



Talbot Mackenzie & Associates

Consulting Arborists

1693 Fort St.—Victoria, BC

Construction Impact Assessment & Tree Management Plan

Prepared For: Aryze Developments Inc.
1839 Fairfield Road
Victoria, BC V8S 1G9

Prepared By: Talbot, Mackenzie & Associates
Robert McRae
ISA Certified # PN-7125A
TRAQ – Qualified

Date of Issuance: November 25, 2020
Amended November 4, 2021
Amended March 11, 2022 (*Updates indicated in
italics preceded by a red asterisk **)

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Jobsite Property: 1693 Fort Street; Victoria, BC

Date of Site Visit(s): September 9, 2020

Site Conditions: Multi-unit residential lot with no ongoing construction activity.

SUMMARY

- The proposal includes rezoning and construction of a multi-storey residential complex with associated at-grade parking, sidewalks, landscape features, and underground servicing. **As of March 11, 2022, plans to modify the driveway access to 1610 Belcher Ave. have been foregone in favour of an easement at the southwest corner of 1693 Fort Street.*
- Fifteen trees were inventoried on the subject property, neighbouring properties, and municipal boulevard; ten of these are bylaw protected—five on the subject property, four within 3m of the property line at 1619 Morrison St. (assuming estimated DBHs of neighbours' trees are correct), and one on the Belcher Ave. municipal frontage. Five additional trees are not bylaw protected—two on the subject property, three within 3m of the property line at 1610 Belcher Ave.
- Five bylaw protected trees will likely require removal due to construction impacts. One is within the proposed building footprint, while the other four may be too greatly impacted by foundation, parking, and sidewalk construction to safely retain.

SCOPE OF ASSIGNMENT

- Inventory the existing bylaw protected trees and any trees on municipal or neighbouring properties that could potentially be impacted by construction or that are within three metres of the property line.
- Review the proposal to rezone and construct a multi-storey residential complex with associated parking lot, sidewalks, landscape features, and underground servicing.
- Comment on how construction activity may impact existing trees.
- Prepare a tree retention and construction damage mitigation plan for those trees deemed suitable to retain given the proposed impacts.

METHODOLOGY

- We visually examined the trees on the property and prepared an inventory in the attached Tree Resource Spreadsheet.
- Due to the small number of trees on the subject property, no tags were used in their identification. Rather, all trees have been labeled “NT” 1-15 on the site survey.
- Information such as tree species, DBH (1.4m), crown spread, critical root zone (CRZ), health, structure, and relative tolerance to construction impacts were included in the inventory.
- The conclusions reached were based on the information provided within the attached civil plans from McElhanney (dated March 3, 2022), Landscape Plans from Biophilia (dated March 10, 2022) and Architectural Plans from D’Ambrosio Architecture (dated October 8, 2021).
- A “Tree Removal & Protection Plan” is included on Page 1 of the Landscape Plan.

LIMITATIONS

- No exploratory excavations have been conducted and thus the conclusions reached are based solely on critical root zone calculations, observations of site conditions, and our best judgement using our experience and expertise. The location, size and density of roots are often difficult to predict without exploratory excavations and therefore the impacts to the trees may be more or less severe than we anticipate.
- The extent of impacts to some trees will largely depend on the cut-slope prescribed by the geotechnical engineer during excavation for the foundations. Therefore, the proximity of excavation to trees (without shoring) can only be estimated and may be closer or farther from trees than we estimate.

TREES TO BE REMOVED

- **Lawson Cypress (*Chamaecyparis lawsonia*) NT#2**, bylaw protected according to multi-stemmed DBH calculation {25cm + (60% of 20 and 16)}, is within the footprint of the proposed building.
- Multiple constructions are proposed within the CRZs of bylaw protected **Elms (*Ulmus minor*) NT#4-NT#7 (33cm, 34cm, 33cm, and 43cm DBHs, respectively)**. The building footprint shows at 3m distance from the row, and we have assumed that at least an additional 1m of excavation will be required outside the footprint for construction of foundations, potentially resulting in significant impacts to the trees’ health and stability.
 - In addition, the proposed sidewalk shows at 1.5m from the trees, with the parking lot 0.5m from NT#7 and 2m from NT#5 & 6. Due to the surface rooting of these trees, it would not be practical to construct floating surfaces for the sidewalks and parking lot (grades would be incompatible). Excavation will likely be required at least to the extent of the parking lot/sidewalk footprints, potentially resulting in health decline and impacts to the trees’ stability.

- For the reasons listed above, removal of NT#4-7 and replacement with more suitable long-term urban trees recommended.
- **Beech (*Fagus sylvatica*) NT#11 (23cm DBH) and Lawson Cypress NT#3 (27cm DBH)** are within the proposed footprints of the parking lot and sidewalk (respectively). These trees are not bylaw protected.
- *Refer to landscape plan for replacement tree specifications.*

POTENTIAL IMPACTS TO TREES AND MITIGATION MEASURES

- **Municipal ID# 18498—Cherry (*Prunus serrulata* ‘Kwanzan’) NT#1 (73cm DBH):** According to the conceptual site servicing plan, two existing water services (within the CRZ) will be capped and abandoned—we recommend the project arborist be on-site to supervise excavations required. Alternative excavation methods (e.g. hydro-vac) will likely also be recommended.
 - A new sidewalk is also proposed over the footprint of the existing, within the CRZ of this tree. We recommend the project arborist supervise the removal of existing concrete, to mitigate potential damage to roots during this process. If large structural roots are encountered, we recommend the new sidewalk be installed above these, and that permeable surfacing materials be used (see attached diagrams). This may result in the surface being raised above existing grades (see section “Paved Surfaces Above Tree Roots”).
 - A new irrigation system is also proposed to tie into existing water service approximately 4m north of NT#1. We recommend the project arborist be on-site to supervise any excavations required for irrigation service within the CRZ.
 - New paving is also proposed within the east portion of the CRZ. Given that this area is below the existing curb and pavement under Belcher Ave., it is less likely that large, structural roots will be encountered—we do recommend the project arborist supervise the removal of existing pavement and any excavation required within the CRZ of NT#1.
 - Protective barrier fencing should be erected and maintained to the existing sidewalk and curb edges adjacent to NT#1, and to cover as much of the CRZ as possible to the north and south. This fencing can be moved during excavation for services with permission from the City of Victoria Parks Department.
- **Garry Oak (*Quercus garryana*) NT#15 (~60cm DBH)** grows on the municipal frontage at 1619 Morrison St., according to the site survey. However, it may be co-owned between said property and the City of Victoria, though it is not included in the city inventory accessed via VicMap GIS.

- **It is our understanding that no plans are in place to modify the existing driveway access to 1610 Belcher Ave. Therefore, we do not anticipate significant impacts to this tree. If resurfacing of the driveway access is required, the project arborist should be contacted to supervise.*
- Protective barrier fencing should be erected and maintained along the property boundary with 1619 Morrison St. and to the sidewalk edge along Fort St.
- **Neighbour's Austrian Pines (*Pinus nigra*) NT#12-14 (~30, ~40, and ~35cm DBHs, respectively):**
 - **It is our understanding that no plans are in place to modify the existing driveway access to 1610 Belcher Ave. Therefore, we do not anticipate significant impacts to these trees. If resurfacing of the driveway access is required, the project arborist should be contacted to supervise.*
 - Protective barrier fencing should be erected and maintained along the property boundary with 1619 Morrison St.
- **Neighbour's Crabapples (*Malus spp.*) NT#8-10 (~20cm DBHs)**, not protected under bylaw, may experience minor impacts from the demolition of the existing carport and installation of the new parking lot. We anticipate these impacts will be negligible, as the construction is proposed on the outer edge of the CRZs, but the neighbours at 1610 Belcher Ave. should be notified.

MITIGATION MEASURES (FOR REFERENCE)

ARBORIST SUPERVISION

- All excavation occurring within the critical root zones of protected trees should be completed under the direction or supervision of the project arborist. This includes (but is not limited to) the following activities within CRZs:
 - Excavation for underground servicing and sidewalk within the CRZ of NT#1 (municipal ID# 18498).
 - Driveway-related excavation within the CRZs of NT#12-15 (if required).

PRUNING ROOTS

- Any severed roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. Backfilling the excavated area around the roots should be done as soon as possible to keep the roots moist and aid in root regeneration. Ideally, the area surrounding exposed roots should be watered; this is particularly important if

excavation occurs or the roots are exposed during a period of drought. This can be accomplished in a number of ways, including wrapping the roots in burlap or installing a root curtain of wire mesh lined with burlap, and watering the area periodically throughout the construction process.

BARRIER FENCING

- The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zones.

The barrier fencing must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with plywood, or flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

MINIMIZING 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 or a combination of the following methods (depending on the size of machinery and the frequency of use):
 - Placing a layer of geogrid (such as Combigrid 30/30) over the area to be used and installing a layer of crushed rock to a depth of 15 cm over top or a layer of hog fuel or coarse wood chips at least 30 cm in depth and maintaining it in good condition until construction is complete.
 - 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 two layers of 19mm plywood.
 - Placing steel plates

DEMOLITION OF THE EXISTING BUILDING

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

PAVED SURFACES ABOVE TREE ROOTS

- If the new paved surfaces within the CRZs of retained trees require excavation down to bearing soil and significant roots are encountered in this area, this could impact the health or stability of the retained trees. If tree retention is desired, the following recommendations should be followed.

The objective of “no-dig” construction techniques is to avoid root loss and to instead raise the paved surface and/or its base material above the root systems of trees. This may result in the finished grade of the paved surface being raised above existing grade (the amount depending on how close roots are to the surface and the depth of the paving material and base layers). Final grading plans should take this potential change into account (e.g. the resulting slope, grades of surrounding patios, etc.). Contractors should be informed that soils which are high in organic content will likely be left intact below the paved area.

Within the CRZs, the project arborist should supervise any excavation associated with constructing these hard surfaces, including the removal of the existing paving or turf. If significant roots are encountered, excavation should be stopped.

Depending on the amount of the critical root zone covered by the paved surface, the condition of the sub-grade and the amount of roots observed, it may be recommended that the paved surface be made permeable and that a geogrid material (such as CombiGrid 30/30 or similar) be used. The function of the geogrid is to reduce compaction and to disperse weight over soils high in organics and roots. The base material for the paving should be placed above this geogrid and should be clear washed gravels (3/4” clear) in order to inhibit future root growth and potential damage to paving as well as to ensure a well-draining aeration layer. An additional layer of filter cloth or geotextile fabric may be recommended to separate coarse and fine layers (if a finer material is required directly underneath the paving).

To allow water to drain into the root systems below, the project arborist may recommend that the surface be made of a permeable material (instead of conventional asphalt or concrete) such as permeable asphalt, paving stones, or other porous paving materials and designs such as those utilized by Grasspave, Gravelpave, Grasscrete and open-grid systems. If the paved surface is a driveway, it may be possible to construct a “ribbon driveway” with an unpaved area between the two strips of paving.

Ultimately, a geotechnical engineer may be consulted and in consultation with the project arborist, may specify their own materials and methods that are specific to the site’s grading, soil conditions and requirements, while also avoiding root loss, reducing compaction to the sub-grade and ensuring the most long-term aeration and permeability.

MULCHING

- Mulching can be an important proactive step in maintaining the health of trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces (not dyed) and be 5-8cm deep. No mulch should be touching the trunk of the tree. See “methods to avoid soil compaction” if the area is to have heavy traffic.

BLASTING

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

LANDSCAPING AND IRRIGATION SYSTEMS

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

SCAFFOLDING

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

ARBORIST ROLE

- It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:
 - Locating the barrier fencing
 - Reviewing the report with the project foreman or site supervisor

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

REVIEW AND SITE MEETING

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

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

Thank you,



Robert McRae
ISA Certified # PN-7125A
TRAQ – Qualified

Talbot Mackenzie & Associates
ISA Certified Consulting Arborists

Attached:

2-page tree resource spreadsheet
4-page Landscape Plans with “Tree Removal & Protection Plan” on page 1
4-page architectural base plans
1-page civil site plan
2-page tree resource spreadsheet methodology and definitions

Disclosure Statement

The tree inventory attached to the Tree Preservation Plan can be characterized as a limited visual assessment from the ground and should not be interpreted as a “risk assessment” of the trees included.

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.

Tree Resource Spreadsheet - 1693 Fort Street

Tree ID	Common Name	Latin Name	DBH (cm) ~ approximate	Crown Spread (diameter in metres)	CRZ (radius in metres)	Relative Tolerance (good, moderate, poor)	Health	Structure	Remarks and Recommendations	Bylaw Protected	Retention Status	Impacts
NT1	Cherry	<i>Prunus spp.</i>	73 below union	10.0	9.0	Moderate	Fair	Fair-poor	Municipal tree. Decay in most pruning wounds.	Yes (municipal)	Retain*	Water services, sidewalk
NT2	Lawson Cypress	<i>Chamaecyparis lawsonia</i>	47 (25 + 60% of 20, 16)	3.0	7.0	Poor	Good	Fair	Close proximity to building foundation. Sheared and topped.	Yes (by multi-stem calculation)	X	Within building footprint
NT3	Lawson Cypress	<i>Chamaecyparis lawsonia</i>	27.0	3.0	4.0	Poor	Good	Fair	Close proximity to building foundation. Sheared and topped.	No	X	Within sidewalk footprint
NT4	Elm	<i>Ulmus spp.</i>	33.0	6.0	4.0	Moderate	Fair	Fair	Leaf miner cosmetic damage. Surface roots. Appears to be 3 more in the row that were removed to the west.	Yes	X	Conflict with foundation, sidewalk
NT5	Elm	<i>Ulmus spp.</i>	34.0	7.0	4.0	Moderate	Fair	Fair	Topped previously. Leaf miner cosmetic damage. Surface roots. Appears to have been 3 more in the row that were removed (to the west).	Yes	X	Conflict with foundation, sidewalk
NT6	Elm	<i>Ulmus spp.</i>	33.0	5.0	4.0	Moderate	Fair	Fair	Leaf miner cosmetic damage. Surface roots. Appears to have been 3 more in the row that were removed (to the west).	Yes	X	Conflict with foundation, sidewalk
NT7	Elm	<i>Ulmus spp.</i>	43.0	8.0	5.0	Moderate	Fair	Fair	Leaf miner cosmetic damage. Surface roots. Appears to have been 3 more in the row that were removed (to the west).	Yes	X	Conflict with foundation, sidewalk, and parking lot
NT8	Crabapple	<i>Malus spp.</i>	~20	4.0	2.0	Good	Fair	Fair	Clearance pruned. Neighbour's trees. Ivy covered.	No	Retain	Parking lot
NT9	Crabapple	<i>Malus spp.</i>	~20	3	2.0	Good	Fair	Fair	Clearance pruned. Neighbour's trees. Ivy covered.	No	Retain	Parking lot
NT10	Crabapple	<i>Malus spp.</i>	~20	3	2.0	Good	Fair	Fair	Clearance pruned. Neighbour's trees. Ivy covered.	No	Retain	Parking lot
NT11	Beech (purple)	<i>Fagus sylvatica</i>	23	4	3.5	Poor	Good	Good	Close proximity to carport foundation. Some clearance pruning previously.	No	X	Within parking lot footprint
NT12	Austrian Pine	<i>Pinus nigra</i>	~30	7.0	3.0	Good	Fair	Good	Assymetric crown. Elevated from subject property 45cm , protected by retaining wall. Barrier fencing due to development on neighbouring property.	Yes (if estimate is correct)	Retain	
NT13	Austrian Pine	<i>Pinus nigra</i>	~40	8	4.0	Good	Fair	Fair-poor	Codominant leaders with included bark, swelling from reaction wood. Asymmetric crown	Yes (if estimate is correct)	Retain	

Tree Resource Spreadsheet - 1693 Fort Street

Tree ID	Common Name	Latin Name	DBH (cm) ~ approximate	Crown Spread (diameter in metres)	CRZ (radius in metres)	Relative Tolerance (good, moderate, poor)	Health	Structure	Remarks and Recommendations	Bylaw Protected	Retention Status	Impacts
NT14	Austrian Pine	<i>Pinus nigra</i>	~35	9	3.5	Good	Fair	Good	Assymetric crown.	Yes (if estimate is correct)	Retain	
NT15	Garry Oak	<i>Quercus garryana</i>	~60	15	6.0	Good	Good	Fair	May be municipal or co-owned. Codominant leaders with included bark. Barrier fencing due to development on neighbouring property.	Yes	Retain	



PROJECT
Rental Housing

ADDRESS
1693 Fort St.
Victoria BC

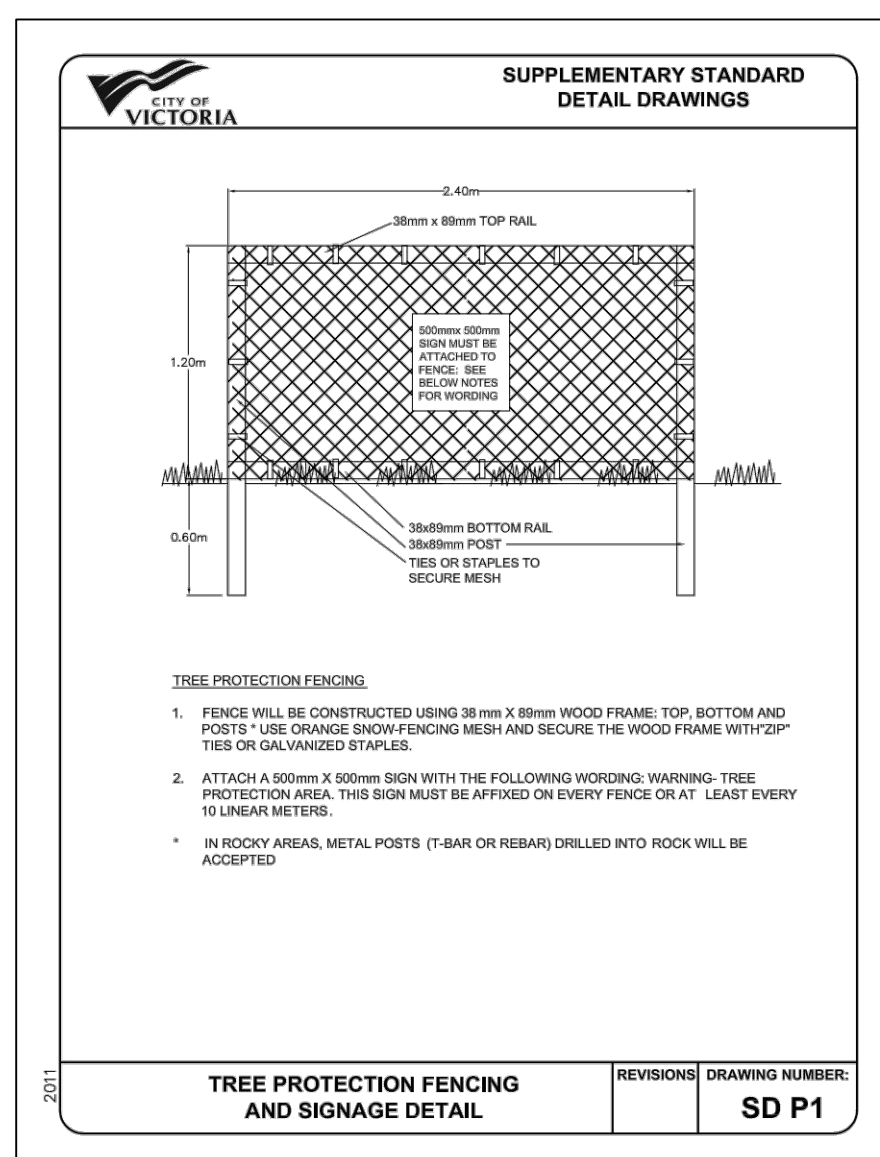
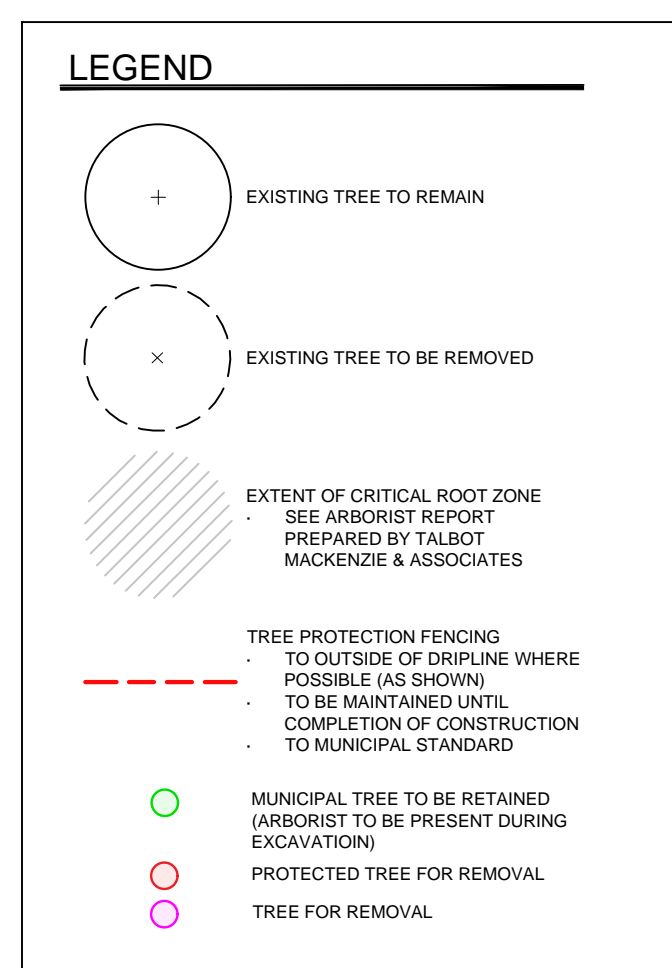
Bianca Bodley

KH

1	ISSUED FOR RE-ZONING AND DEVELOPMENT PERMIT	2021-01-2
2	ISSUED FOR RE-ZONING AND DEVELOPMENT PERMIT	2021-11-0

TREE IMPACT SUMMARY TABLE					
TREE STATUS	TOTAL	To be RETAINED	To be REMOVED	REPLACEMENTS REQUIRED	To be PLANTED
ON-SITE TREES BYLAW PROTECTED	5		5	10	8
ON-SITE TREES, NOT BYLAW PROTECTED	2		2		
MUNICIPAL TREES	1	1		0	4
NEIGHBORING TREES, BYLAW PROTECTED	4	4			
NEIGHBORING TREES, NOT BYLAW PROTECTED	3	3			
TOTAL	15	8	7	10	12

REPLACEMENT TREES REQUIRED	10
REPLACEMENT TREES PROPOSED	8
REPLACEMENT TREE SHORTFALL	2



Inventory date: September 9, 2020

Tree Resource Spreadsheet - 1693 Fort Street

Page 1 of 2

Tree ID	Common Name	Latin Name	DBH (cm) ± approximate	Crown Spread (diameter in metres)	CRZ (m) ± (a) (m)	Relative Value (good, moderate, poor)	Health	Structure	Remarks and Recommendations	Bylaw Protected	Retention Status	Impacts
NT1	Cherry	<i>Prunus</i> spp.	73 below union	10.0	9.0	Moderate	Fair	Fair-poor	Municipal tree. Decay in most pruning wounds.	Yes (municipal)	Retain*	Water services, sidewalk
NT2	Lawson Cypress	<i>Chamaecyparis lawsonia</i>	47 (25 + 60% of 20, 16)	3.0	7.0	Poor	Good	Fair	Close proximity to building foundation. Sheared and topped.	Yes (by multi- stem calculation)	X	Within building footprint
NT3	Lawson Cypress	<i>Chamaecyparis lawsonia</i>	27.0	3.0	4.0	Poor	Good	Fair	Close proximity to building foundation. Sheared and topped.	No	X	Within sidewalk footprint
NT4	Elm	<i>Ulmus</i> spp.	33.0	6.0	4.0	Moderate	Fair	Fair	Leaf minor cosmetic damage. Surface roots. Appears to be 3 more in the row that were removed to the west.	Yes	X	Conflict with foundation, sidewalk
NT5	Elm	<i>Ulmus</i> spp.	34.0	7.0	4.0	Moderate	Fair	Fair	Topped previously. Leaf minor cosmetic damage. Surface roots. Appears to have been 3 more in the row that were removed (to the west).	Yes	X	Conflict with foundation, sidewalk
NT6	Elm	<i>Ulmus</i> spp.	33.0	5.0	4.0	Moderate	Fair	Fair	Leaf minor cosmetic damage. Surface roots. Appears to have been 3 more in the row that were removed (to the west).	Yes	X	Conflict with foundation, sidewalk
NT7	Elm	<i>Ulmus</i> spp.	43.0	8.0	5.0	Moderate	Fair	Fair	Leaf minor cosmetic damage. Surface roots. Appears to have been 3 more in the row that were removed (to the west).	Yes	X	Conflict with foundation, sidewalk, and parking lot
NT8	Crabapple	<i>Malus</i> spp.	-20	4.0	2.0	Good	Fair	Fair	Clearance pruned. Neighbour's trees. Ivy covered.	No	Retain	Parking lot
NT9	Crabapple	<i>Malus</i> spp.	-20	3	2.0	Good	Fair	Fair	Clearance pruned. Neighbour's trees. Ivy covered.	No	Retain	Parking lot
NT10	Crabapple	<i>Malus</i> spp.	-20	3	2.0	Good	Fair	Fair	Clearance pruned. Neighbour's trees. Ivy covered.	No	Retain	Parking lot
NT11	Beech (purple)	<i>Fagus sylvatica</i>	23	4	3.5	Poor	Good	Good	Close proximity to carport foundation. Some clearance pruning previously.	No	X	Within parking lot footprint
NT12	Austrian Pine	<i>Pinus nigra</i>	-30	7.0	3.0	Good	Fair	Good	Asymmetric crown. Elevated from subject property 45cm, protected by retaining wall. Barrier fencing due to development on neighbouring property.	Yes (if estimate is correct)	Retain	Driveway widening/res urfacing
NT13	Austrian Pine	<i>Pinus nigra</i>	-40	8	4.0	Good	Fair	Fair-poor	Codominant leaders with included bark, swelling from reaction wood. Asymmetric crown	Yes (if estimate is correct)	Retain	Driveway widening/res urfacing
Tree ID	Common Name	Latin Name	DBH (cm) ± approximate	Crown Spread (diameter in metres)	CRZ (m) ± (a) (m)	Relative Value (good, moderate, poor)	Health	Structure	Remarks and Recommendations	Bylaw Protected	Retention Status	Impacts
NT14	Austrian Pine	<i>Pinus nigra</i>	-35	9	3.5	Good	Fair	Good	Asymmetric crown.	Yes (if estimate is correct)	Retain	Driveway widening/res urfacing
NT15	Garry Oak	<i>Quercus garryana</i>	-60	15	6.0	Good	Good	Fair	May be municipal or co-owned. Codominant leaders with included bark. Barrier fencing due to development on neighbouring property.	Yes	Retain	Driveway widening/res urfacing

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email: tmtreehelp@gmail.com

RE-ISSUED FOR
REZONING AND
DEVELOPMENT PERMIT
MARCH 10, 2021

Scale: 1:100



LO Tree Removal & Protection Plan

CLIENT NAME
ARYZE Developments

PROJECT
Rental Housing

ADDRESS
1693 Fort St.
Victoria BC

DESIGNED BY

Bianca Bodley

DRAWN BY

KH

REVISIONS:

1 ISSUED FOR RE-ZONING AND DEVELOPMENT PERMIT 2021-01-25
2 ISSUED FOR RE-ZONING AND DEVELOPMENT PERMIT 2021-11-03

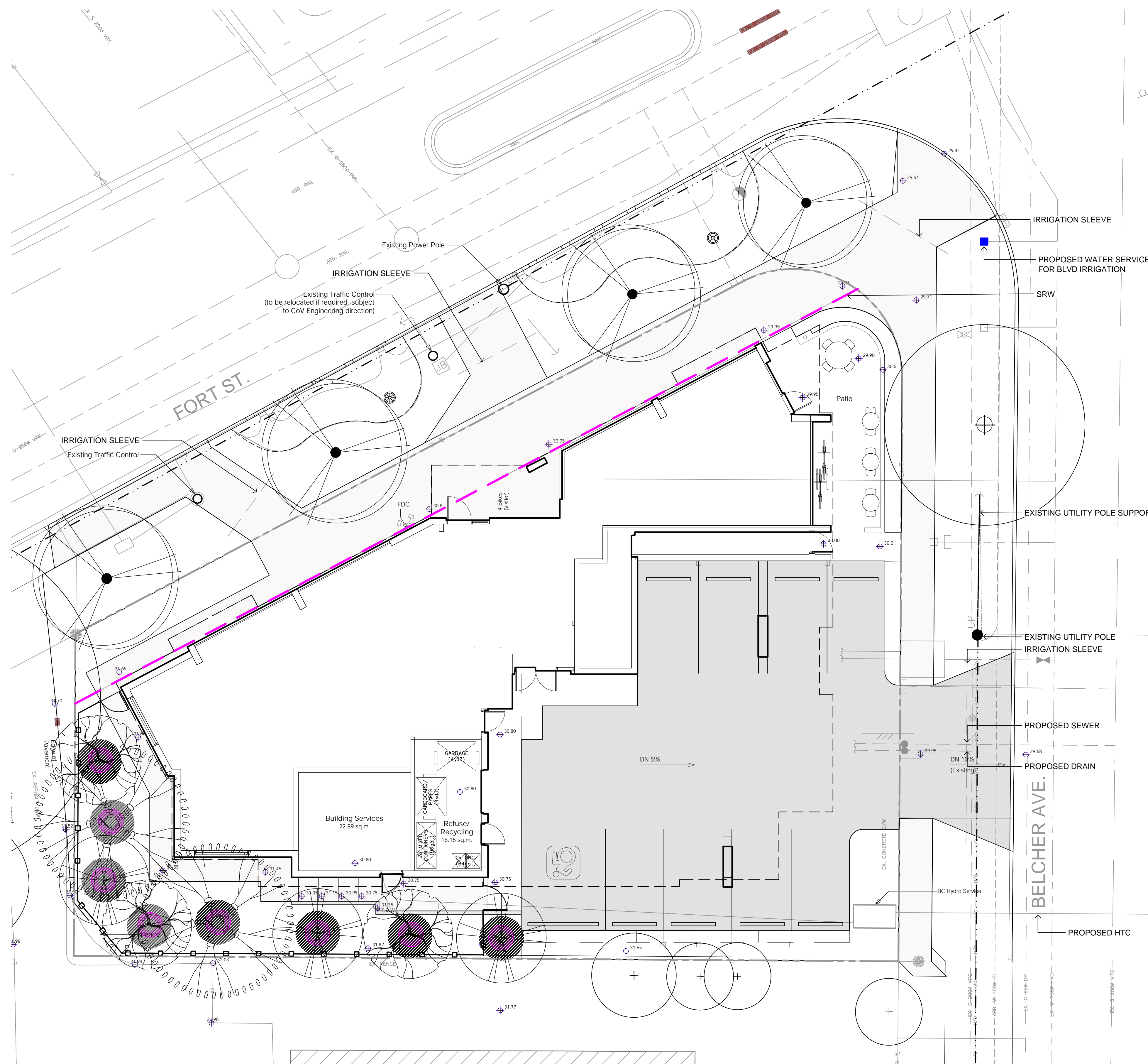
RE-ISSUED FOR
REZONING AND
DEVELOPMENT PERMIT
MARCH 10, 2021

Scale: 1:100



L1 Landscape Site Plan





LEGEND

REPLACEMENT TREE

TREE PLANTING RESTRICTIONS

OVERHEAD POWER LINE

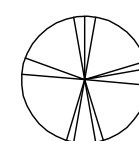
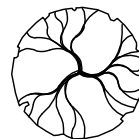
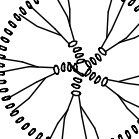
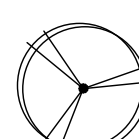
5.0 m OFFSET FROM HYDRO OR LIGHT POLE

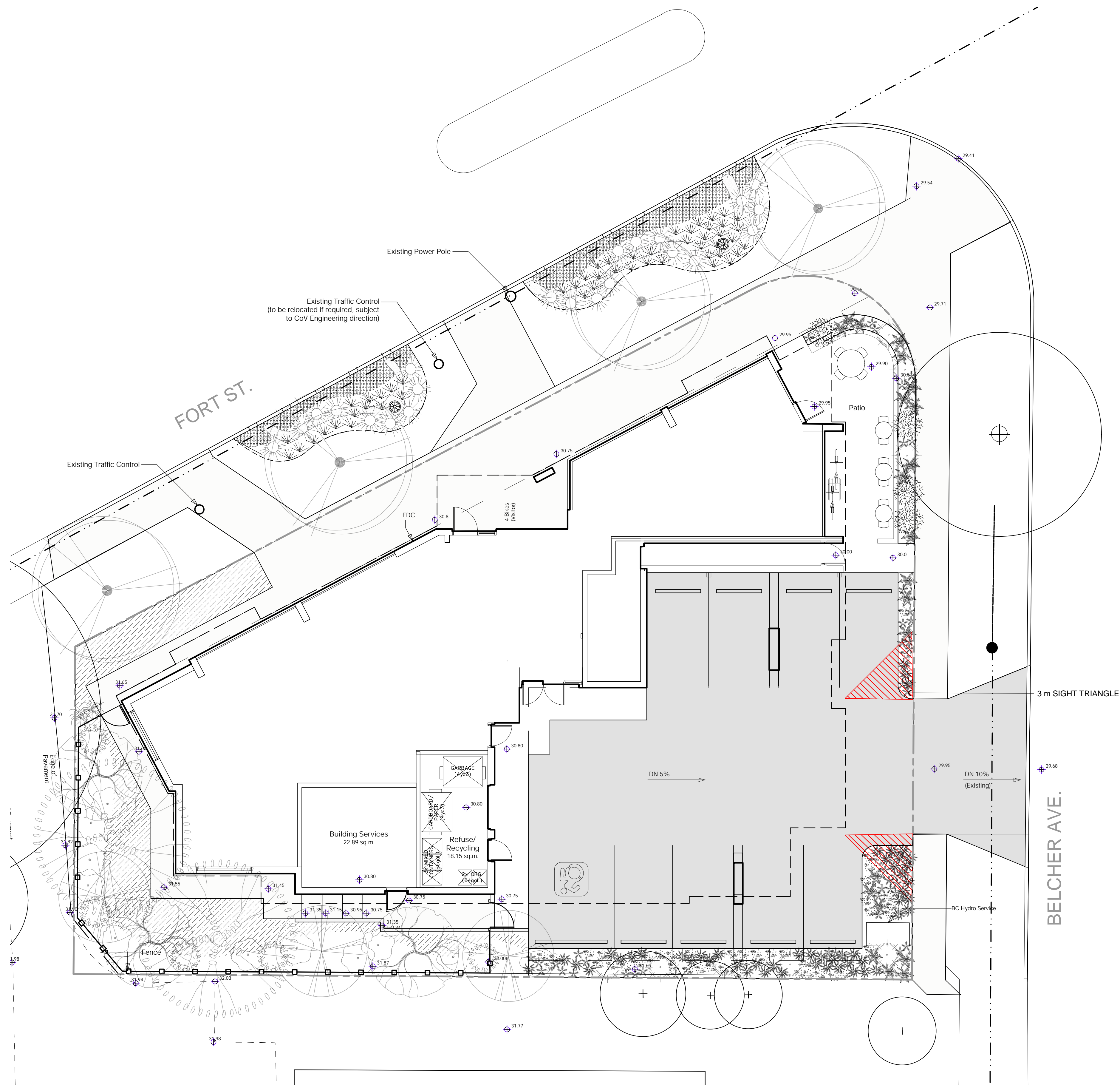
1.0 m OFFSET FROM PAVING & UTILITIES

EXISTING TREE TO REMAIN

TREE IMPACT SUMMARY TABLE					
TREE STATUS	TOTAL	To be RETAINED	To be REMOVED	REPLACEMENTS REQUIRED	To be PLANTED
ON-SITE TREES BYLAW PROTECTED	5		5	10	8
ON-SITE TREES, NOT BYLAW PROTECTED	2		2		
MUNICIPAL TREES	1	1		0	4
NEIGHBORING TREES, BYLAW PROTECTED	4	4			
NEIGHBORING TREES, NOT BYLAW PROTECTED	3	3			
TOTAL	15	8	7	10	12

REPLACEMENT TREES REQUIRED	10
REPLACEMENT TREES PROPOSED	8
REPLACEMENT TREE SHORTFALL	2

TREE SCHEDULE						
Quantity	Symbol	Latin Name	Common Name	Container	Caliper	Native
3		Acer circinatum	Vine maple	B&B	4cm	yes
3		Cornus 'Eddies White Wonder'	Eddie's White Wonder Flowering Dogwood	B&B	4cm	yes
2		Quercus garryana	Garry oak	B&B	4 cm	yes
MUNICIPAL						
4		BOULEVARD TREE TO BE DETERMINED BY PARKS AT BP		B&B	4cm	



Project Information Table		
Zone (existing)	R3-2	
Proposed zone or site specific zone	Site Specific	
Site area (m2)	896	
Total floor area (m2)	2456.70	
Commercial floor area (m2)	77.26	
Floor space ratio	2.74	
Site Coverage (%)	61.15%	
Open site space (%)	30.54%	
Height of building (m)	19.72	
Number of storeys	6	
Parking stalls (number) on site	9	
Bicycle parking number (Class 1 & 2)	Class 1 = 63 Class 2 = 6	
Building Setbacks (m)		
Front yard	0.771	
Rear yard	3.36	
Side yard (Flanking Street)	3.025	
Side yard (Interior)	1.815	
Combined side yards	4.84	
Residential Use Details		
Total number of units	34	
Unit type, e.g., 1 bedroom	Studio, 1-Bdrm and 2-Bdrm	
Ground-oriented units	None	
Minimum unit floor area (m2)	35.44	
Total residential floor area (m2)	2379.44	

SCHEDULE C PARKING CALCULATIONS					
Vehicle Parking Calculations (Per Unit)					
Unit Area	Pkg Rate	Qty	LT	ST	
< 45 sq.m.	0.2	12	2.4	1.2	
45 sq.m. to 70 sq.m.	0.5	17	8.5	1.7	
> 70 sq.m.	0.75	5	3.75	0.5	
Totals			14.65	3.4	
Vehicle Parking Calculations (Commercial)					
Use	Pkg Rate	Area	ST		
Restaurant	1 per 40 sq.m.	77.3 sq.m.	1.9		
Totals			1.9		
Bicycle Parking Calculations (Residential)					
Unit Area	Pkg Rate	Qty	LT	ST	
< 45 sq.m.	1.0	12	12	1.2	
> 45 sq.m.	1.25	22	27.5	2.2	
Totals			39.5	3.4	
Bicycle Parking Calculations (Commercial)					
Stall Type	Pkg Rate	Qty	LT	ST	
Long Term	1 per 400 sq.m.	77.4	0.19		
Short Term	1 per 100 sq.m.	77.4		0.8	
Totals			0.19	0.8	

34 Affordable Rentals + CRU - Urban Village



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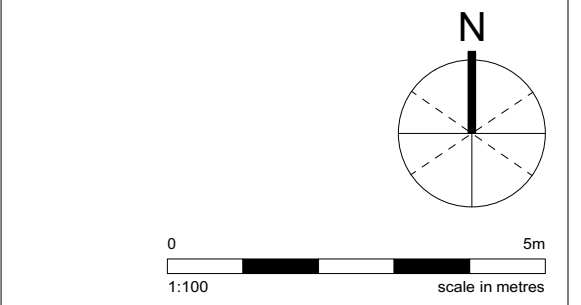
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 - Refer to landscape architectural drawings for paving and plant materials information.

5		
4		
3		
2		
1		
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rev no	description	date
5	Rezoning and DP	22/03/14
4	Rezoning and DP	21/11/03
3	Rezoning and DP	21/05/11
2	Rezoning and DP	21/04/29
1	Rezoning and DP	21/01/22
0	Rezoning and DP	20/11/18
project name		
Rental Housing		
1693 Fort Street		
sheet title		
Site Plan / L1 Floorplan		
project no.		
20-17		
drawing file		
20-17 1693 Fort Street CURRENT.vwx		
date issued		
March 14, 2022		
scale		
As Noted		
drawn by		
MZ		
checked by		
ES		
revision no.		sheet no.
5		A2.0

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NOTES:

1. General information, dimensions & specifications on these drawings are subject to confirmation and are not to be used as part of construction contract documentation.



5	Rezoning and DP	22/03/14
4	Rezoning and DP	21/11/03
3	Rezoning and DP	21/05/11
2	Rezoning and DP	21/04/29
1	Rezoning and DP	21/01/22
0	Rezoning and DP	20/11/18

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project name
Rental Housing

1693 Fort Street

sheet title
L2 & L3 Floorplans

project no. 20-17

drawing file 20-17 1693 Fort Street CURRENT.vwx

date issued March 14, 2022

scale As Noted

drawn by MZ

checked by ES

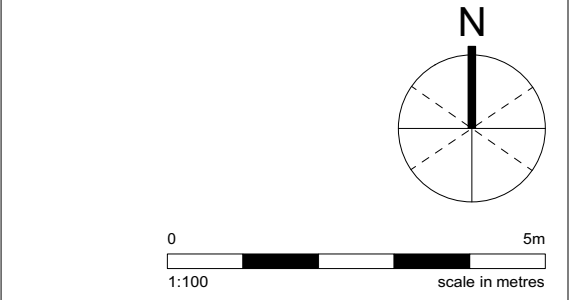
revision no. sheet no.

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- NOTES:
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 - Units 403 and 506 conform to BCBC 2018 adaptable design requirements.



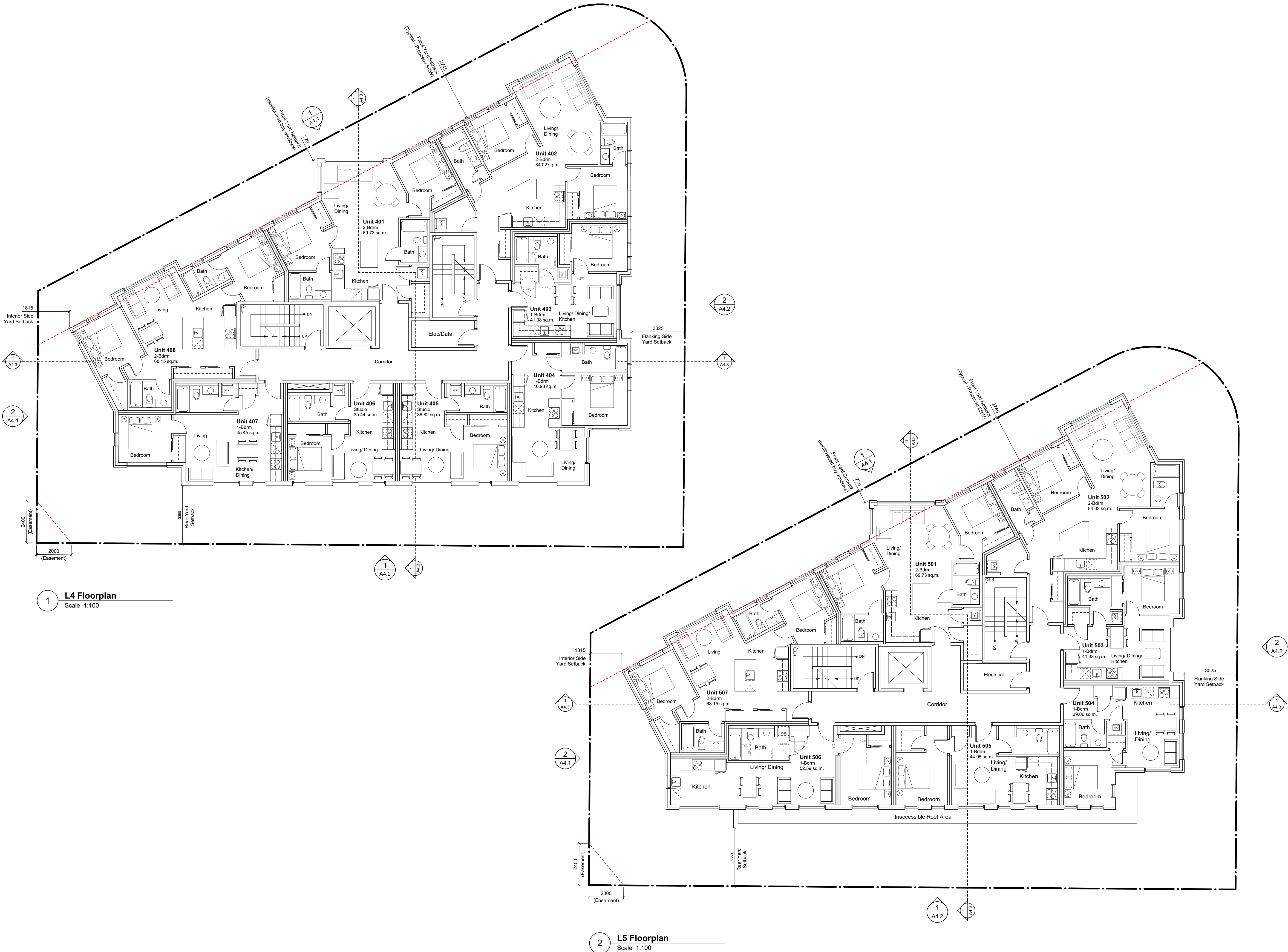
5	Rezoning and DP	22/03/14
4	Rezoning and DP	21/11/03
3	Rezoning and DP	21/05/11
2	Rezoning and DP	21/04/29
1	Rezoning and DP	21/01/22
0	Rezoning and DP	20/11/18

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project name
Rental Housing
1693 Fort Street
sheet title
L4 & L5 Floorplans

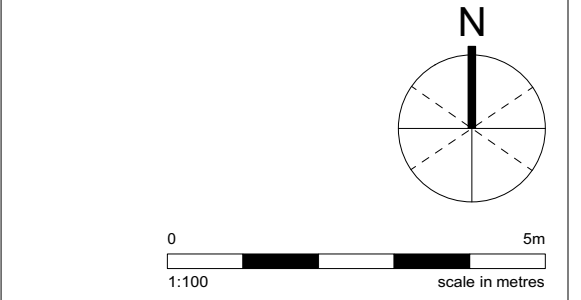
project no.	20-17
drawing file	20-17 1693 Fort Street CURRENT.vwx
date issued	March 14, 2022
scale	As Noted
drawn by	MZ
checked by	ES
revision no.	sheet no.

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A2.2



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- NOTES:
- General information, dimensions & specifications on these drawings are subject to confirmation and are not to be used as part of construction contract documentation.
 - Refer to landscape architectural drawings for paving and plant materials information.
 - Soffit-mounted exterior artwork subject to approval by the Director of Planning.
 - Unit 601 conforms to BCBC 2018 adaptable design requirements.



rev no	description	date
5	Rezoning and DP	22/03/14
4	Rezoning and DP	21/11/03
3	Rezoning and DP	21/05/11
2	Rezoning and DP	21/04/29
1	Rezoning and DP	21/01/22
0	Rezoning and DP	20/11/18

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project name
Rental Housing
1693 Fort Street

sheet title
L6 & Roof Floorplans

project no.	20-17
drawing file	20-17 1693 Fort Street CURRENT.vwx
date issued	March 14, 2022
scale	As Noted
drawn by	MZ
checked by	ES
revision no.	sheet no.

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A2.3





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Consulting Arborists

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Ph: (250) 479-8733

Fax: (250) 479-7050

Email: tmtreehelp@gmail.com

Tree Resource Spreadsheet Methodology and Definitions

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

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

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

* Measured over ivy

~ Approximate due to inaccessibility or on neighbouring property

Crown Spread: Indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

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

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

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

To calculate the critical root zone, the DBH of multiple stems is considered the sum of 100% of the diameter of the largest stem and 60% of the diameter of the next two largest stems. It should be noted that these measures are solely mathematical calculations that do not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean).

Health Condition:

- Poor - significant signs of visible stress and/or decline that threaten the long-term survival of the specimen
- Fair - signs of stress
- Good - no visible signs of significant stress and/or only minor aesthetic issues

Structural Condition:

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

Retention Status:

- X - Not possible to retain given proposed construction plans
- Retain - It is possible to retain this tree in the long-term given the proposed plans and information available. This is assuming our **recommended mitigation measures are followed**
- Retain * - See report for more information regarding potential impacts
- TBD (To Be Determined) - The impacts on the tree could be significant. However, in the absence of exploratory excavations and in an effort to retain as many trees as possible, we recommend that the final determination be made by the supervising project arborist at the time of excavation. The tree might be possible to retain depending on the location of roots and the resulting impacts, but concerned parties should be aware that the tree may require removal.
- NS - Not suitable to retain due to health or structural concerns