



# **Talbot Mackenzie & Associates**

Consulting Arborists

January 22, 2018

Wei Tu  
1322 Rockland Avenue  
Victoria, BC V8S 1V6

## **Re: Proposed subdivision at 1322 Rockland Avenue.**

**Assignment:** To review the location of the proposed new driveway off Royal Terrace (see attached site plan) and provide recommendations for mitigating any potential impacts to Garry oak number 373.

**Methodology:** Using the plans provided, we visited the site and measured from existing structures to approximate the location of the proposed new driveway. It is our understanding that the existing parking elevations will not change, and the proposed new driveway will enter from the existing road grades to reach the grades of the parking area. There are no servicing upgrades or proposed new sidewalks in this area shown on the plans provided. On Tuesday January 16, 2018 we conducted localised exploratory excavations to determine the depth of the existing retaining wall and the type of footing that it is built on.

**Observations:** The majority of the proposed driveway will be located within an area that has had a retaining wall installed, fill soil added, and a laurel hedge planted (see attached sketch 1). There will be a portion of the driveway nearest the road on municipal property that will be installed where there is no existing retaining wall.

Exploratory excavations carried out on January 16, 2018 found that the retaining wall does not have a poured concrete footing and appears to be constructed at a depth of approximately 20 cm below existing grades. Excavation below the footing found bearing soils at approximately 30-40 cm, the only Oak roots encountered were less than 3 cm in diameter. We anticipate the wall was likely installed due to shallow soils and existing rock to level the area to the higher grade and provide a suitable planting area for the hedge. Due to the previous soil disturbance, retaining wall installation and fill soils in this area, we do not anticipate the proposed new driveway will have any negative impact on the health or stability of the tree beyond the impacts that may have already occurred historically, providing the driveway is installed in the fill area, using the following specifications.

**Recommendations:** We recommend that any excavation for the proposed driveway be completed under the direction of the project arborist and may involve a combination of digging by hand and small machine excavation. This will include the removal of any portions of rock wall that must be removed and the removal of the existing laurel hedge. If any roots from Garry oak 373 are encountered during the excavation the proposed new driveway must be designed to retain them.

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The amount of fill soil that can be removed without encountering roots from the oak tree will dictate the final design of the new driveway and may require input from a Geotechnical engineer. We recommend using the following floating, permeable driveway specifications or a similar design to minimize any impacts the proposed new driveway may have on Garry oak 373. We do not anticipate that any significant roots will be encountered from Garry oak 374.

There is a portion of the proposed new driveway that will be constructed on municipal property in the road dedication area where we do not anticipate encountering significant roots. If during the excavation, roots are encountered that cannot be pruned without negatively impacting the tree, we recommend that floating permeable construction techniques be incorporated, if permitted by the City.

We anticipate that one low sweeping branch approximately 15-20 cm in diameter will have to be pruned to accommodate the new driveway for vehicle clearance, we recommend that the pruning be completed by an ISA certified arborist and do not feel the pruning will have a significant impact on the health of the tree.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions. Thank You.

Yours truly,  
Talbot Mackenzie & Associates



Tom Talbot & Graham Mackenzie  
ISA Certified, & Consulting Arborists

Encl. site sketch 1, site plan showing proposed driveway location, floating driveway specifications

**Disclosure Statement**

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their 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. It is not possible for an Arborist to identify every flaw or condition that could result in failure or can he/she guarantee that the tree will remain healthy and free of risk.

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.

Issue	Date: YYYY-MM-DD
Subdivision Application	Dec 22, 2016
DP Application	Jan 30, 2017
Review	Mar 9, 2017
Municipal Response	Mar 14, 2017
Resubmission	Oct 31, 2017
Municipal Response	Dec 18, 2017

Revision		
No.	Description	Date
1	Revised Driveway	Dec 18, 2017

Consultant
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1322 Rockland Avenue

1322 Rockland Ave  
Victoria, BC

Site Plan - Proposed

Project number	CLA- 16-31
Date	December 18, 2017
Drawn by	JMG
Checked by	Checker

A1.03

Scale	1 : 350
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PROJECT INFORMATION

LOT 1

ZONING:	RN-2
SITE AREA:	3205m2
BUILDING AREA:	860m2
SITE COVERAGE:	26%
OPEN SITE SPACE:	52%
PARKING STALLS:	20

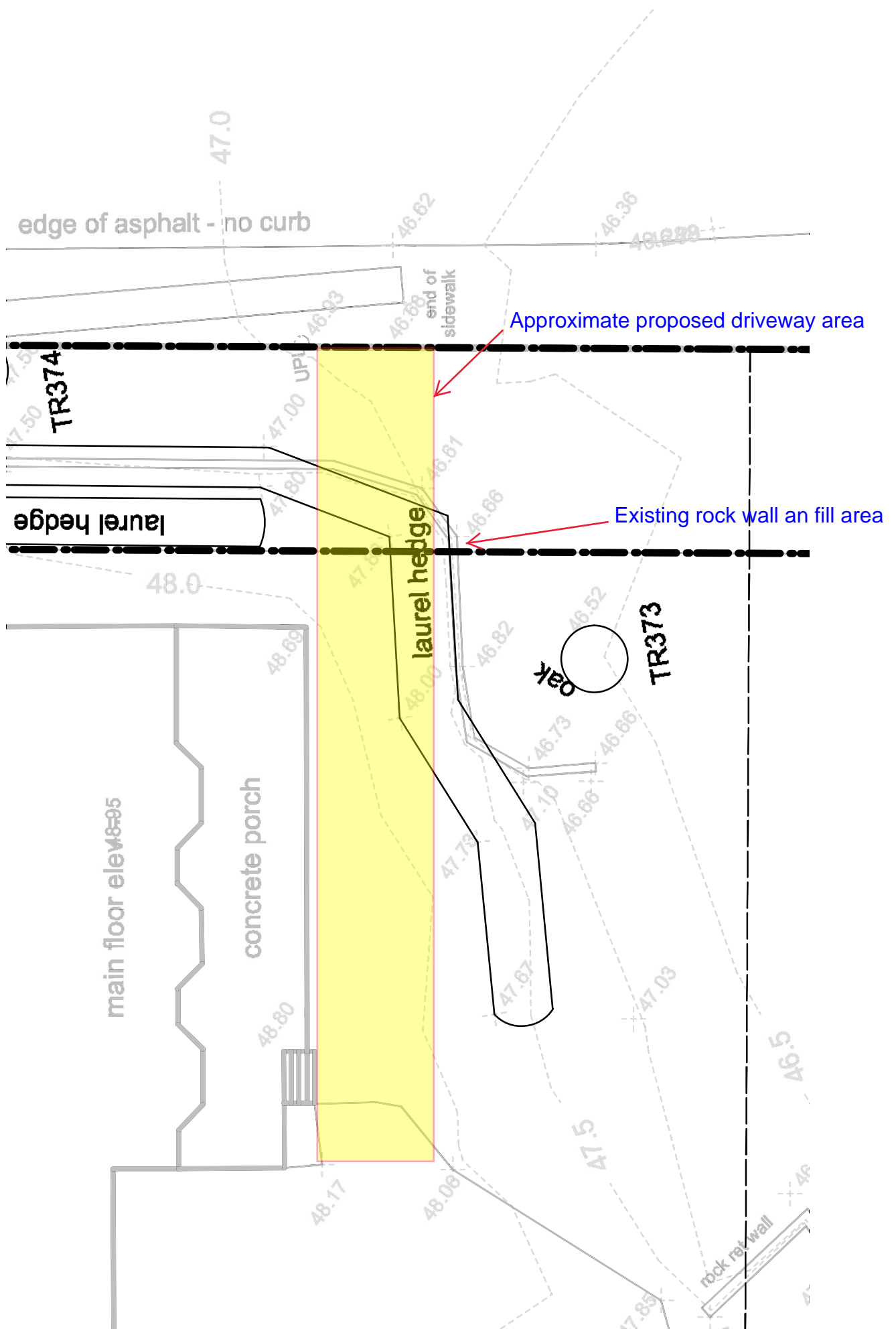
FRONT SETBACK (EAST):	0.77m
REAR SETBACK (WEST):	14.25m
SIDEYARD SETBACK (NORTH):	8.70m
SIDEYARD SETBACK (SOUTH):	14.10m

LOT 2

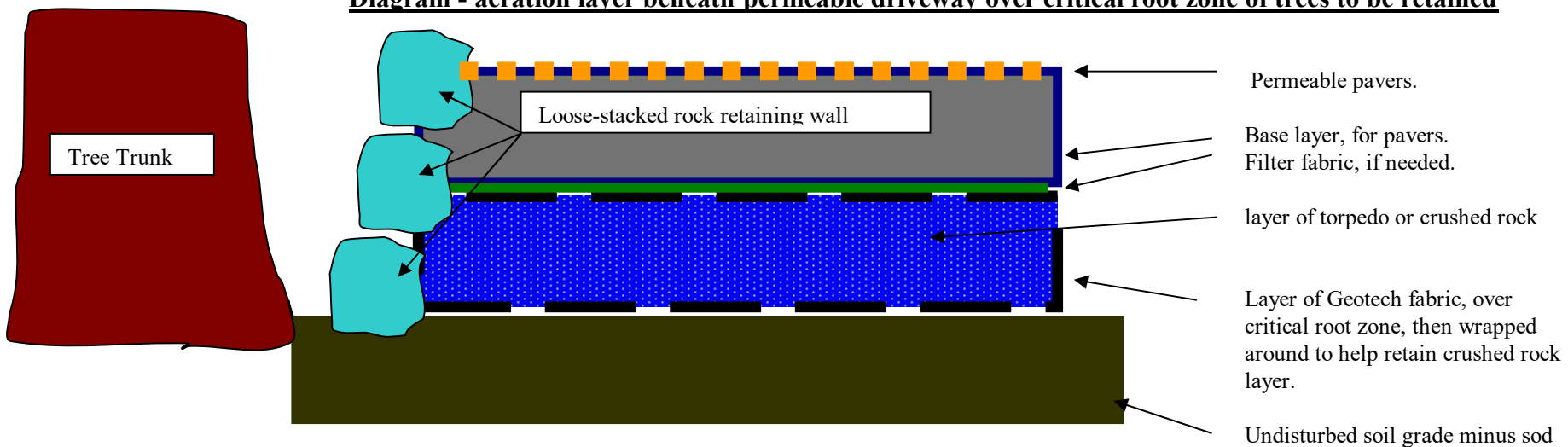
ZONING:	RN-2
SITE AREA:	4727m2

TOTAL PERIMETER LENGTH:	320.65m
FRONTAGE PERIMETER LENGTH:	33.92m

FRONTAGE PERCENT:	10.6%
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**Diagram - aeration layer beneath permeable driveway over critical root zone of trees to be retained**



**Specifications for boulder retained floating driveway.**

1. Excavation for driveway area must remove only the sod layer, where the driveway bisects the critical root zones of the protected trees.
2. A layer of geotech fabric installed over the existing soils with enough extra material extending from the sides of the driveway to wrap around and retain the next aeration fill layer.
3. An aeration layer of 10cms of torpedo rock, or 20-mm clean crushed drain rock, or larger material in bigger fill situations.
4. Wrap the geotech fabric around the sides of the fill layer, with material ends overlapping at the top of the aeration fill layer.
5. A layer of felted filter fabric can then be installed over the aeration layer to prevent fine particles of sand and soil from infiltrating this layer if necessary.
6. The permeable paver base layer can be installed directly on top of this aeration layer and the pavers installed over top.
7. Suitable edging material such as a loose-stacked rock wall is required to retain the fill away from the trunks of the trees.
8. It should be noted that if installed correctly the geotech fabric will help to displace weight and reduce driveway settling over the organic layer, but in some situations settling may still occur over time. If any driveway settling cannot be tolerated you may wish to consult with a geotechnical engineer.

Prepared by:

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