



Talbot Mackenzie & Associates

Consulting Arborists

Received  
City of Victoria

MAY 01 2018

Planning & Development Department  
Development Services Division

## CONSTRUCTION IMPACT ASSESSMENT

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## TREE PRESERVATION PLAN

3031 Jackson Street, Victoria

PREPARED FOR:

Brian Canfield  
289 Marine Drive  
Pt. Roberts, Washington, USA  
98281

PREPARED BY:

Talbot, Mackenzie & Associates  
Tom Talbot – Consulting Arborist  
ISA Certified # PN-0211A  
TRAQ – Qualified

DATE OF ISSUANCE: April 24, 2018

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**Subject Property:** 3031 Jackson Street

**Date of Site Visits:** November 30, 2016, and January 03, 2018

**Weather Conditions:** 4 degrees Celsius, Wind west 8 km/hr

**Existing Site Conditions:** Residential lot with rock outcrops, single family house. No construction activity present.

**Summary:** Our examination of the tree resource on the property identified a total of seventy-two (72) trees on the property. Sixty-one (61) of the trees are considered to be protected under the current tree protection bylaw, while eleven (11) are below the size that would be protected under this bylaw.

- Bylaw-protected trees are: 2 Monterey cypress and 59 Garry oak trees
- The proposal, as reviewed, will require the removal of 21 protected Garry oak trees.
- The remaining 40 Protected and 11 Non-protected trees have been identified for retention and are to be protected throughout the construction phase.

From the information and plans that were provided to us as part of this proposal, it is our opinion that the trees identified for retention can be isolated from the construction phase and will survive the construction impacts if the procedures outlined in this report are implemented.

**Assignment:** Provide arborist services to examine the tree resource on the property at 3031 Jackson Street, document the resource of bylaw-protected trees located on this property and on the municipal frontage and on neighbouring properties where they could be impacted, review the impacts on the tree resource of constructing townhouse units and prepare a tree impact report for the proposal that summarizes our findings.

**Methodology:** For this purpose, we reviewed a proposal to construct eight townhouse units on the subject property. Each tree was visually examined, and the information regarding all bylaw-protected, non-protected, and municipal trees was entered on a tree resource attached to this report. The information that was compiled includes the existing numeric metal tag number, tree species, size (dbh), protected root zone (PRZ), critical root zone (CRZ), crown spread, health and structural condition, relative tolerance to construction impacts and general remarks and recommendations.

**Tree Resource:**

During our November 30, 2016 site visit, we identified and documented a total of 73 trees. Since that date, one of the trees, Pacific dogwood #0784, has failed and been removed, leaving a total of 72 trees. Of these remaining trees, 61 (2 Monterey cypress and 59 Garry oak) are bylaw-protected, and 11 are below the size that would be protected under the current municipal tree protection bylaw.

**Potential Impacts:**

- 21 Garry oak trees are located where they will be impacted, cannot be retained, and therefore have been identified in this report as trees to be removed or unlikely to be retained.

Trees identified for removal or that are unlikely to be retained:

Amount	Species	Tag numbers
20	Garry oak - removals Bylaw-protected	0746,0749,0758,0759,0760,0761,0762,0763,0764, 0765,0767,0768,0769,0770,0783,0792,0793,0799,0800 0801.
01	Garry oak - unlikely Bylaw-protected	0766

The Garry oak trees that are identified for removal are quantified under the following classifications:

- 1 tree is exhibiting fair/good or good health and structural characteristics.
- 8 trees are exhibiting fair health and structural characteristics.
- 9 trees are exhibiting fair/poor health characteristics that may limit their longevity.
- 3 trees are exhibiting either poor health or structural characteristics or are dead and therefore are poor candidates for retention.

Garry oak #0766, identified as unlikely to be retained, is located close to building and driveway footprints, and service corridors where it will be difficult to retain, or will require extensive and possibly costly mitigation strategies to assure its retention. The ability to retain this tree will depend on the final location width, and depth of, the service corridor. It has been shown in the plans to be removed however if you opt to attempt to retain it, the decision regarding its retention is best made as a field decision at the time of construction.

Tree # 0784, shown on the plan was a dogwood tree that failed since our initial site visit and inventory of the tree resource, and has been removed from the site.

One untagged Flowering plum tree is located on the municipal frontage or on the shared property boundary.

There will be some encroachment by the service, building, driveway, and parking footprints into the edges of the critical root zones of trees to be retained; however, in our opinion, there is a good opportunity to mitigate these impacts and retain the remainder of the bylaw-protected trees on the site.

**Mitigation of impacts:** The following are guidelines to be considered as a means of isolating and protecting the trees that are to be retained on this site from the development impacts.

**Barrier fencing:** It is a requirement of the municipality that areas surrounding the trees that are designated for retention on this property 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 zones. Where the new construction encroaches within the critical root zone areas, the fencing should be erected 1.0 metre off the edge of these footprints, or in a location that is determined by the project arborist.

The barrier fencing to be erected must be a minimum of 4 feet in height. A solid board or rail must run between the posts at the top and the bottom of the fencing. This frame can then be covered with plywood, or flexible snow fencing (see attached diagram). 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.

**Demolition:** Barrier fencing must be erected to protect all trees that are to be retained, prior to any machinery entering the site for the demolition phase. Once the fencing is erected, trucks and equipment entering the site and demolition debris should be removed from the property along the existing main driveway where they are outside of the fenced tree protection zones.

**Building footprints:** The building footprints for Units 1, 2, 3, 5 and 8 encroach within the edge of the defined critical root zones of trees that are identified for retention, but where, in our opinion, the impacts related to the construction can be successfully mitigated. The project arborist must supervise the excavation for the building footprints, where these footprints encroach within the critical root zone of any of the trees that are to be retained on this property.

**Blasting and rock Removal:**

Blasting and the removal of rock will be required to establish a level building footprint for Units 3, 4, 5, 6, 7, 8 and the adjacent roadway and parking area. To reduce the impacts on the trees located near the edge of the blasting zone, care must be taken to assure that the area of blasting does not extend into the critical root zones of trees that are to be retained outside of the construction area footprint.



This can be accomplished by:

1. Erecting barrier fencing to isolate the root zones of the trees that are to be retained from the area of blasting and construction (see attached barrier fencing specifications).
2. Maintaining a buffer of solid rock between the edge of blasting and the trees' critical root zones.
3. Line drilling along the perimeter of the blasting area which involves drilling a series of closely spaced holes, 4.0 in (10 cm) apart or a similar spacing that is determined by the blasting contractor, at the perimeter of the cut so as to break the rock along this line. This technique is designed to make a shear cut and reduce the potential for the blast to extend into the rock beyond this line.
4. The use of small low-concussion charges and multiple small charges will reduce fracturing, ground vibration, and reduce the impact on the surrounding environment.

Only explosives of low phytotoxicity (stick dynamite), and techniques that minimize tree damage, are to be used within the critical root zones of the trees that are to be retained. Provisions must be made to store blast rock, and other construction materials and debris away from critical tree root zones. The project arborist must meet with the blasting contractor to review the blasting requirements and monitor the progress throughout the blasting phase.

**Driveway/Parking areas:** The driveway and parking areas encroach within the edge of the defined critical root zones of trees that are identified for retention. In some of these driveway areas, the area beneath the footprint will already have been impacted by the installation of the underground service corridor. In other locations, there will be a significant grade change that will require the installation of a retaining wall.

In areas where the driveway will encroach within the root zones of protected trees, and the root zones have not been impacted by services and other construction activity, the driveway must be designed and constructed at a grade that permits them to be floated over the existing site grade in these locations with little or no excavation below these grades. We have provided typical floating driveway specifications that can be adapted to meet the requirements of your project. The project arborist must direct or supervise any excavation that is required within the root zones of the protected trees.

A retaining wall will be constructed along the west and north perimeter of the driveway and parking areas between Unit 4 and Unit 5. Where possible, the wall will be pinned directly to the bedrock layer or alternately constructed with a footing that extends beneath the parking area footprint and with limited excavation outside the edge of the wall.

**Servicing:** The proposal is to service the property by way of a single corridor that would run along the proposed driveway access. In our opinion, this is the most suitable and practical location to install the underground services. Garry oak trees are located on either side of this corridor and where they could potentially be impacted by the service trench.

- Garry oaks #741, 746 and 749, on either side of the driveway near Units 1 and 2
- Garry oaks #767 and 766 on the north side of the driveway near Unit 3, and #768, 769, 770, 771 and 772 on the south side of the driveway opposite Unit 3

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We determined, and outlined in the spreadsheet tree removal summary, that Garry oaks #746, 767, 768, 769 and 770 should be removed due to these and other anticipated construction impacts. We further indicated that it is also unlikely that Garry oak #749 could be retained due to its location in relation to the driveway footprint; therefore, these trees have been identified for removal.

The degree of impact on the remaining trees is dependant on the number of services that will be installed within the corridor, the degree of separation between each service and the depth of excavation required. If it is determined that a wide, deep corridor is required, we recommend relocating the easement to one side of the corridor. Such a relocation may result in the loss of trees on one side of the corridor, but would increase the chance of protecting the trees on the other side of this corridor.

On this site, if a wide corridor is required and is located where trees on both sides of this corridor cannot be adequately protected, we would suggest:

- Where the service corridor enters the property near Unit 1 & 2, run the trench down the south side of the driveway which would result in the removal oak #749. This tree has already been identified as a tree that may not survive due to other construction related impacts.
- The service trench should cross the driveway and run along the north side of the driveway where it passes Unit 3. Therefore, Garry oak #767 which has already been identified in our spreadsheet for removal, and one additional oak #766 would be removed.

In some instances, to reduce the width of the required corridor, individual services can be stacked, or services encased to reduce the separation between individual services. A decision regarding the removal of these trees can be made prior to construction or made as field decision at the time of excavation.

**Stump removal:** The stumps of trees #0746, 0767, 0768, 0769, 0770, 0781, 0792, 0801, 0803, 0809 and 0811 that are to be removed, fall within the root zones of trees that are to be retained. The project arborist must supervise the removal of these stumps. If a stump cannot be removed without having a detrimental impact on the protected trees, it should be left in place, undisturbed or removed with the use of a stump router or grinder.

**Pruning:** Any pruning of tree canopies that may be required to provide adequate clearance for access, clearance from or construction around the building footprint, headroom above the driveway and any parking or turn around areas must be completed by an ISA Certified arborist or to ANSI 300 standards.

**Landscape Installation:** Landscape installations can have a considerable impact on mature landscape trees. The project arborist should review detailed plans that outline proposed grade changes, planting types and irrigation locations, when available, in order to determine the potential impacts on the tree resource and to outline measures to mitigate these impacts.

**Mulching:** Mulching is an important proactive step to maintaining the health of the trees to be retained 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. As much of the area within the dripline and fenced protection zones of the tree to be retained, as possible should be mulched.

**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 cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

**Work Area and Material Storage:** It is important that the issue of storage of excavated soil, construction material, and site parking be reviewed prior to the start of construction or demolition; where possible, these activities should be kept outside of the critical root zones of trees that are to be retained. If there is insufficient room for onsite storage and working room, the arborist must determine a suitable working area within the critical root zone, and outline methods of mitigating the associated impacts (i.e. mulch layer, bridging etc).

**Owners Responsibility:** 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 excavation during the demolition, construction, paths, driveways and service footprints where they encroach within the critical root zones of trees that are to be retained.
- Reviewing and advising of any tree removal, replacements required and pruning requirements for 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, demolition or other construction activity occurs.

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Please do not hesitate to call us at 250-479-8733 should you have any questions.

Thank you,

Talbot Mackenzie & Associates



Tom Talbot & Graham Mackenzie  
ISA Certified, & Consulting Arborists

Enclosures: Tree resource spreadsheet, Keys to headings in resource table, Floating driveway specifications, Barrier fencing specifications, Barrier fencing location plan, Plans reviewed

**Disclosure Statement**

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve the health and structure of individual trees or group of trees, 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 nor 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.

### Key to Headings in Resource Table

d.b.h. – **diameter at breast height** - diameter of trunk, measured in centimetres at 1.4 metres above ground level

CRZ – **critical root zone** - estimated optimal size of tree protection zone based on tree species, condition and age of specimen and the species tolerance to root disturbance. Indicates the radial distance from the trunk, measured in metres.

Crown spread – indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

Condition health/structure –

- Good – no visible or minor health or structural flaw
- Fair – health or structural flaw present that can be corrected through normal arboricultural or horticultural care.
- Poor – significant health or structural defects that compromise the long-term survival or retention of the specimen.

Retention status – Planned status of tree retention within proposed development

- Retain – Retention of tree proposed
- Possible – Retention possible with precautions
- Unlikely – Survival and retention unlikely based on the proposal.
- Remove – Removal required or recommended

Relative Tolerance – relative tolerance of the selected species to development impacts.

- Good - Shows little evidence of stress related to encroachment and disturbance within its root zone
- Moderate - Frequently exhibits stress symptoms when disturbed by construction activity by often recovers in subsequent years.
- Poor - Exhibits severe stress and decline symptoms encroachment and disturbance within its root zone and frequently declines and dies

**TREE RESOURCE**  
for  
3031 Jackson Street

Tree #	d.b.h. (cm)	PRZ	CRZ	Common Species Name	Latin Name	Crown Spread	Condition Health	Condition Structure	Relative Tolerance	Tree Status	Remarks / Recommendations
no tag	26	4.7	3.0	Japanese Flowering plum	Prunus pissardi 'Nigra'	5	Good	Good	Moderate	Retain	Flush cut wounds, leaning. Located on municipal frontage.
0741	26	4.7	2.6	Garry oak	Quercus garryana	5	Fair/Poor	Fair	Good	Retain	Twig dieback, weeps over driveway, compacted soil at base.
0742	24	4.3	2.4	Garry oak	Quercus garryana	6	Fair/Good	Fair	Good	Retain	Co-dominant with 0743, weeps over sidewalk, history of limb failure.
0743	26	4.7	2.6	Garry oak	Quercus garryana	4	Fair	Fair	Good	Retain	Co-dominant with 0742, large deadwood, natural lean.
0744	20	3.6	2.0	Garry oak	Quercus garryana	3	Fair	Fair	Good	Retain	High crown, twig dieback.
0745	26, 33	8.8	4.9	Garry oak	Quercus garryana	5	Fair	Fair	Good	Retain	Co-dominant, small deadwood, cavity in upper canopy.
0746	37, 41	11.0	6.3	Garry oak	Quercus garryana	8	Fair	Fair	Good	Remove	Co-dominant, large deadwood, compacted soil at base.
0747	26, 42	10.4	5.8	Garry oak	Quercus garryana	8	Fair	Fair	Good	Retain	Co-dominant, large deadwood, twig dieback.
0748	61	11.0	6.1	Garry oak	Quercus garryana	10	Fair/poor	Good	Good	Retain	Close to northern property boundary, twig dieback, small deadwood, poor annual shoot elongation.
0749	23, 28, 30	11.0	6.0	Garry oak	Quercus garryana	8	Fair	Fair	Good	Remove	Tri-dominant, located along southern property line, tri-dominant, epicormic growth, poor annual shoot elongation.
0750	17	3.1	1.7	Garry oak	Quercus garryana	4	Fair	Fair	Good	Retain	Located along southern property line, small deadwood, ivy covered.
0751	24	4.3	2.4	Horse chestnut	Aesculus hippocastanum	5	Good	Good	Good	Retain	Located along southern property line. Rubbing adjacent Garry oak.
0752	29	5.2	2.9	Garry oak	Quercus garryana	7	Good	Good	Good	Retain	Located along southern property line. Rubbing adjacent Horse chestnut.

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Tree #	d.b.h. (cm)	PRZ	CRZ	Common Species Name	Latin Name	Crown Spread	Condition Health	Condition Structure	Relative Tolerance	Tree Status	Remarks / Recommendations
0753	24	4.3	2.4	Garry oak	Quercus garryana	2	Fair/poor	Fair/poor	Good	Retain	Located along southern property line, asymmetric form, 100% ivy covered, live foliage visible through ivy.
0754	29	5.2	4.4	Douglas-fir	Psuedotsuga menziesii	5	Good	Good	Poor	Retain	Located along northern property line, may be shared tree with neighbour.
0755	27	4.9	4.1	Douglas-fir	Psuedotsuga menziesii	5	Good	Fair	Poor	Retain	Located along northern property line, corrected lean, may be shared tree with neighbour.
0756	60	10.8	6.0	Garry oak	Quercus garryana	7	Good	Good	Good	Retain	Located along northern property line, ivy covered, deadwood.
0757	30	5.4	3.0	Garry oak	Quercus garryana	4	Fair/Poor	Fair	Good	Retain	Ivy covered, some live foliage visible.
0758	36	6.5	3.6	Garry oak	Quercus garryana	4	Fair/poor	Fair	Good	Remove	Covered in dead ivy, poor annual shoot elongation.
0759	23	4.1	2.3	Garry oak	Quercus garryana	6	Fair	Fair	Good	Remove	Covered in dead ivy, poor annual shoot elongation.
0760	42	7.6	4.2	Garry oak	Quercus garryana	6	Fair/poor	Fair	Good	Remove	Ivy covered, some live foliage visible.
0761	27, 31	8.5	4.7	Garry oak	Quercus garryana	8	Fair	Fair/Poor	Good	Remove	Co-dominant, large deadwood, poor annual shoot elongation.
0762	37	6.7	3.7	Garry oak	Quercus garryana	8	Fair	Fair	Good	Remove	Large deadwood, twig dieback, poor annual shoot elongation.
0763	27, 27, 34	12.0	6.6	Garry oak	Quercus garryana	12	Fair/poor	Fair	Good	Remove	Epicormic growth, large deadwood, poor annual shoot elongation.
0764	18	3.2	1.8	Garry oak	Quercus garryana	5	Fair	Fair	Good	Remove	Twig dieback, poor annual shoot elongation.
0765	34	6.1	3.4	Garry oak	Quercus garryana	7	Fair	Fair	Good	Remove	Large deadwood, cavity at lower trunk.
0766	41	7.4	4.1	Garry oak	Quercus garryana	12	Fair	Fair	Good	Unlikely	Small deadwood, compaction at base.



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Tree #	d.b.h. (cm)	PRZ	CRZ	Common Species Name	Latin Name	Crown Spread	Condition Health	Condition Structure	Relative Tolerance	Tree Status	Remarks / Recommendations
0767	27	4.9	2.7	Garry oak	Quercus garryana	3	Poor	Poor	Good	Remove	Large deadwood, poor annual shoot elongation.
0768	26	4.7	2.6	Garry oak	Quercus garryana	8	Fair/poor	Fair	Good	Remove	Ivy covered, leaning, some live foliage visible, compaction at base from driveway.
0769	28	5.0	2.8	Garry oak	Quercus garryana	4	Fair/poor	Fair	Good	Remove	Ivy covered, leaning, some live foliage visible, compaction at base from driveway.
0770	36	6.5	3.6	Garry oak	Quercus garryana	4	Fair/Poor	Fair	Good	Remove	Ivy covered, large deadwood, some live foliage visible.
0771	48	8.6	4.8	Garry oak	Quercus garryana	6	Good	Fair	Good	Possible	Ivy covered, leaning.
0772	28	5.0	2.8	Garry oak	Quercus garryana	8	Fair	Fair	Good	Possible	Ivy covered, small deadwood, weeping over driveway.
0773	40	7.2	4.0	Garry oak	Quercus garryana	7	Good	Fair	Good	Retain	Ivy covered, leaning over neighbour's yard.
0774	38	6.8	3.8	Garry oak	Quercus garryana	5	Fair	Fair	Good	Possible	Ivy covered, high crown.
0775	26	4.7	3.9	Douglas-fir	Psuedotsuga menziesii	4	Good	Poor	Poor	Possible	Ivy covered, young tree, suppressed.
0776	49	8.8	4.9	Garry oak	Quercus garryana	6	Fair	Fair	Good	Retain	Ivy covered, one-sided form over neighbour's yard.
0777	34	6.1	4.1	Ash	Fraxinus species	4	Good	Fair	Moderate	Possible	Located at edge of driveway, minor included bark, compaction at base.
0778	32	5.8	4.8	Douglas-fir	Psuedotsuga menziesii	6	Good	Good	Poor	Possible	Located at edge of driveway, compaction at base.
0779	60	10.8	9.0	Monterey cypress	Cupressus macrocarpa	9	Good	Fair	poor	Retain	Located at edge of driveway, multiple stems, compaction at base, small hangers.
0780	34	6.1	4.1	Garry oak	Quercus garryana	9	Fair	Fair	Good	Retain	Twig dieback, grows close to cherry #0781.



**TREE RESOURCE  
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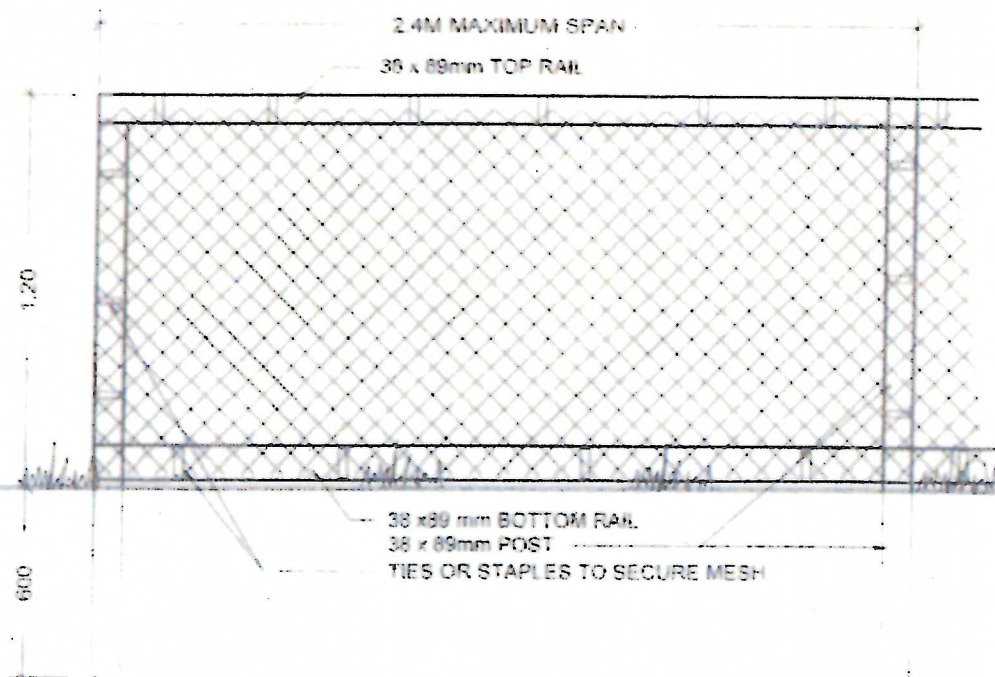
Tree #	d.b.h. (cm)	PRZ	CRZ	Common Species Name	Latin Name	Crown Spread	Condition Health	Condition Structure	Relative Tolerance	Tree Status	Remarks / Recommendations
0781	22	4.0	2.2	Cherry	Prunus species	6	Fair	Fair	Moderate	Possible	Grows close to Garry oak #0780.
0782	13	2.3	1.3	Garry oak	Quercus garryana	3	Fair	Fair	Good	Retain	Leans over neighbour's yard, grows next to cherry #0781.
0783	34	6.1	3.4	Garry oak	Quercus garryana	9	Dead	Poor	Good	Remove	Grows next to house, declining. Tree is now dead.
0786	48	8.6	4.8	Garry oak	Quercus garryana	5	Poor	Poor	Good	Possible	Main stem failed historically, large cavity in remaining stem. Removal recommended.
0787	30	5.4	3.0	Garry oak	Quercus garryana	5	Fair	Fair	Good	Possible	Corrected lean, minor girdling from power line.
0788	40	7.2	4.0	Garry oak	Quercus garryana	6	Fair	Fair	Good	Retain	Ivy covered, small deadwood, low live crown ratio, canopy leans over neighbouring property.
0789	42	7.6	4.2	Garry oak	Quercus garryana	4	Fair	Fair	Good	Retain	Ivy covered, small deadwood, low live crown ratio.
0790	31, 32	9.0	5.1	Garry oak	Quercus garryana	5	Fair	Fair	Good	Retain	Co-dominant, twig dieback, small deadwood, leaning toward neighbouring property.
no tag	multiple stems	N/A	N/A	Western Red cedar	Thuja plicata	N/A	Fair	Fair	Poor	Possible	Cedar hedge along southeast property line. Approximately 20 stems between 10-20 cm d.b.h.
0791	37	6.7	3.7	Garry oak	Quercus garryana	6	Good	Good	Good	Retain	Leaning toward neighbouring property.
0792	52	9.4	5.2	Garry oak	Quercus garryana	10	Poor	Poor	Good	Remove	Covered in dense ivy, no live foliage visible. Remove ivy to determine if the tree is alive.
0793	109	19.6	10.9	Garry oak	Quercus garryana	14	Fair/poor	Fair/poor	Good	Remove	Mature tree with large historic pruning wounds, recent limb failure, large deadwood, end-weighted limbs. Resistograph test if retained.
0794	79	14.2	7.9	Garry oak	Quercus garryana	8	Fair/poor	Poor	Good	Retain	Mature tree, large dead/decayed stem, twig dieback, leans toward neighbour's property. Resistograph test if retained.

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Tree #	d.b.h. (cm)	PRZ	CRZ	Common Species Name	Latin Name	Crown Spread	Condition Health	Condition Structure	Relative Tolerance	Tree Status	Remarks / Recommendations
0795	55	9.9	5.5	Garry oak	Quercus garryana	7	Fair	Good	Good	Retain	Twig dieback.
0796	34, 35, 66	19.0	16.0	Monterey cypress	Cupressus macrocarpa	18	Good	Fair	Poor	Retain	Northeast corner of property, crossing limbs, multiple stems.
0797	30	5.4	4.5	Monterey cypress	Cupressus macrocarpa	12	Good	Fair	Poor	Retain	Rubbing adjacent Cypress tree.
0798	46	8.3	6.9	Monterey cypress	Cupressus macrocarpa	10	Good	Fair	Poor	Retain	Previously topped, recent pruning wounds.
0799	57	10.3	5.7	Garry oak	Quercus garryana	10	Fair	Fair/poor	Good	Remove	Large cavity at lower trunk, large deadwood, rooted in rock.
0800	17, 21	5.6	3.0	Garry oak	Quercus garryana	12	Good	Fair	Good	Remove	Co-dominant, deadwood, rooted in rock.
0801	20	3.6	2.0	Garry oak	Quercus garryana	8	Fair	Fair	Good	Remove	Rooted in rock.
0802	26	4.7	2.6	Garry oak	Quercus garryana	9	Fair	Fair	Good	Possible	Rooted in rock, deadwood.
0803	18	3.2	1.8	Garry oak	Quercus garryana	6	Fair	Fair	Good	Retain	Rooted in rock, twig dieback.
0804	22	4.0	2.2	Garry oak	Quercus garryana	7	Fair	Fair	Good	Retain	Rooted in rock, high crown.
0805	29	5.2	2.9	Garry oak	Quercus garryana	12	Fair	Fair	Good	Retain	Rooted in rock, large deadwood, may be shared with neighbour.
0806	36	6.5	3.6	Garry oak	Quercus garryana	10	Fair	Fair	Good	Retain	Rooted in rock, may be shared with neighbour.
0807	14	2.5	1.4	Garry oak	Quercus garryana	8	Fair	Fair	Good	Retain	Rooted in rock.
0808	42	7.6	4.2	Garry oak	Quercus garryana	8	Fair	Fair	Good	Retain	Rooted in rock, located on northernmost property line.

**TREE RESOURCE**  
for  
3031 Jackson Street

<b>Tree #</b>	<b>d.b.h. (cm)</b>	<b>PRZ</b>	<b>CRZ</b>	<b>Common Species Name</b>	<b>Latin Name</b>	<b>Crown Spread</b>	<b>Condition Health</b>	<b>Condition Structure</b>	<b>Relative Tolerance</b>	<b>Tree Status</b>	<b>Remarks / Recommendations</b>
0809	16	2.9	1.6	Garry oak	Quercus garryana	8	Good	Good	Good	Retain	Rooted in rock, small tree, located along northernmost property line.
0810	38	6.8	3.8	Garry oak	Quercus garryana	10	Good	Good	Good	Retain	Rooted in rock, located behind 0808, leaning over neighbouring property.
0811	16	2.9	1.6	Garry oak	Quercus garryana	8	Good	Good	Good	Retain	Rooted in rock.
0812	21	3.8	2.1	Garry oak	Quercus garryana	9	Good	Good	Good	Retain	Rooted in rock.



**TREE PROTECTION FENCING**

FENCE WILL BE CONSTRUCTED USING

38 X 89 mm (2"X4") WOOD FRAME:

TOP, BOTTOM AND POSTS. \*

USE ORANGE SNOW-FENCING MESH AND

SECURE TO THE WOOD FRAME WITH

"ZIP" TIES OR GALVANIZED STAPLES

\* IN ROCKY AREAS, METAL POSTS (T-BAR  
OR REBAR) DRILLED INTO ROCK WILL BE  
ACCEPTED

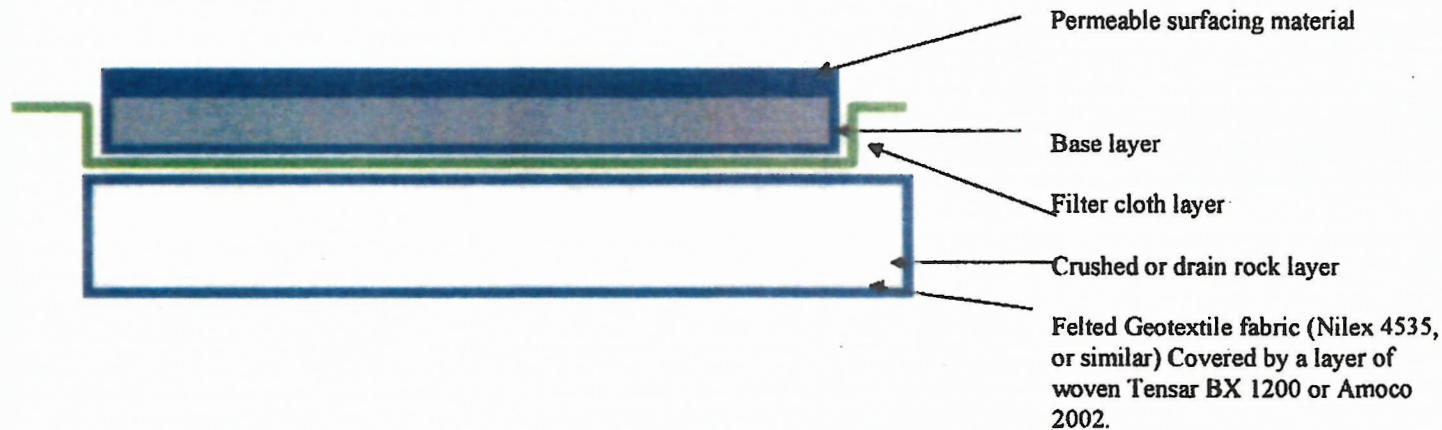
DETAIL NAME:

**TREE PROTECTION FENCING**

DATE	Oct 30/07
DRAWN	DM
APP'D	RR
SCALE	N.T.S.

**E105**  
DRAWING

### **Diagram – Site Specific Floating Driveway, Parking and Sidewalk Areas**



### **Specifications for Floating Driveway and Parking Areas**

1. Excavation for driveway or parking area construction must remove the sod layer only, where they encroach on the root zones of the protected trees
2. A layer of medium weight felted Geotextile fabric (Nilex 4535, or similar) is to be installed over the entire area of the critical root zone that is to be covered by the paving. Cover this Geotextile fabric with a layer of woven Amoco 2002 or Tensar BX 1200. Each piece of fabric must overlap the adjoining piece by approximately 30-cm.
3. A 10cm layer of torpedo rock, or 20-mm clean crushed drain rock, is to be used to cover the Geotextile fabric.
4. A layer of felted filter fabric is to be installed over the crushed rock layer to prevent fine particles of sand and soil from infiltrating this layer.
5. The bedding or base layer and permeable surfacing can be installed directly on top of the Geotextile fabric.



# LEGEND

## LANDSCAPE FEATURES:

- P71** Road English Plant Society
- P72** Green and growing (the County Tree, 10, 15 and 20' trees - Mature Trees)
- P73** Green and growing (the County Tree, 10, 15 and 20' trees - Mature Trees)
- P74** Cashed tree area

## SOFTSCAPE:

- 1** Existing
- 2** Planting area
- 3** Proposed area

## UTILITIES:

- 4** Electric power lines (10' and 20' lines)
- 5** Sewer lines (10' and 20' lines)
- 6** Water lines (10' and 20' lines)
- 7** Gas lines (10' and 20' lines)
- 8** Other utilities (10' and 20' lines)

## NOTES:

1. All existing trees to be retained and marked with a red dot.
2. All existing trees to be removed and marked with a red dot.
3. All existing trees to be removed and marked with a red dot.
4. All existing trees to be removed and marked with a red dot.
5. All existing trees to be removed and marked with a red dot.
6. All existing trees to be removed and marked with a red dot.
7. All existing trees to be removed and marked with a red dot.
8. All existing trees to be removed and marked with a red dot.

# LEGEND

- EXISTING TREE TO REMAIN**  
Existence of tree to appear PER Proposed Plan
- EXISTING TREE TO BE REMOVED**
- TREE FENCING**
- EXCAVATING TO REDUCE SOIL COMPACTION**
- NEW (REINFORCED) CURB WILL BE OR INSTALLED**

JACKSON STREET



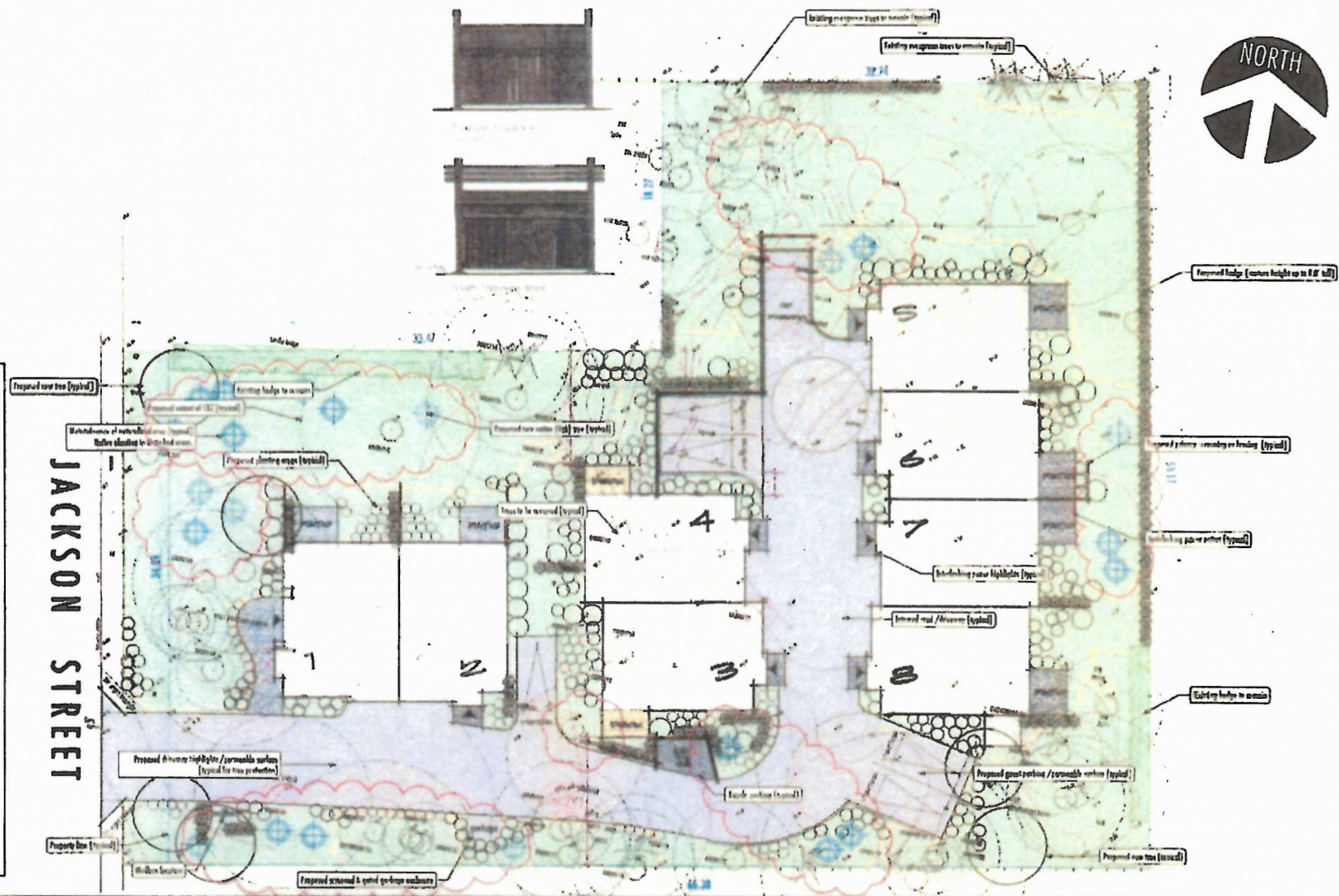
SKL.02  
13 FEBRUARY 2016  
1:125  
LATEST REVISION: 20 APRIL 2018

3031 JACKSON STREET  
TREE RETENTION & GRADING PLAN

STUDIO  
ONE  
CREATIVE

TOWNHOUSE REZONING - 3031 JACKSON STREET - SKL.02 - Landscape layout





3031 JACKSON STREET  
LANDSCAPE LAYOUT

STUDIO  
ONE  
CREATIVE

... TOWNHOUSE REZONING :: 3031 JACKSON STREET :: SHELBY :: landscape layout ::