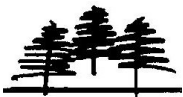


**Tree Evaluation Report for:
Kingsway Affordable Housing
Kingsway Avenue and Gately Avenue
Port Coquitlam, BC**

Prepared by:

**Mike Fadum and Associates Ltd.
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**Date: April 22, 2020
Revised: September 28, 2020**

1.0 INTRODUCTION

We attended the site on April 8 and April 21, 2020 to evaluate the tree resource and to make recommendations for removal and preservation for the development application proposed for the properties southeast of the Kingsway Avenue and Gately Avenue intersection. The Coquitlam River riparian zone borders the site to the southeast. The application proposes rezoning for the purpose of constructing new multifamily buildings with underground parking. A plan showing the proposed building footprints, lot lines, riparian setbacks, and topographical survey was provided for our use and used as a resource for making recommendations pertaining to tree removal and retention. *The September 28, 2020 revision reflects the current plans.*



Figure 1. Aerial Photograph 2492 Kingsway Avenue (QtheMap, 2019).



2.0 FINDINGS

The onsite tree resource varies considerably across the site with the majority of trees located on 2450 and 2420 Ticehurst Lane. These two properties include a wide assortment of native and non native species that are typically well conditioned. Dominant trees to the north include a small group of mature black cottonwoods (*Populus balsamifera* ssp. *balsamifera*) and a mature Douglas-fir (*Pseudotsuga menziesii*). Dominant trees on the western lots include a well conditioned Colorado blue spruce (*Picea pungens* var. *glauca*) and row of flowering cherries (*Prunus* sp). We did not individually assess all trees below the top of bank but did walk the area to conduct a Level 1 Tree Risk Assessment. This area is dominated by red alder (*Alnus rubra*) and black cottonwood that range in diameter from approximately 15-65cm. Trees here are typically in good health and have forms of trees growing in this type of environment including limited stem tapers and phototropic sweeps.

Table 1 provides individual tree data. Specific information includes tree type, diameter at breast height (DBH), structure and health rating (poor (P), moderate (M), good (G) or a combination of two), live crown ratio (LCR) and structural observations. Health refers to the tree's overall health and vigor, while structure is a qualitative rating of a tree's shape and structure when compared to ideal trees of the same species and age class. Trees were evaluated for their preservation potential based on health, structure, location and species factors. Trees expected to be unsafe, conflicting with the proposed building plans, of poor health or of little long-term retentive value are recommended for removal and are shown on the attached Tree Preservation and Removal Plan. Smaller stature trees and shrubs are included on the plans with a Legend. Photographs are provided in Appendix A.

3.0 TREE PROTECTION

Tree protection fencing is to be installed as per municipal standards prior to construction with no excavation, grade alterations or materials storage within the tree protection zone. The consulting Arborist should be contacted prior to and be onsite for any construction within the recommended root protection zone which is approximately 6x the tree diameter. Grade alterations and other construction works required to provide drainage are not to occur within the root protection zone. Failure to comply with these recommendations may result in delays, stop work orders or fines imposed by the municipality.



4.0 TREE PRESERVATION SUMMARY

Our plans have been provided to the design team and it is expected that all consultants and contractors adhere to the recommendations in this report and ensure there is no conflict with Tree Protection Zones. No ground disturbance or grade alterations are permitted within the Tree Protection Zones unless preapproved by the project arborist. Mechanical injuries caused to trees below or above ground cannot be repaired. All parties must be aware that long-term success in tree preservation efforts depends greatly on minimizing the impact caused during and post construction. Best efforts must be made to ensure that soils remain undisturbed within the tree protection zones. Ongoing monitoring and implementation of mitigating works, such as watering, mulching, etc., is essential for success.

5.0 EDGE TREE ASSESSMENT

We recommend all edge trees undergo a Tree Risk Assessment to determine if they are at an increased risk of partial or complete failure when the surrounding trees are removed and the exposure to wind is increased. Trees considered to be of poor structure and / or condition, of species types prone to failure within striking distance of future targets of value should be removed or undergo crown modification treatments. We recommend that any trees to be removed near retained trees are cut to grade and their stumps left intact in order to prevent disturbance to the stability and negative impacts on the health of the adjacent trees. Crown modification treatments may include large limb removal and or retopping.

6.0 LIMITATIONS

This Arboricultural field review report is based on site observations on the dates noted. Effort has been made to ensure that the opinions expressed are a reasonable and accurate representation of the condition of the trees reviewed. All trees or groups of trees have the potential to fail. No guarantees are offered or implied by Mike Fadum and Associates Ltd. or its employees that the trees are safe given all conditions. The inspection is limited to visual examination of accessible items without dissection, excavation, probing, coring or climbing. Trees can be managed, but they cannot be controlled. To live, work or play near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

The findings and opinions expressed in this report are representative of the conditions found on the day of the review only. Any trees retained should be reviewed on a regular basis. The root crowns, and overall structure, of all the



trees to be retained must be reviewed immediately following land clearing, grade disturbance, significant weather events and prior to site usage changes.

Please contact the undersigned if you have any questions or concerns regarding this report.

On behalf of Mike Fadum and Associates Ltd.



Peter Mennel BSc
ISA Certified Arborist PN# 5611A
TRAQ



Table 1 - Tree Evaluation: Kingsway Avenue and Gately Avenue, Port Coquitlam, BC

Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
4530	Japanese Maple (<i>Acer palmatum</i>)	10/6/16/8 /16/8/17	G	G	NA	5m dripline.	Remove. 4.0m
4531	Dogwood (<i>Cornus florida</i>)	15/8/ 5/6	M	M	NA	All major leaders headed back previously. Growing under a soffit. Extensive sucker growth. 3m dripline.	Remove. 2.5m
4532	Japanese Maple (<i>Acer palmatum</i>)	12/14/4/5 /3/19/ 10	MG	MG	NA	Not identified at the time of survey. Location approximate. 4m dripline. Includes 4 unsurveyed rhododendrons between 3-4m tall in this area.	Remove. 2.5m
4533	Mountain Ash (<i>Sorbus americana</i>)	20/8/ 18/8/7	MG	MG	NA	Multi stemmed base. 3m dripline.	Remove. 3.0m
4534	Sawara Falsecypress (<i>Chamaecyparis pisifera</i>)	37/27/ 23/43	M	MG	80	4m dripline. Some stems topped previously for overhead utility line clearance. Multi stemmed base.	Remove. 5.0m
4535	Threadleaf Falsecypress (<i>Chamaecyparis pisifera</i>)	17	MG	MG	60	2m dripline. Canopy weighted to the south west. Slight pistol butt base.	Remove. 2.0m
4536	Deodar Cedar (<i>Cedrus deodara</i>)	75	MG	MG	70	Pistol butt base. Multi stemmed at 5m. Canopy weighted to the southwest. 7m dripline.	Remove. 5.0m
4537	Grand Fir (<i>Abies grandis</i>)	38	G	MG	90	3m dripline. No observed defects.	Remove. 3.0m
4538	Hiba (<i>Thujopsis dolabrata</i>)	28	MG	MG	80	3m dripline. No observed defects.	Remove. 2.5m



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Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
4539	Sawara Falsecypress (<i>Chamaecyparis pisifera</i>)	61/48	P	M	95	Significant lower stem phototropic sweep. Northern stem has been topped at 5m with no regrowth. Canopy weighted to the south. 4m dripline.	Remove. 5.0m
4540	Magnolia (<i>Magnolia sp.</i>)	15/10/8/16 /12/17/8	MG	M	NA	Shade suppressed. 4m dripline.	Remove. 3.0m
4541	Pine (<i>Pinus sp.</i>)	14/16/ 12/6	M	M	20	Leggy form. High canopy. Four stemmed coppice base. 2.5m dripline.	Remove. 2.5m
4542	Photinia (<i>Photinia sp</i>)	~14/ 14/6/9/ 8/6/5	MP	M	NA	Topped at 3m with multiple stem small diameter regrowth. 1.5m dripline.	Retain. 2.5m
4543	Flowering Cherry (<i>Prunus sp</i>)	43	M	MG	NA	Most major leaders and scaffold headed back at 4m. Open grown symmetrical canopy. Decay cavity at point of past leader failure. 4m dripline.	Retain. 3.5m
4544	Norway Maple (<i>Acer platanoides</i>)	42	M	M	NA	Well calloused rib on the north side. Leggy form. Canopy weighted to the west. 7m dripline.	Retain. 3.5m
4545	Flowering Cherry (<i>Prunus sp</i>)	48	MP?	MG	NA	Decay cavity at base with large conk. Leggy form. High canopy. 7m dripline.	Retain. 3.5m
4546	Katsura (<i>Cercidiphyllum japonicum</i>)	~35/36/ 28/35/ 20/15/19	MG	G	NA	8m dripline. No observed defects.	Retain. 5.0m
4547	Persian Ironwood (<i>Parrotia persica</i>)	3-17 X40	M	G	NA	Multi stemmed base. 6m dripline.	Retain. 5.0m



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Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
4548	Norway Spruce (<i>Picea abies</i>)	34	M	MG	40	Limited trunk taper. 3m dripline.	Retain. 3.0m
4549	Japanese Maple (<i>Acer palmatum</i>)	8/5/9	M	M	NA	Dieback throughout canopy. Shade suppressed - leggy form. 3m dripline.	Retain. 2.0m
4550	Mountain Ash (<i>Sorbus americana</i>)	31	MP	M	NA	Multiple stems cut or fail at 2-4m. Leggy form. 3.5m dripline.	Retain. 2.5m
4551	Sycamore Maple (<i>Acer pseudoplatanus</i>)	42	M	MG	NA	Canopy weighted to the south. Large pile of debris and concrete at the base prevented a thorough assessment. 6m dripline.	Retain. 3.5m
4552	Sycamore Maple (<i>Acer pseudoplatanus</i>)	40	M	MG	NA	Canopy weighted to the north. Phototropic sweep to the north. Large stem removed from the base with sucker growth. 5m dripline.	Retain. 3.0m
4553	Sycamore Maple (<i>Acer pseudoplatanus</i>)	~60	M	M	NA	Heavy ivy growth. 6m dripline.	Remove. 4.5m
4554	Cherry (<i>Prunus sp.</i>)	33	M	G	NA	Significant sweep to the west. Decay column at 1m. 8m dripline.	Remove. 2.5m
4555	Spruce (<i>Picea sp.</i>)	47	M	MG	80	Sweep to the north. Old wound at 1m north side. 5m dripline.	Remove. 4.0m
4556	Colorado Blue Spruce (<i>Picea pungens</i> <i>Glauca Group</i>)	41	M	M	NA	Dieback throughout. Codominant leader at 3m has failed at 8m.	Remove. 3.0m
4557	Colorado Spruce (<i>Picea pungens</i>)	29	M	MP	75	Canopy weighted to the south. Pruned north side for utility line clearance. 3m dripline.	Remove. 2.5m



Table 1 - Tree Evaluation: Kingsway Avenue and Gately Avenue, Port Coquitlam, BC

Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
4558	Colorado Spruce (<i>Picea pungens</i>)	29	MG	M	80	Pruned north side for utility line clearance. Canopy weighted to the south. 3m dripline.	Remove. 2.5m
4559	Black Cottonwood (<i>Populus trichocarpa</i>)	~20	G	G	NA	Typical.	Retain. 2.0m
4560	Black Cottonwood (<i>Populus trichocarpa</i>)	~60/50 /60	M	MG	NA	3 stems fused to the base with phototropic sweeps. Ivy across lower 10m and recently removed. 11m dripline.	Remove. 7.5m
4561	Black Cottonwood (<i>Populus trichocarpa</i>)	55	M	MG	NA	Tree grows to about 60 degrees angle to the south then corrects to vertical. Ivy across lower 10m recently removed. 10m dripline.	Remove. 4.5m
4562	Black Cottonwood (<i>Populus trichocarpa</i>)	56	M	MG	NA	Ivy recently removed. Significant sweep to the west. 10m dripline.	Remove. 4.5m
4563	Black Cottonwood (<i>Populus trichocarpa</i>)	53	M	MG	NA	Ivy across lower 10m and recently removed. 8m dripline.	Remove. 4.0m
4564	Black Cottonwood (<i>Populus trichocarpa</i>)	~100	M	MG	NA	2 stems fused across lower 2m. Ivy across lower 10m and recently removed. 8m dripline.	Remove. 7.0m
4565	Emerald Cedar (<i>Thuja occidentalis</i>) 'Smargd'	8/10/12 /8/5	MP	M	80	Tree leans to the south – possibly supported by the Douglas fir. Top has corrected to vertical. 2m dripline.	Remove. 2.0m
4566	Colorado Blue Spruce (<i>Picea pungens</i> <i>Glauca Group</i>)	36	M	M	50	Significant phototropic sweep to the west. Shade suppressed. 5m dripline.	Remove. 2.5m



Table 1 - Tree Evaluation: Kingsway Avenue and Gately Avenue, Port Coquitlam, BC

Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
4567	Douglas-fir (<i>Pseudotsuga menziesii</i>)	77	M	MG	80	Codominant attachment at 2m with angle of attachment. Limb locked. Some dieback across lower canopy and needle blight. 8m dripline.	Remove. 6.0m
4568	Threadleaf Falsecypress (<i>Chamaecyparis pisifera</i>)	23/20	M	G	NA	2 stem base. Canopy weighted to the south. Pruned on north side to clear the house. 2m dripline.	Remove. 2.5m
4569	Colorado Blue Spruce (<i>Picea pungens Glauca Group</i>)	42	MG	MG	80	4m dripline.	Remove. 3.0m
4570	Cherry (<i>Prunus sp.</i>)	31/32/ 32/20	M	G	NA	Multi stemmed base. Large leader scaffolds pruned/cut on the west side. 7m dripline.	Remove. 5.0m
4752	Cherry (<i>Prunus sp.</i>)	44/15/17/1 7/26/27	M	MG	NA	Scaffolds pruned on west side. 7m dripline.	Remove. 5.0m
4753	Threadleaf Falsecypress (<i>Chamaecyparis pisifera</i>)	31	M	G	50	Canopy weighted to the north. Aggressively pruned on the south side to clear the carport. 2.5m dripline.	Remove. 2.0m
4754	Plum (<i>Prunus sp.</i>)	~5-15 X13	M	M	NA	Not maintained. 2.0m	Remove. 2.5m
4755	Mountain Ash (<i>Sorbus americana</i>)	~3-25 X25	P	M	NA	Large limb failure. Large cavity in the lower stem. Topped at 4-6m. Southern stem has failed.	Remove. 2.5m



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Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
4756	Magnolia (<i>Magnolia sp.</i>)	15/12	MP	MG	NA	Leaders cut at 2m with multiple stem small diameter regrowth. Decay at points of cutting. 2m dripline.	Remove. 2.0m
4757	Cherry (<i>Prunus sp.</i>)	10/6/ 11	MP	M	NA	Dieback lower mid canopy. Shade suppressed. 1m dripline.	Remove. 2.5m
4758	Norway Maple (<i>Acer platanoides</i>)	58	M	MG	NA	Well calloused crack on the south side. Some leaders have been topped previously. 6m dripline.	Remove. 4.5m
4759	Apple (<i>Malus sp</i>)	10/10/ 13/17	M	MG	NA	3 stems fused at the base. 3m dripline.	Remove. 2.5m
4760	Laburnum (<i>Laburnum sp</i>)	12/5/ 4/2	MG	MG	NA	Multi stemmed. Canopy weighted to the north.	Remove. 2.0m
4761	Norway Spruce (<i>Picea abies</i>)	~25	MG	MG	70	Lack of access prevented thorough assessment. Possibly topped previously. 3m dripline.	Remove. 2.5m
4762	Apple (<i>Malus sp</i>)	10/15/10/ 10/10	M	M	NA	Open grown canopy. Lack of access prevented thorough assessment. 4m dripline.	Remove. 2.5m
4763	Atlas Cedar (<i>Cedrus atlantica</i>)	24/ ~45/35	MG	M	80	Canopy weighted to the south. Multi stemmed base. 8m dripline.	Remove. 5.0m
ROW1	Western Redcedar (<i>Thuja plicata</i>) X12	24,19,22,26 ,20,18,23, 22,20,11,8, 24	G	G	60	Many trees not surveyed. 3m dripline.	Retain. 2.5m



Table 1 - Tree Evaluation: Kingsway Avenue and Gately Avenue, Port Coquitlam, BC

Tree #	Type	DBH (cm)	Structure	Health	LCR (%)	Observations	Recommendation / Tree Protection Zone Radii
C1	European Hornbeam (<i>Carpinus betulus</i>)	22/15 /15/5	G	G	NA	Phototropic sweep to the west. Canopy weighted to the west. 5m dripline.	Retain. 3.0m
C2	European Hornbeam (<i>Carpinus betulus</i>)	5-15 x11	MG	G	NA	4m dripline. No observed defects.	Retain. 3.0m
C3	European Hornbeam (<i>Carpinus betulus</i>)	5-10 X12	M	MG	NA	Stems pruned on north side for sidewalk clearance. 2.5m dripline.	Retain. 3.0m
C4	European Hornbeam (<i>Carpinus betulus</i>)	3-6 X7	M	MG	NA	Stems pruned on north side for sidewalk clearance. 2m dripline.	Retain. 3.0m
C5	European Hornbeam (<i>Carpinus betulus</i>)	3-8 X11	MG	MG	NS	2.5m dripline. No observed defects.	Retain. 3.0m
C6	European Hornbeam (<i>Carpinus betulus</i>)	3-16 X22	MG	MG	NA	2.5m dripline. Typical.	Retain. 3.0m
ADDITIONAL RECOMMENDATIONS							
<ul style="list-style-type: none"> In order to prevent root damage, which may adversely affect the health and or stability of the retained trees, any ground disturbance or grade alteration within the recommended Tree Protection Zone provided in the table above shall be under the direction of the project arborist if permissible. 							

Note: 'OS' refers to Offsite trees and due to restricted access their diameters are approximate. An assessment of offsite trees does not imply they are safe as the restricted access prevented a thorough review. 'C' refers to trees on City property.





Figure 1. 4530 with rhododendrons.



Figure 2. 4533 with sumac in the foreground.



Figure 3. 4534



Figure 4. 4535 and 4763.





Figure 5. 4536 (left) and 4539.



Figure 6. 4537



Figure 7. 4538



Figure 8. 4545.





Figure 9. 4546



Figure 10. 4547 (right) and 4548.



Figure 11. Row 1.



Figure 12. 4552.



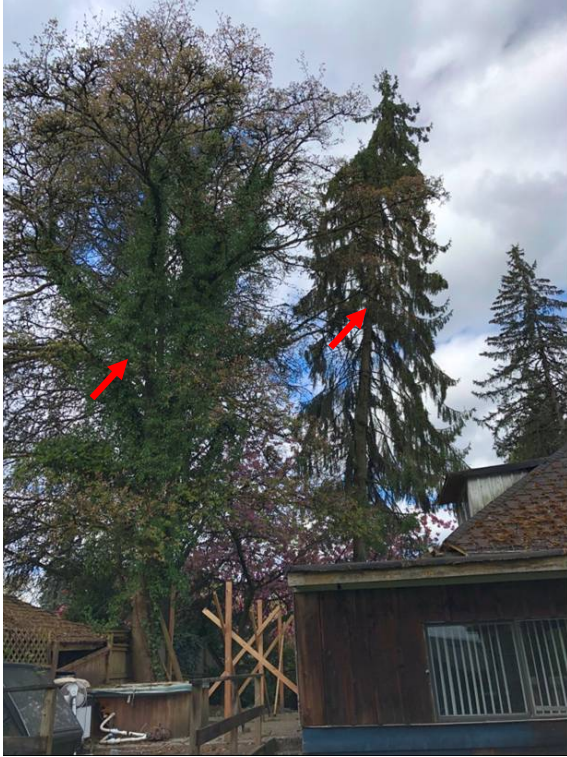


Figure 13. 4553 (left) and 4555.



Figure 14. Typical boulevard hornbeam.



Figure 15. 4560-4564.



Figure 16. 4569 (left) and 4570.





Figure 17. 4578.



Figure 18. 4761.



Figure 19. Riparian are black cottonwoods at northeast corner.

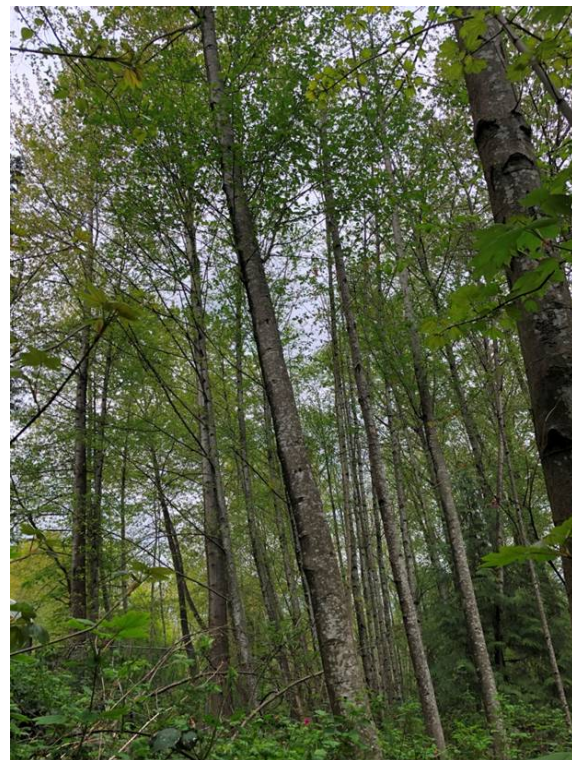


Figure 20. Interior of riparian zone.



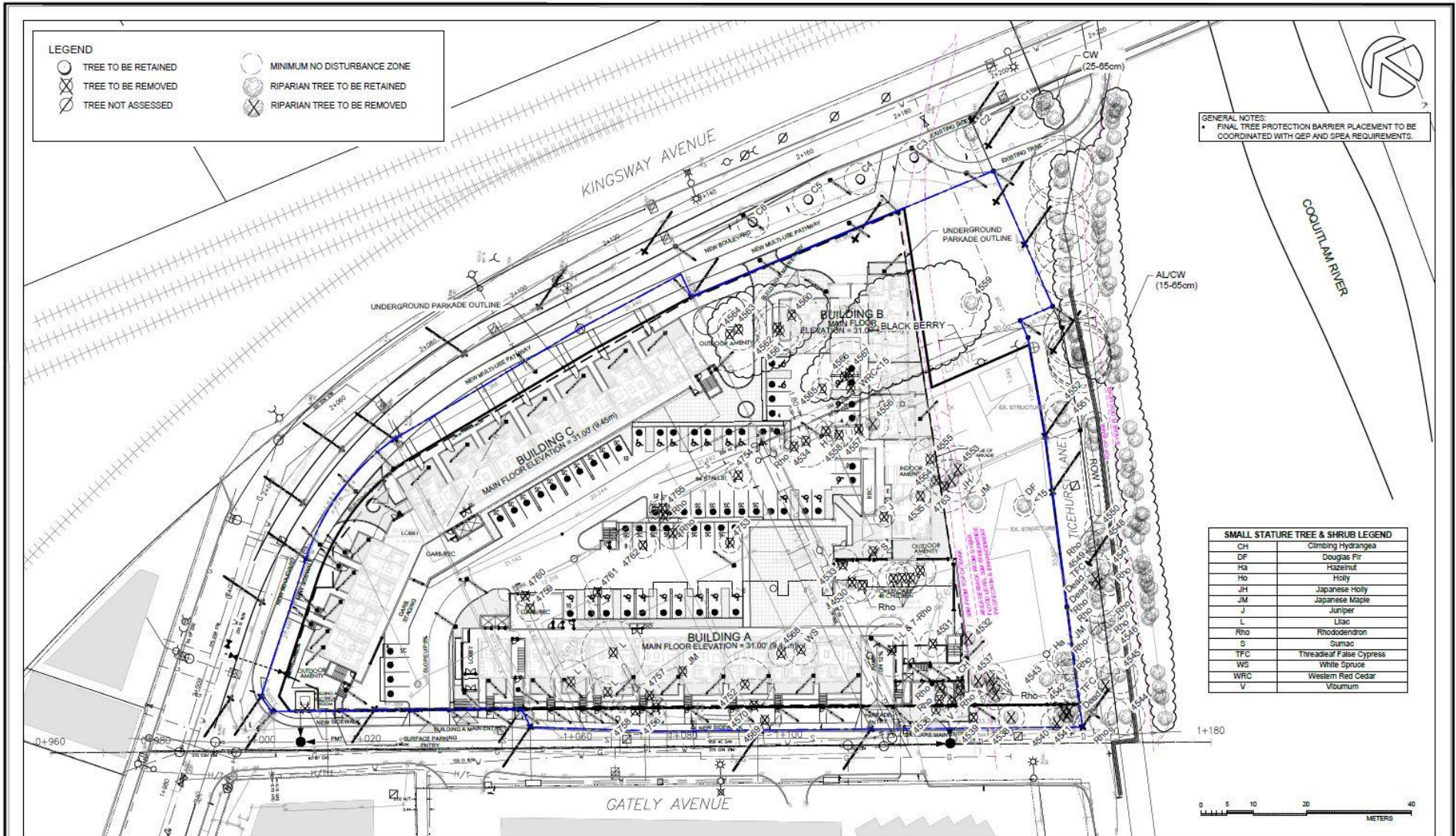
LEGEND

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- TREE NOT ASSESSED

- MINIMUM NO DISTURBANCE ZONE
- RIPARIAN TREE TO BE RETAINED
- RIPARIAN TREE TO BE REMOVED

GENERAL NOTES:
 • FINAL TREE PROTECTION BARRIER PLACEMENT TO BE COORDINATED WITH QEP AND SPEA REQUIREMENTS.

SMALL STATURE TREE & SHRUB LEGEND	
CH	Climbing Hydrangea
DF	Douglas Fir
Ha	Hazelnut
Ho	Holly
JH	Japanese Holly
JM	Japanese Maple
J	Juniper
L	Lilac
Rho	Rhododendron
S	Sumac
TFC	Threadleaf False Cypress
WS	White Spruce
WRC	Western Red Cedar
V	Viburnum



NO.	DATE	BY	REVISION
1	APR21/20	MK	SITE AND GRADING PLAN
2	SEPT2/20	MK	SITE PLAN

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PROJECT TITLE
KINGSWAY & GATELY AVENUE
PORT COQUITLAM, B.C.

SHEET TITLE
T1 - TREE REMOVAL AND PRESERVATION PLAN
 CLIENT

DRAWN
 MK
 SCALE
 AS SHOWN
 DATE
 APRIL 8, 2020

T-1
 SHEET 1 OF 2

