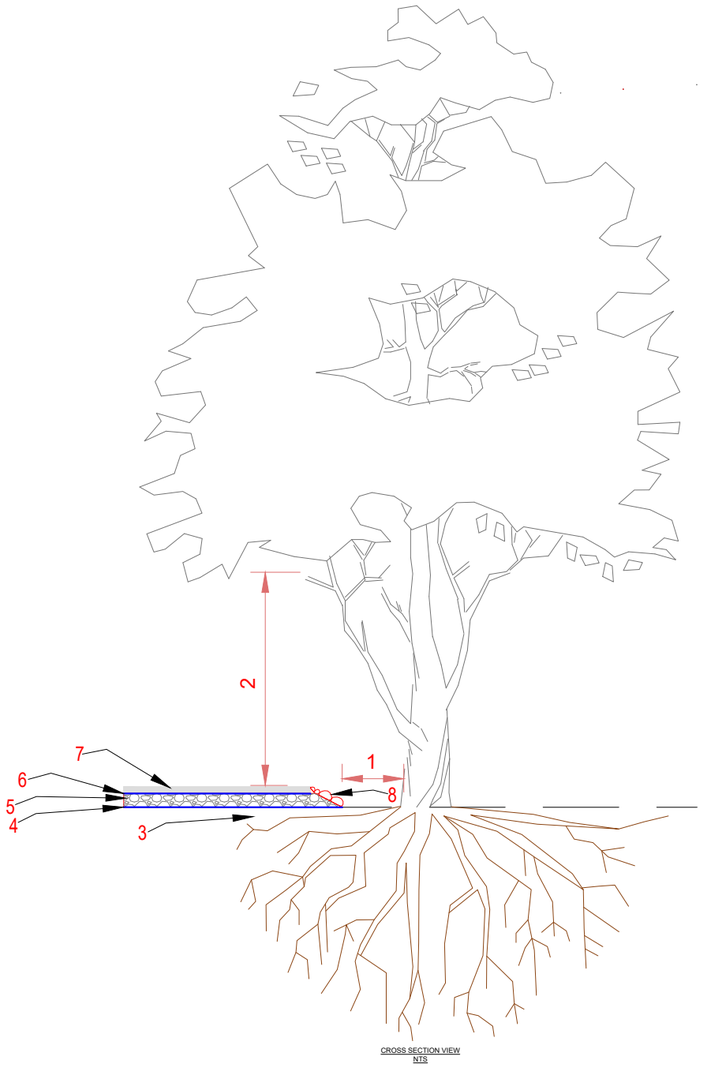
APPENDIX B – HARD SURFACE OVER ROOT DETAIL

HARD SURFACE ABOVE TREE ROOTS DETAIL



CROSS SECTION VIEW
NTS

HARD SURFACE ABOVE TREE ROOTS NOTES

1. Maintain as large a setback between the fill encroachment and the root collar of the tree as possible.
2. Review any canopy clearance pruning requirements to accommodate vehicle or pedestrian clearances (Pruning to be performed to ANSI A300 standards).
3. Excavate the new footprint of the driveway or sidewalk under the supervision of the project arborist. Excavation will be limited to the removal of the existing sod layer. Excavation around root structures must be performed by hand, airspade, or hydroexcavation.
4. Install a two-dimensional (such as Combigrid $\frac{30}{30}$) or Three-dimensional geogrid reinforcement.
5. Install a 150mm depth layer of clear crushed gravel (no fines) using 20mm and/or 75mm diameter material or approved equivalent. *Note - the depth may be less than 150mm in some situations (dependant on grading constraints).
6. Install meduim weight geotextile fabric (such as Nilex 4535 or similar) over the clear crushed gravel layer to prevent fine particles of sand from infiltrating this layer.
7. The bedding or base layer and new driveway or sidewalk surface can be installed directly on top of the felted filter fabric.
8. Fill slopes - where possible install loose stacked boulders to reduce the footprint of the fill slopes that encroach within the critical root zone. Fill slope materials must be permeable to air and water. Do not pile fill material directly against the trunk of a tree.

TALMACK
URBAN FORESTRY

APPENDIX C – PHOTOGRAPHS

Image 1: Tree 2249 (red dot). Proposed as Retain*

Image 2: Tree 2250 (red dot). Selected for removal.

Image 3: Tree 2251 (red dot). Selected for removal.

Image 4: Trees 2252 (red dot) & 2253 (blue dot). Both proposed as Retain*

Image 5: Tree 2254 (red dot). Proposed for removal.

Image 6: Tree 2255 (red dot). Proposed for removal.

Image 7: To our understanding the proposed back of sidewalk (wooden stake) and curb (pink line), on the east side of tree 2249 (Dean Avenue) were surveyed. See red arrows.

Image 8: To our understanding the Proposed back of sidewalk (wooden stake) and curb (pink line), on the east side of tree 2249 (Dean Avenue) were surveyed. See red arrows.

Image 9: To our understanding the Proposed back of sidewalk (wooden stake) and curb (pink line), on the northeast of tree 2249 (corner of Cochrane Road and Dean Avenue) were surveyed. See red arrows.

Image 10: North side of tree 2249. Branches likely requiring removal for sidewalk clearance (red arrows). The project arborist should be on-site to coordinate and clarify what branches need to be pruned.

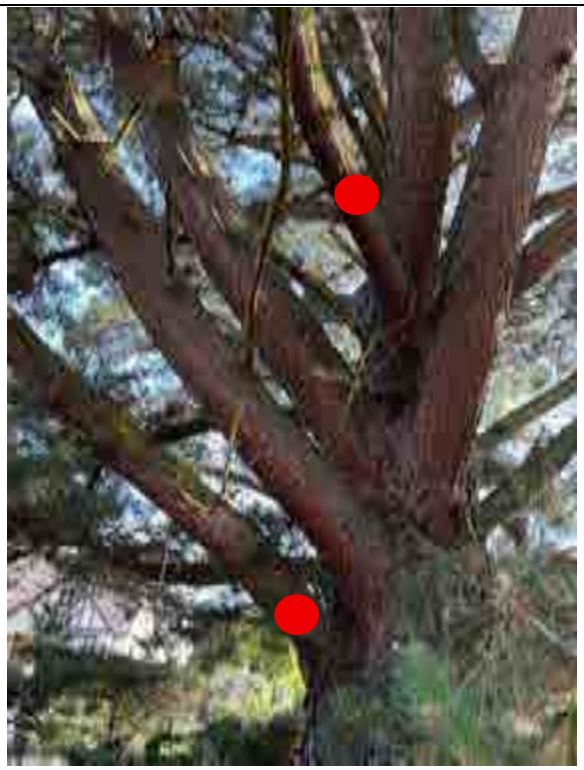


Image 11: 1x25cm & 1x~18cm branches in diameter likely to require removal for the building corner of unit 1 (red dots). The project arborist should be on-site to coordinate and clarify what branches need to be pruned.

Image 12: 1x~18cm branch in diameter likely to require removal for the building corner of unit 1 (red dot). The project arborist should be on-site to coordinate and clarify what branches need to be pruned.

Image 13: 3x7cm & 1x~14cm branches in diameter from tree 2253 will likely require removal to accommodate machine access for the servicing installation and to provide clearance for the proposed sidewalk (red arrows).

APPENDIX D – EXPLORATORY EXCAVATION PHOTOGRAPHS

Photographs 1 & 2: Larger rooting structures (~10-20cm in diameter) were exposed approximately 5-6.5m east of tree 2249 near the existing catch basin on Dean Avenue (**left photo**). More larger rooting structures encountered ~5-6m northeast from the root collar of tree 2249 (**right photo**).

Photographs 3 & 4: Area on the southwest side of the tree was marked out for the exploratory excavation (**left photo**). Rooting structures encountered during the southwest hydro-vac excavation (**right photo**). These structures will have to be pruned during the over-excavation for the building footprint.

Photographs 5 & 6: Continuation of rooting structures encountered during southwest exploratory excavation. Some of these rooting structures will require pruning during the over-excavation for the building footprint.

APPENDIX E – EXPLORATORY EXCAVATION PHOTOGRAPHS (AUGUST 21ST, 2025)

Photograph 1: Area of hand-dug exploratory excavation along the backside of the proposed sidewalk (wooden stake – red arrow) on the east side of tree 2249 (Dean Avenue frontage). Larger rooting structures previously encountered (blue arrow, difficult to see) were found to be 20-25cm below the existing boulevard grade.

Photograph 2: Area of hand-dug exploratory excavation along the backside of the proposed sidewalk (wooden stake) on the northeastern side of tree 2249 (Corner of Dean Avenue and Cochrane Street). Larger ~12-14cm root (red arrow indicates approximately location, it is not visible in this photo) located near the base of existing street sign “no parking”. To our understanding the let down area of the sidewalk to the road grade is between the no parking street sign and the stop sign (blue arrows).

Photograph 3: Area of hand-dug exploratory excavation along the backside of the proposed sidewalk (wooden stake – red arrow) on the north/northeastern side of tree 2249.

Photograph 4: Area of hand-dug exploratory excavation along the backside of the proposed sidewalk on the north side of tree 2249. Large ~12-14cm root (red arrow) was exposed roughly .25m west from the existing stop sign at the corner of Cochrane Street and Dean Avenue.

Photograph 5: Area of hand-dug exploratory excavation along the backside of the proposed sidewalk (wooden stake – red arrow) on the north side of tree 2249. The large ~12-14cm root exposed .25m from the existing stop sign can be seen (blue arrow).

Photograph 6: Area of hand-dug exploratory excavation along the backside of the proposed sidewalk (wooden stake – red arrow) on the north side of tree 2249.

Photograph 7: 1x6cm root (red arrow) exposed just east of the existing driveway during the had-dug exploratory excavation on the north side of tree 2249 along the Cochrane Street frontage.