



City of Richmond

Report to Committee

To: Planning Committee

Date: March 23, 2021

From: James Cooper, Architect AIBC
Director, Building Approvals

File: 12-8060-20-
010246/Vol 01

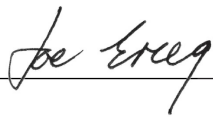


Re: Update on the City of Richmond Tree Protection Bylaw No. 8057

Staff Recommendation

1. That Tree Protection Bylaw No. 8057, Amendment Bylaw 10246 amending regulations for tree removal and replacement be introduced and given first, second and third reading; and
2. That Consolidated Fees Bylaw No. 8636, Amendment Bylaw 10247 amending the Tree Protection Bylaw permit fees table be introduced and given first, second and third reading.

James Cooper, Architect AIBC
Director, Building Approvals
(604-247-4606)

Att. 10

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Development Applications	<input checked="" type="checkbox"/>	
Policy Planning	<input checked="" type="checkbox"/>	
Parks	<input checked="" type="checkbox"/>	
Law	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS: 	APPROVED BY CAO 

Staff Report

Origin

At the November 5, 2019 Planning Committee, staff received the following referral:
“That staff provide an update regarding the Tree Protection Bylaw No. 8057 to include:

- 1) *Statistics on tree removal, replacement and retention;*
- 2) *Information regarding Tree Bylaw infractions and penalties; and*
- 3) *Options to enhance the Bylaw.”*

This report supports Council’s Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.

2.2 Policies and practices support Richmond's sustainability goals.

Background

The purpose of this report is to provide Council with information regarding the Tree Protection Bylaw program activity and options Council could consider to enhance the Bylaw.

Tree Protection Bylaw No. 8057 was adopted May 8, 2006, and is intended to protect Richmond’s urban forest by regulating tree removal of trees 20cm caliper (8” diameter) or greater from private lands; with retention of structurally safe trees being a priority and ensuring replacement trees are provided when removal is unavoidable.

When trees on private lands are denied removal and/or retained, their long-term maintenance and safety is the sole responsibility of the property owner. In contrast, the removal and care of trees located on City property (City Parks and Boulevards) is under the regulatory jurisdiction of City of Richmond’s Parks Department.

Trees within any urban forest are a dynamic resource - they grow, mature, decline and eventually die. Seeking retention where it is feasible, while at the same time ensuring there are adequate replacements, promotes the creation of a sustainable urban forest as a continued benefit to our community. The administration of tree regulations can be challenging, specifically with regards to decisions for removal or retention. Tree protection staff endeavour to strike a balance between individual private property rights and the community value placed on trees.

Standards

The main objectives of the Tree Protection Bylaw program are to maximize the retention of existing trees, create clear and transparent decision-making for tree retention and removal based on sound arboriculture industry standards, and achieve best practices in fulfilling Council objectives and community expectations in regulating the removal of trees on private lands.

When assessing trees for either retention or removal and replacement, Tree Protection Bylaw staff undertake a ‘Duty of Care’; Legal obligation requiring adherence to a standard of care, in addressing the life safety tree risks associated with tree retention. Decision-making is based on industry best management practices (BMP) and International Society of Arboriculture (ISA) tree risk assessment methodology, by qualified staff with all pertinent professional certifications. The ISA is the international governing body of arboricultural certification, practices and standards. The risk tolerance associated with regulating trees on private lands is inherently lower than that for public lands (City trees) because the private property owner is wholly responsible for tree monitoring and maintenance after a decision has been made by Tree Protection Bylaw staff to require tree retention or replacement.

Operations

The core operations of Richmond’s Tree Bylaw staff include the processing of development and non-development related tree removal permit applications, assessing private trees with the intent of retaining as many trees as possible based on an ISA “Level 2” Visual Tree Assessment, specifying replacement trees, reviewing Rezoning and Development Permit related Arborist report and working with Developers/Architects to refine building placement and form to retain existing trees. Staff also investigate complaints of non-compliance, undertaking appropriate enforcement action, including preparing Reports to Crown Counsel for prosecution, issuing Municipal Tickets (MTI’s), supporting the enforcement efforts of other City departments including Parks Operations and the Environmental Sustainability group, respond to general information requests from residents, the development community, other City departments and local governments. Tree Bylaw staff undertake community outreach initiatives, develop policy information bulletins, integrate innovative measures to retain trees and seek out process improvements to better serve our customers and meet Council objectives.

Innovative Measures Utilized to Retain Trees on Construction Sites

The City of Richmond encourages and mandates various innovative measures to retain existing trees on development sites whenever possible. Some of these measures are as follows:

- installation of aeration tubes to manage required grade changes within the critical root zone of trees (Attachment 1);
- installation of floating grade beams to protect tree roots when perimeter walls are constructed (Attachment 2);
- installation of bridged walkways to transition grade changes (Attachment 3);
- requiring Letter of Undertaking (signed contract prior to permit issuance) to ensure a Certified Arborist will supervise (and undertake any necessary work) when trees are retained associated with new construction (Attachment 3);
- the use of a hydro-vac truck, (use of high pressure water and vacuum truck), to excavate for underground service lines and connections within the critical root zone of retained trees (Attachment 4); and
- directional drilling to install underground utilities (Attachment 5).

Provincial Requirements Limiting the Authority of Tree Protection Bylaw No. 8057

The City's tree protection regulations function within a framework of provincial legislation that have authority over tree preservation. The powers and authority in Richmond's Tree Protection Bylaw No. 8057 may in some cases be limited or superseded by various Provincial legislation and/or Provincial requirements embedded in other Richmond bylaws. Examples of these are as follows:

- a) *The Community Charter*: Section 50(2) provides that the tree bylaw powers may not be used to prevent uses and densities permitted by applicable zoning regulations unless the owner of the land is compensated.
- b) *Farm Practices Protection (Right to Farm) Act*: Tree removal on Agriculture land (AG1) for farm operations is exempt from first obtaining a Tree Removal Permit (under the Tree Protection Bylaw) as per the Provincial "*Farm Practices Protection (Right to Farm) Act*."
- c) *Flood Plain Designation and Protection Bylaw No. 8204*: Richmond's alluvial soils and high water table are addressed by the Provincial requirements in the Flood Plain Designation and Protection Bylaw No. 8204. This Bylaw requires the grade under new habitable floor space to be raised 0.3m above the crown of the fronting road. (**Note:** Successful tree retention is predicated on existing grades retained within the critical root zone [or dripline] of a tree).
- d) *BC Hydro's Vegetation Management Provincial Authority*: BC Hydro's Vegetation Management program is exempt from the obtaining a tree removal permit in order to maintain above ground utilities.

Analysis

In order to provide relevant data to base our recommendations and suggested improvements, staff performed an analysis of the 2018-2020 tree protection data.

Tree Protection Bylaw No. 8057 Enforcement Activity Update

The majority of enforcement activity by Tree Protection Bylaw staff is related to general non-compliance issues associated with requirements for tree protection established by permit, as opposed to instances responding to illegal tree removal. The strategy of issuing tickets under the Municipal Ticketing Information (MTI) Bylaw to address general non-compliance issues has been successful in preventing the occurrence of the more serious issue of tree removal without permit.

Enforcement activity for 2018 include the following:

- Total of 58 Municipal Tickets (MTI's) issued.
 - 13 tickets (22%) issued for illegal tree removal.
 - 45 tickets (78%) issued for general non-compliance, such as failure to follow or maintain tree protection conditions as directed by permit.
- Total of 13 trees were removed without permit.

- 7 trees (54%) were associated with Homeowner (non-development) sites and 6 trees (46%) were associated with Development sites.
- Total of 17 properties were involved with Tree Protection Bylaw related fines.
 - 4 (23%) involved tree removal.
 - 13 (77%) involve general non-compliance issues.
- For the 2018 fiscal year, Tree Protection Bylaw enforcement action has resulted in fines totaling \$47,500.

Enforcement activity for 2019 include the following:

- Total of 127 Municipal Tickets (MTI's) issued.
 - 36 tickets (28%) issued for illegal tree removal.
 - 91 tickets (72%) issued for general non-compliance, such as failure to follow or maintain tree protection conditions as directed by permit.
- Total of 23 trees were removed without permit.
 - 13 trees (57%) were associated with Homeowner (non-development) sites and 10 trees (43%) were associated with Development sites.
- Total of 48 properties were involved with Tree Protection Bylaw related fines.
 - 10 (20%) involved tree removal.
 - 38 (80%) involve general non-compliance issues.
- For the 2019 fiscal year, Tree Protection Bylaw enforcement action has resulted in fines totaling \$107,500.

Enforcement activity for 2020 include the following:

- Total of 130 Municipal Tickets (MTI's) issued.
 - 40 tickets (31%) issued for illegal tree removal.
 - 90 tickets (69%) issued for general non-compliance, such as failure to follow or maintain tree protection conditions as directed by permit.
- Total of 21 trees were removed without permit.
 - 14 trees (67%) were associated with Homeowner (non-development) sites and 7 trees (33%) were associated with Development sites.
- Total of 42 properties were involved with Tree Protection Bylaw related fines.
 - 13 (30%) involved tree removal.
 - 29 (70%) involve general non-compliance issues.
- For the 2020 fiscal year, Tree Protection Bylaw enforcement action has resulted in fines totaling \$110,500.
 - For the fiscal years, 2018-2020, Tree Protection Bylaw enforcement action has resulted in fines totalling \$265,500.

The record shows increasing enforcement activity for the previous 3 years with most fines originating from non-compliance to instructions provided by issued permits rather than from illegal tree removal. The relatively rare occurrences of illegal tree removal stem more from actions of individual home owners rather than those associated with development.

2018-2020 Tree Permit Activity Summary and Proposed Bylaw Amendments

Richmond has three different types of tree removal permit applications, reflecting three unique processes and associated submission requirements. As part of all three, there is an overall review process to identify and document all tree resources on site. This includes capturing data on the number of trees applied for removal, those either approved or refused removal, “other” trees to be protected and retained on site, and the number of replacement trees required as a condition of the permit. In addition, efforts to retain the maximum number of trees and replacement of any loss due to development are also addressed through a Tree Protection Plan within the City’s Rezoning application process. These applications and the rezoning application process are identified as follows:

- A. Homeowner (non-development) tree removal applications (TP).
- B. Tree removal applications (T2) associated with new single-family dwelling construction.
- C. Tree removal applications associated with rezoning application process (T3).
- D. Tree Retention within comprehensive rezoning and/or Development Permit process.

Note: A Tree Removal Permit is not required to remove a tree where a Development Permit and/or Rezoning application have been approved, addressing the removal and required replacement of tree(s). Trees in these situations are assessed by the developers project Arborist and the associated Arborist report reviewed by Tree Protection Bylaw staff for further tree preservation potential. Although no tree permit is issued in the context of considering a rezoning or development permit, the Tree Protection Bylaw provides the framework for retention of the maximum number of trees when comprehensive development is considered.

A. Homeowner tree removal applications (TP)

	Number of Applications	Trees Applied for Removal	Trees Removed	Trees Refused	Trees Replaced	Other Retained trees	Total Trees Retained and Replaced on site
2018	571	1,175	962	213	572	5,659	6,444
2019	540	1,032	817	215	449	4,557	5,221
2020	590	1,464	988	476	523	7,346	8,345

- The number of tree removal permit applications submitted by homeowners (non-development) is fairly consistent year over year: between 500 and 600 annually.

- On average, 25% of all Homeowner tree removal requests are refused because the trees are healthy and in good structural condition.
- Under the current Tree Protection Bylaw, homeowners are not required to plant a replacement tree when one tree is approved for removal in a 12 month period.
- The current tree permit application fee schedule for home owners is:
 - no application fee for the removal of one tree, per year.
 - flat fee of \$62 for the removal of 2 or more trees per year irrespective of the number applied for removal.

Based on the data, there is currently an average 43% annual shortfall in the number of replacement trees required to be planted in contrast to those approved for removal. In addition, Tree Permit Application fees have fallen well below the averaged charged by other cities within the regional district.

Proposed Bylaw Amendment:

- Amend the Tree Protection Bylaw to require replacement trees at a 1:1 ratio for homeowner (non-development) tree permit applications whenever any trees are removed, including a single tree within a calendar year.
- Increasing tree removal permit application fees to be in line with the average charged by other cities within the regional district. Staff proposes a tiered system where application fees would be:
 - \$62 for the removal of one tree, per year
 - \$75 per tree for multiple tree removals.

B. New single-family dwelling construction related tree removal applications (T2)

	Number of Applications	Trees Applied for Removal	Trees Removed	Trees Refused	Trees Replaced	Other Retained trees	Total Trees Retained and Replaced on site
2018	194	990	627	363	875	112	1,350
2019	126	510	375	135	398	95	628
2020	158	697	494	203	544	79	826

- From 2018 to 2020 the number of tree removal permit applications associated with new single-family building permits, dropped by 19% commensurate with reduced number of single family homes constructed.
- In 2018, staff inspected 194 new single-family dwelling construction sites with associated tree removal permit applications. Of those:
 - 118 sites (61%) were required to retain trees on site.
 - Applications for the removal of 990 trees associated with new single-family construction were received. Of those, 363 trees (37%) were refused removal.

- In 2019, staff inspected 126 proposed single-family dwelling construction sites with associated tree removal permit applications. Of those:
 - 91 sites (73%) were required to retained trees.
 - Applications for the removal of 510 trees associated with new single family construction were received. Of those, 135 (27%) associated with new single-family construction were refused removal.
- In 2020, staff inspected 158 proposed single-family dwelling construction sites with associated tree removal permit applications. Of those:
 - 101 sites (64%) were required to retained trees.
 - Applications for the removal of 697 trees associated with new single family construction were received. Of those, 203 (29%) associated with new single-family construction were refused removal.
- Applicants in this tree permit category typically apply for the removal of all the trees on site as currently, the charge for removal of two or more trees is currently a flat fee of \$62. Staff's opinion is that the application fee for tree removal is too low and a fee structure in line with the average charged (\$62 for one tree and \$75 per tree afterwards) by other cities within Metro Vancouver would be appropriate.

Based on the data, Tree Permit Application fees have fallen well below the averaged charged by other cities within Metro Vancouver. In addition, there is an opportunity to provide an additional 600 new replacement trees per year by increasing the current 1:1 required replacement tree ratio (for new single-family construction) to a 2:1 ratio, creating consistency with the requirements for development permit and rezoning applications under the Official Community Plan Bylaw 9000. Furthermore, planting additional trees would support the City's tree canopy objectives as outlined in the recently adopted 'Public Tree Management Strategy 2045'.

Proposed Bylaw Amendment:

- A "per tree" application fee format would provide applicants incentive in this permit category to make well considered applications, discouraging those who apply for removal of all trees on site for construction convenience. Increasing tree removal permit fees will also bring Richmond's Tree Permit Application fees in line with the average charged by other cities within the regional district. Staff proposes a two tiered system of \$62 for an application to consider the removal of one tree, and \$75 per tree afterwards for multiple tree removals.
- Increase the current 1:1 required replacement tree ratio to 2:1 as supported by the Official Community Plan Bylaw 9000. The 2:1 ratio is currently only required for rezoning applications.

C. Tree removal applications for rezoning in process (T3)

	Number of Applications	Trees Applied for Removal	Trees Removed	Trees Refused	Trees Replaced	Other Retained Trees	Total Trees Retained and replaced on site
2018	20	307	279	28	669	29	726
2019	11	211	161	50	386	10	446
2020	13	167	152	15	380	19	414

- There is a consistent trend year over year, that approximately 1/3 of rezoning applicants submit T3 tree removal applications for a rezoning application in process to facilitate site preparation works and/or preloading requirements.
- In 2018, staff received and issued 20 Tree Removal Permit applications related to rezoning applications in (T3) process (after the Rezoning Bylaw had received third reading of Council) to permit tree removal prior to the developer's submission of a Development Permit (landscape) Letter of Credit and Council adoption of the rezoning amended bylaw.
 - Overall, 669 replacement trees were required for a replacement ratio of 2.4:1 (exceeding the minimum 2:1 ratio required in the OCP).
- In 2019, staff received and issued 11 Tree Removal Permit applications related to rezoning applications in process (T3).
 - Overall, 386 replacement trees were required, for a replacement ratio of 2.4:1 (exceeding the minimum 2:1 ratio required in the OCP).
- In 2020, staff received and issued 13 Tree Removal Permit applications related to rezoning applications in process (T3).
 - Overall, 380 replacement trees were required, for a replacement ratio of 2.5:1 (exceeding the minimum 2:1 ratio required in the OCP).

Based on the data, Tree Permit Application fees have fallen well below the averaged charged by other cities within the regional district.

Proposed Bylaw Amendment:

- Increase the tree removal permit application fees to be in line with the average charged by other cities within the regional district. Staff proposes a tiered system where application fees would be:
 - \$62 for the first tree.
 - \$75 per tree for multiple tree removals.

D. Rezoning and/or Development Permit Tree Review Process (No Tree Permit)

	# of Applications	Trees Applied for Removal	Trees Removed	Trees Refused	Trees Replaced	Other Retained Trees	Total Trees Retained and Replaced on site
2018	90	1,288	1,044	244	3,126	154	3,524
2019	35	427	161	266	672	147	1,085
2020	12	221	137	84	528	33	645

- In 2018, staff reviewed arborist reports for 90 rezoning applications with existing trees on site.
 - Staff directed tree retention on 42 sites (47%)
 - Trees could not be retained on 36 sites (40%)
 - 12 sites (13%) had no existing trees, but staff directed retention on neighbouring private property and City trees
 - Of the 90 applications, only 21 sites (23%) resulted in trees in “good condition” being removed for a variety of reasons, including conflict with development, required significant grading changes, etc.
 - Overall 3,126 replacement trees were required for a replacement ratio of 3:1 (exceeding the minimum 2:1 ratio required in the OCP).
- In 2019, staff reviewed arborist reports for 35 rezoning applications with existing trees on site.
 - Staff directed tree retention on 23 sites (66%)
 - Trees could not be retained on 6 sites (17%)
 - 6 sites (17%) had no existing trees, but staff directed retention on neighbouring private property and City trees
 - Of the 35 applications, only 10 sites (23%) had trees in “good condition” removed for a variety of reasons, including conflict with development, required significant grading changes, etc.
 - Overall 672 replacement trees were required for a replacement ratio of 4:1 (exceeding the minimum 2:1 ratio required in the OCP).
- In 2020, staff reviewed arborist reports for 12 rezoning applications with existing trees on site.
 - Staff directed tree retention on 10 sites (83%)
 - Trees could not be retained on 2 sites (17%) due to their poor structural condition.
 - Of the 12 applications, only 2 sites (17%) had trees in “good condition” removed for a variety of reasons, including conflict with development, required significant grading changes, etc.

- Overall 528 replacement trees were required for a replacement ratio of 4:1 (exceeding the minimum 2:1 ratio required in the OCP).
- Comparing results from previous years, there is a relative upward trend in the number of trees refused removal in spite of a drop in application numbers as staff continue to work with applicants to encourage proposed building re-design in order to retain trees in good condition.

No Bylaw Change Proposed:

- Since Development is complying with City requirements and is consistent with Official Community Plan (OCP) objectives, staff recommends that the current procedures and replacement tree requirements continue.

Summary of Options to Enhance the Tree Protection Bylaw No. 8057

The urban forest canopy may be impacted by both development and, to a lesser extent, non-development related tree removal to address life-safety issues in an urban environment. Richmond's Tree Protection Bylaw No. 8057 is an important tool aimed at mitigating those impacts while improving the urban forest. Updating the Bylaw provides opportunities to increase the number of trees planted, improve support measures for successful tree establishment, and discourage tree removal.

Staff recommends consideration for the following amendments to Tree Protection Bylaw No. 8057. These changes also reflect feedback put forward by both the Advisory Committee to the Environment (ACE) and the "Save Richmond Trees" (Community) group.

- a) Remove the exemption allowing homeowners to not provide a replacement tree when one tree is removed (per property) within a 12 month period. This change would result in an average of 340 more replacement trees being planted per year.
- b) Increase the current tree permit fees. Currently, Richmond's tree removal permit fee schedule is considered low. The current fee schedule is "no fee for one tree application per year and a flat fee of \$62 for two or more trees within a 12 month period". Staff proposes a tiered system where application fees would be \$62 for one tree and \$75 per tree for multiple tree removals.
- c) Change the current 1:1 replacement tree requirement associated with new single-family dwelling construction to a 2:1 replacement tree ratio so as to be consistent with the current 2:1 replacement ratio identified in the Official Community Plan for Rezoning and Development permits. This change would result in an average of 400-500 more replacement trees being planted per year.
- d) Standardize the Tree Protection Bylaw's replacement tree size at minimum 6cm caliper for deciduous trees and 3.5m high for coniferous trees, and maximum at 8cm and 4.0m respectively, with denotation that larger replacement trees are to be required in accordance with the site conditions, at the discretion of the Director of Building Approvals. These measures address the survivability of replacement trees, ensuring a higher level of survival than at present, greater compliance and eventually larger and more robust trees than would result from the planting of initially larger trees that are presently specified in the sliding scale, "Schedule A, Table 1" of the Tree Protection

Bylaw. This will result in better replacement tree establishment and a more diverse and resilient urban forest.

Financial Impact

None.

Conclusion

This report provides an update of the City of Richmond's Tree Protection Bylaw No. 8057, including enforcement activity and a 2018-2020 tree permit activity updated summary, showing increasing enforcement activity and continued preservation of the urban forest on private property. This report recommends that Council endorses the proposed changes to improve Richmond's Tree Protection Bylaw No. 8057, ensuring important City objectives related to tree preservation and policy supporting the continual development of a sustainable, resilient and diversified urban forest are being advanced.



Gordon Jaggs
Program Lead, Tree Preservation
Building Approvals
(604-247-4910)

GJ:gj

- Attachment 1: Example of Aeration Tubes
- Attachment 2: Example of Floating Grade Beams
- Attachment 3: Example of Bridging Grade Changes & Letter of Undertaking
- Attachment 4: Example of Hydro-Vac Excavation
- Attachment 5: Example of Directional Drilling
- Attachment 6: Retained Trees
- Attachment 7: Retained Trees
- Attachment 8: Retained Trees with Modified Fence
- Attachment 9: Replacement trees
- Attachment 10: Mixture of Retained and Replacement Trees



Aeration tube layout for driveway encroachment



Gravel and landscape fabric over perforated tubes



Aeration tube vents



Aeration tube installation adjacent to existing tree



Construction of a Floating Grade Beam



Bricks laid on metal beam



Floating Grade Beam to protect critical root zone of mature tree





Bridging grade changes to retain existing trees

ARBORTECH CONSULTING A Division of **NUMBACK GROUP**

LETTER OF UNDERTAKING FOR PROJECT ARBORIST SERVICES
CITY OF RICHMOND

March 21, 2014
Attn: Staff - City of Richmond
SIC: Agri Thermal - Owner Representative
A/C/L File: 14314
Muni Ref No.:
Site Address: 6891 Mayflower Drive, Richmond

158 21494
RECEIVED

Pursuant to municipal requirements, the owner is required to retain a qualified arborist to direct certain construction related activities in proximity to On-Site Trees 124, 126, 127, 128 and 129 located at the above referenced site. This letter serves as confirmation that ArborTech Consulting is retained as an hourly charge-out basis to serve in this role as Project Arborist.

Construction work within or directly adjacent to a Tree Protection Zone (TPZ) must be undertaken in conformance with best management practices and proper arboricultural standards, and in compliance with the Tree Protection Guidelines (see page 7). At the discretion of the project arborist, the contractor may be required to use certain low impact methods and materials in the completion of this work.

Site review reports will be compiled for guidance to the owner, the contractor and the city, as appropriate. A final sign-off will be provided at substantial completion of construction. Following are the responsibilities whenever when the contractor must follow the project arborist in guidance when working within or directly adjacent to a TPZ:

1. Passage or operation of any machinery, vehicles, equipment or delivery of materials or supplies.
2. Demolition of any existing buildings and hard landscaping.
3. Undertaking any tree pruning, tree removals and/or stump removals.
4. Undertaking any soil disturbance, excavation, fill placement, or soil disturbance of any scope.
5. Installation of any drainage, perimeter retaining walls, underground services or utilities.
6. Undertaking sub-base preparation for new driveways and/or temporary site access for machinery.
7. Landscaping finishing within TPZ's.

Note: The erection of tree protection fences for landscape finishing purposes does not waive tree protection restrictions. The landscape contractor must also coordinate with the project arborist in advance of their work. The operation of, or passage through, a TPZ by any equipment remains a restricted installation of conduit or irrigation, placement of any growing medium, grade changes of any scope, installation of retaining walls, fences or hard landscape features, and/or any planting within a TPZ will need to be conducted with direction from the project arborist.

If construction related damage is incurred to a tree, it may constitute an offence under municipal bylaw provisions. By signing below, the owner agrees to:

- 40 ensure that ArborTech Consulting is contacted with 3 business days advance notice to arrange landscaping by the project arborist at the office times (as noted above).
- 41 ensure that construction activities will be conducted in conformance with the tree protection guidelines and using low impact methods and methods if directed by the project arborist, and take sole responsibility for paying any fines and/or penalties that may be levied by the municipality if damage is caused to a tree as a result of non-compliance to the above, and indemnify ArborTech Consulting accordingly.

Regards,

Norman Mel,
Consulting Arborist
Direct: 404.813.9194
Email: numbackgroup.ca
Enclosed: Tree Protection Guidelines

Signature: 
Name: Howard Shul
Phone #: 781-741-2644

Greater Vancouver Office: Phone: 604.275.3489
Suite 200 - 2140 Cloughan St
Richmond, BC V6V 3T3

Panor Valley Office: Phone: 604.753.7182
Suite 101 - 12311 MacLellan Rd
Richmond, BC V6X 3A3

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Letter of Undertaking contract between Certified Arborist and property owner



Hydro Vac (High pressure water excavation)



Hydro Vac to install services without cutting roots



Directional drill



Pipe installed for services under tree root zone



**Retained Sequoia tree
with services directionally
drilled under root zone**





Retained tree at new townhouse development



Retained trees





Retained trees





Retained tree with modified fence





Replacement trees





Mixture of retained and replacement trees



Mixture of retained and replacement trees with modification



**Tree Protection Bylaw No. 8057,
Amendment Bylaw No. 10246**

The Council of the City of Richmond enacts as follows:

1. Tree Protection Bylaw No. 8057, as amended, is further at section 2.1 by deleting the definition of "Certified Tree Risk Assessor" in section 2.1 and replacing it with the following:

"CERTIFIED TREE RISK ASSESSOR means a Certified Arborist with additional current training and certification in tree risk assessment as determined by the International Society or Arboriculture."

2. Tree Protection Bylaw No. 8057, as amended, is further amended by deleting section 3.2.2 and marking it "Repealed."
3. Tree Protection Bylaw No. 8057, as amended, is further amended at section 4.2.1a) by deleting the words "or one tree under section 3.2.2, in which case there shall be no fee".
4. Tree Protection Bylaw No. 8057, as amended, is further amended by deleting section 4.3.3 and replacing it with the following:

"4.3.3 A replacement tree is not required for the cutting or removal of a hazard tree."

5. Tree Protection Bylaw No. 8057, as amended, is further amended by deleting Schedule A and replacing it with Schedule A attached to and forming part of this bylaw as a new Schedule A of the Tree Protection Bylaw No. 8057.

6. This Bylaw is cited as **“Tree Protection Bylaw No. 8057, Amendment Bylaw No. 10246”**.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

MAYOR

CORPORATE OFFICER

CITY OF RICHMOND
APPROVED for content by originating Division JC
APPROVED for legality by Solicitor BRB

SCHEDULE A to BYLAW NO. 10246
SCHEDULE A to BYLAW NO. 8057

Replacement Trees

Where replacement trees are required to be provided pursuant to this bylaw, such replacement trees shall be provided and planted as follows:

- 1) Subject to sections 3 and 4 below, for tree removals not related to demolition or construction on parcels containing a one-family dwelling, such replacement trees shall be provided at a ratio of 1:1 and planted as follows:
 - (a) deciduous replacement trees are to be a minimum of 6cm caliper* or a minimum 3.5m in height,
 - (b) coniferous replacement trees are to be a minimum of 3.5m in height.
- 2) Subject to sections 3 and 4 below, for tree removals for all other properties and permits related to construction, demolition, rezoning, development permits, subdivisions or building permits, such replacement trees shall be provided at a ratio of 2:1 and planted as follows:
 - (a) every deciduous replacement tree shall be of the minimum 8cm caliper* or of a minimum 4m in height,
 - (b) every coniferous replacement tree shall be a tree of the minimum 4m in height.
- 3) Every replacement tree shall be spaced from existing trees and other replacement trees in accordance with an approved forest management plan or landscape plan and in all cases shall be planted in accordance with the current BCSLA (British Columbia Society of landscape architects) or BCLNA (British Columbia Landscape & Nursery Association) Landscape Standards, and all replacement trees shall meet current BCSLA or BCLNA standards.
- 4) Notwithstanding the foregoing, the Director of Building Approvals may, at their discretion, require larger replacement trees than those set out in section 1(a), 1(b), 2(a), and 2(b) set out above in this Schedule.

*Caliper is the diameter of the trunk measured at 15cm above the ground.



Consolidated Fees Bylaw No. 8636, Amendment Bylaw No. 10247

The Council of the City of Richmond enacts as follows:

1. The Consolidated Fees Bylaw No. 8636, as amended, is further amended at SCHEDULE – TREE PROTECTION by deleting the Tree Protection Bylaw No. 8057 Permit Fees table and replacing it with the following:

Description	Fee
<u>Permit application fee</u>	
To remove a hazard tree	No Fee
One (1) tree per parcel during a 12 month period	\$62.00
Two (2) or more trees	\$75.00 per tree
Renewal, extension or modification of a permit	\$62.00

2. This Bylaw is cited as “Consolidated Fees Bylaw No. 8636, Amendment Bylaw No. 10247”.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

MAYOR

CORPORATE OFFICER

CITY OF RICHMOND
APPROVED for content by originating Division
JC
APPROVED for legality by Solicitor
BRB