

### 1221 Blanshard Street—Victoria, BC

## Construction Impact Assessment & Tree Management Plan

PREPARED FOR: Jon Floyd

C/O Jawl Properties Ltd. 200 – 1515 Douglas Street Victoria, BC V8W 2G4

PREPARED BY: Talbot, Mackenzie & Associates

Robert McRae – Consulting Arborist

ISA Certified # PN-7125A

Tree Risk Assessment Qualified

DATE OF ISSUANCE: July 22, 2021

#### **CONTENTS**

		ODUCTION	
2.	TREE	INVENTORY METHODOLOGY	1
		UTIVE SUMMARY	
4.	TREE	INVENTORY DEFINITIONS	2
5.	SITE	INFORMATION & PROJECT UNDERSTANDING	5
6.	FIELD	OBSERVATIONS	5
		RISK ASSESSMENT	
		STRUCTION IMPACT ASSESSMENT	
	8.1.	Retention and Removal of Municipal Trees.	6
	8.2.	Tree impact summary table	6
9.	DISCI	LOSURE STATEMENT	7
10.	IN CL	OSING	7
		RENCES	
Тав			
Tabl	e 1. Tre	e Inventory	4

#### **APPENDICES**

Appendix A Tree Management Plan

Appendix B Tree Replacement Plan

Appendix C Tree Preservation Summary

Appendix D Site Photographs

#### **REVISION RECORD**

REVISION	DESCRIPTION	DATE (YYYY-MM-DD)	ISSUED BY
0	Tree Resource Review	2020-07-09	TT
1	Construction Impact Assessment and Tree Management Plan	2021-07-22	RM

#### 1. INTRODUCTION

Talbot Mackenzie & Associates was asked to complete a tree inventory, construction impact assessment and management plan for the trees at the following proposed project:

Site: 1221 Blanshard Street

Municipality City of Victoria

Client Name: Jawl Properties

Dates of Site Visit(s): June 8, 2020; July 22, 2021

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

Weather During Site Visit: Clear and sunny

The purpose of this report is to address requirements of the City of Victoria arborist report terms of reference, and Tree Preservation Bylaw No. 21-035. The construction impact assessment section of this report (section 8), is based on plans reviewed to date, including the Landscape Plan (by HAPA Collaborative).

#### 2. TREE INVENTORY METHODOLOGY

For the purpose of this report, the size, health, and structural condition of trees were documented. Trees located on neighbouring properties, the municipal frontage or in areas where access was restricted, were not tagged. Each tree was visually examined on a limited visual assessment basis (level 1), in accordance with Tree Risk Assessment Qualification (TRAQ) methods (Dunster *et al.* 2017) and ISA Best Management Practices.

#### 3. EXECUTIVE SUMMARY

Based on review of the landscape site plan and our understanding of the project scope, 5 municipal trees are located where they required removal to facilitate demolition of the existing building, construction of the new multistorey complex, with proposed rain gardens and hardscape on the municipal frontages. All the documented trees had structural defects or health concerns that will shorten their anticipated functional lifespan within the urban setting and streetscape, as identified in our July 9, 2020 Tree Resource Review. During our July 22, 2021 site visit, we also observed recent mechanical damage to Lindsay Plum #9674.

Based on bylaw criteria, 13 trees are required for planting to meet the 13 tree minimum on a lot of this size (2,678m²). The Landscape Plan provided by HAPA Collective shows conceptual locations for 18 onsite replacement trees to exceed the required 13 for the property. The project arborist shall be retained to perform the first inspection of replacements planted.

#### 4. TREE INVENTORY 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

**Dripline:** Indicates the radius 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

Suitability ratings are described as follows:

#### Rating: Suitable.

A tree with no visible or minor health or structural defects, is tolerant to changes to the growing
environment and is a possible candidate for retention provided that the critical root zone can be
adequately protected.

#### Rating: Conditional.

A tree with good health but is a species with a poor tolerance to changes to its growing environment or
has a structural defect(s) that would require that certain measures be implemented, in order to consider it
suitable for retention (ie. retain with other codominant tree(s), structural pruning, mulching, supplementary
watering, etc.)

#### Rating: Unsuitable.

 A tree with poor health, a major structural defect (that cannot be mitigated using ANSI A300 standards), or a species with a poor tolerance to construction impacts, and unlikely to survive long term (in the context of the proposed land use changes).

#### **Retention Status:**

- Remove 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

aw	Name				=	Condition		Retention			
(ON)	Common	Botanical	dbh (cm)	critical root zone radius (m)	Dripline diameter (m)	Health	Structural	Sultability (onsite trees)	Relative tolerance	General field observations/remarks	Tree retention/location comments
cipal	Honey Locust	Gleditsia triacanthos	19	1.9	10	Fair	Good		Good	4 metres from building wall. In grate.	Conflict with proposed rail gardens, hardscape, building construction
cipal	White birch	Betula papyrifera	20	2.4	7	Fair	Fair		Moderate	Dieback in canopy. Decay in stem wounds. 4 metres from building wall. In grate.	Conflict with proposed rail gardens, hardscape, building construction
cipal	Siberian elm	Ulmus pumila	74	7.4	41	Good	Fair		Good	5 metres from existing wall. Narrow main union. Oozing from union. Topped and reduced to control canopy size. In grate.	Conflict with proposed rail gardens, hardscape, building construction
cipal	Lindsay plum	Prunus cerasifera Lindsayiae'	52	6.2	<del>-</del>	Fair- poor	Fair		Moderate	Stem removed at weak union, decay in wound. Stem over street in decline. Active reaction wood on trunk. 2 metres from existing wall. Dead limbs recently removed.	Conflict with proposed rain gardens, hardscape, building construction
cipal	Lindsay plum	Prunus cerasifera Lindsayiae'	52	6.2	5	Fair- poor	Fair		Moderate	Limb breakage and stem scaring on street side. Declining health. 2 metres from existing wall. Heavy stem weight toward Blanshard.	Conflict with proposed rail gardens, hardscape, building construction

#### 5. SITE INFORMATION & PROJECT UNDERSTANDING

The development site consists of one multi-unit commercial lot (1221 Blanshard Street), in Victoria, B.C. It is our understanding that the proposal is to remove the existing building and construct a new 4-level complex with green roof and landscape developments to the municipal frontages.

Below is a general observation of the tree resource, as it appeared at the time of our site visit:

#### 6. FIELD OBSERVATIONS

The offsite municipal tree resource consists of a mixture of nonnative tree species growing in grates (surrounded by hardscape) around the perimeter of the subject property (see *figure 1*). Red highlighted areas and dots within indicate the areas and specific locations where the trees grow.

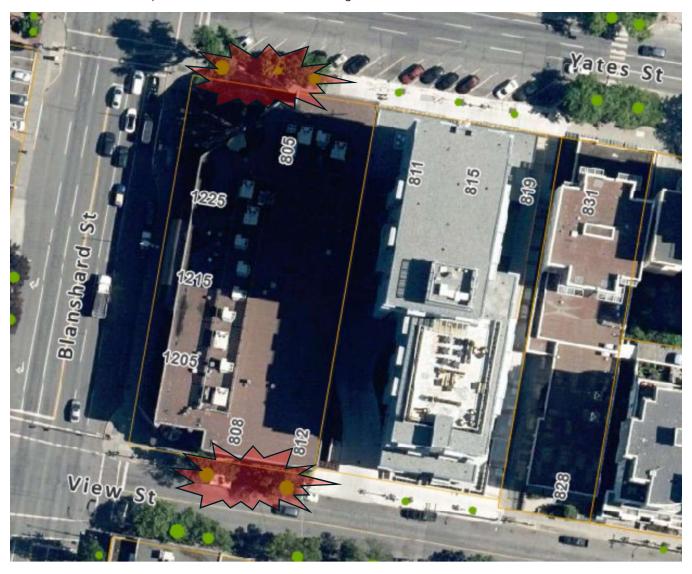


figure 1: Site context air photo: The approximate boundary of the subject site is outlined in Yellow.

#### 7. TREE RISK ASSESSMENT

During our July 22, 2021 site visit and in conjunction with the tree inventory completed in June 2020, onsite trees were assessed for risk, on a limited visual assessment basis (level 1), and in the context of the existing land uses. The time frame used for the purpose of our assessment is one year (from the date of the tree inventory update). Unless otherwise noted herein, we did not conduct a detailed (level 2) or advanced (level 3) risk assessment, such as resistograph testing, increment core sampling, aerial examinations, or subsurface root/root collar examinations.

#### **Existing Land Uses**

We did not observe any trees that were deemed to be moderate, high or extreme risk (in the context of the existing land uses, that would require hazard abatement to eliminate present and/or future risks (within a 1-year timeframe). Targets considered during this TRAQ assessment include: occupants of the existing building (constant use), occupants of vehicles travelling on Yates and View Street (frequent use), pedestrians travelling along existing sidewalks (frequent use), hydro lines (constant use).

#### 8. CONSTRUCTION IMPACT ASSESSMENT

#### 8.1. RETENTION AND REMOVAL OF MUNICIPAL TREES

The following municipal trees (indicated by city object ID#) are located where they will be impacted by proposed onsite construction and are proposed for removal (shown on the attached Tree Management Plan):

#### Remove 5 municipal trees

• 9670-9674

#### 8.2. TREE IMPACT SUMMARY TABLE

Pursuant to City of Victoria Tree Preservation Bylaw No. 21-035, the tree replacement calculations are as follows:

	Α	В	С	D	
Tree Status	Total # of Protected Trees	# Of Trees to be REMOVED	# Of NEW or REPLACEMENT Trees to be	# Of EXISTING non-protected Trees Counted as	NET CHANGE (A-B+C+D)
			Planted*	Replacements	
Onsite Trees	0	0	18	0	18
Private Offsite Trees	0	0	0	0	0
Municipal Trees	5	5	10 (excluded)	N/A	5 (excluded)
Total	5	5	18 (excluding municipal)	0	18 (excluding
					municipa)I

Based on bylaw criteria, 13 trees are required on-site for planting to meet the 13-tree minimum of a lot of this size (2,678m<sup>2</sup>). 18 trees are proposed—a surplus of 5.

#### 9. DISCLOSURE STATEMENT

This arboricultural field review report was prepared by Talbot Mackenzie & Associates for the exclusive use of the Client and may not be reproduced, used or relied upon, in whole or in part, by a party other than the Client without the prior written consent of Talbot Mackenzie & Associates. Any unauthorized use of this report, or any part hereof, by a third party, or any reliance on or decisions to be made based on it, are at the sole risk of such third parties. Talbot Mackenzie & Associates accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, in whole or in part.

Arborists are professionals who examine trees and use their training, knowledge, and experience to recommend techniques and procedures that will improve a tree's 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. The arborist's review is limited to a visual examination of tree health and structural condition, without excavation, probing, resistance drilling, increment coring, or aerial examination. There are inherent limitations to this type of investigation, including, without limitation, that some tree conditions will inadvertently go undetected. The arborist's review followed the standard of care expected of arborists undertaking similar work in British Columbia under similar conditions. No warranties, either express or implied, are made as to the services provided and included in this report.

The findings and opinions expressed in this report are based on the conditions that were observed on the noted date of the field review only. The Client recognizes that passage of time, natural occurrences, and direct or indirect human intervention at or near the trees may substantially alter discovered conditions and that Talbot Mackenzie & Associates cannot report on, or accurately predict, events that may change the condition of trees after the described investigation was completed.

It is not possible for an Arborist to identify every flaw or condition that could result in failure nor can he/she guarantee that the tree will remain healthy and free of risk. The only way to eliminate tree risk entirely is to remove the entire tree. All trees retained should be monitored on a regular basis. 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.

Immediately following land clearing, grade changes or severe weather events, all trees retained should be reviewed for any evidence of soil heaving, cracking, lifting or other indicators of root plate instability. If new information is discovered in the future during such events or other activities, Talbot Mackenzie & Associates should be requested to re-evaluate the conclusions of this report and to provide amendments as required prior to any reliance upon the information presented herein.

#### 10. IN CLOSING

We trust that this report meets your needs. Should there be any questions regarding the information within this report, please do not hesitate to contact the undersigned.

Yours truly,

Talbot Mackenzie & Associates

Prepared by:

Blubae

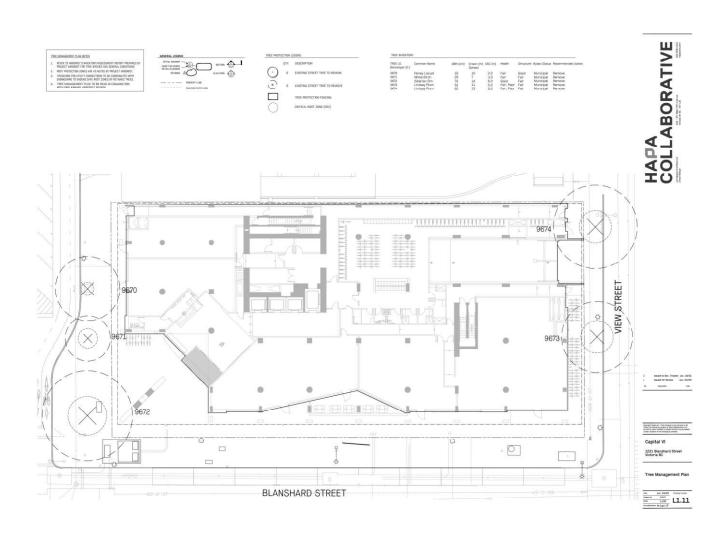
Robert McRae ISA Certified Arborist PN – 7125A Tree Risk Assessment Qualification Email: tmtreehelp@gmail.com

#### 11. REFERENCES

Dunster, J.A., E.T. Smiley, N. Matheny, and S. Lily. 2017. Tree Risk Assessment Manual, International Society of Arboriculture (ISA).

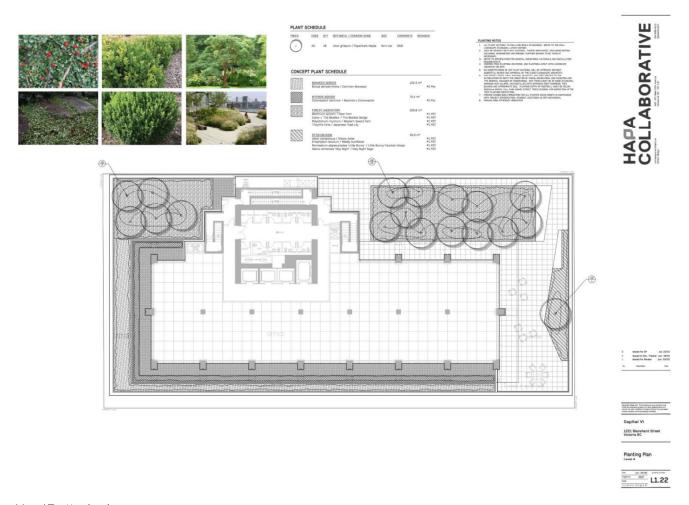
The City of Victoria Tree Preservation Bylaw No. 21-035.

#### APPENDIX A - TREE MANAGEMENT PLAN



--11 x 17 attached.

#### APPENDIX B - TREE REPLACEMENT PLAN



--11 x 17 attached.

		REPLACEM	ENT TREE LIST	
Plan Ref.	Quantity	Minimum Size	Botanical Name	Common Name
		18 Small Size	- BroadLeaf Trees	
AG	18	6cm cal	Acer griseum	Paperbark Maple

Current arboricultural best management practices and BCSLA/BCLNA standards apply to; quality, root ball, health, form, handling, planting, guying/staking and establishment care.

<sup>--</sup>Soil volume table next page.

				Repla	cement	Trees				
				l i	Propose	d	Soi	I Volume F	Required (n	n³)
Planting Area		Soil volume	A. Estimated	B. #	C.#	D. #				
ID	Area (m²)	multiplier	soil volume	Small	Medium	Large	E. Small	F. Medium	G. Large	Total
				Ons	site					
Planting Area 1	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m <sup>3</sup>	N/A	8m <sup>3</sup>
Planting Area 2	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m <sup>3</sup>	N/A	8m <sup>3</sup>
Planting Area 3	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m <sup>3</sup>	N/A	8m <sup>3</sup>
Planting Area 4	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m <sup>3</sup>	N/A	8m <sup>3</sup>
Planting Area 5	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m <sup>3</sup>	N/A	8m <sup>3</sup>
Planting Area 6	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 7	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 8	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 9	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 10	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m³
Planting Area 11	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m³
Planting Area 12	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 13	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 14	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m³
Planting Area 15	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m³
Planting Area 16	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 17	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
Planting Area 18	9m <sup>2</sup>	0.9m	8.1m <sup>3</sup>	0	1	0	N/A	8m³	N/A	8m <sup>3</sup>
			Offsite (	excludir	ng City pro	perty)				
Planting Area						, ,,				
OSA X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Cald	culation	Instructio	ns				
							If $B=1$ ,	If C=1,	If D=1,	
					Ca	lculation	Bx8	Cx20,	Dx35, If	E+F+G

#### APPENDIX C - TREE PRESERVATION SUMMARY

Tree Pro	eservation Summar	ν		
City of Victoria Project No: Unknown				
Address: 1221 Blanshard Street				
Arborist: Robert McRae				
Certifications/Qualifications: ISA Certified Arborist (F	PN-7125A), Tree Ris		t l	
	Count	Multiplier		Total
	replacement tree r	equirement		
A. Protected Trees Removed	0	X 1	A.	0
B. Replacement Trees Proposed per		X 1	В.	18
Schedule "E", Part 1	0	14.0.5		
C. Replacement Trees Proposed per		X 0.5	C.	0
Schedule "E", Part 2	0	V 4	_	
D. Replacement Trees Proposed per Schedule "E", Part 3	0	X 1	D.	0
E. Total replacement trees proposed (B+C+	•	learest whole number	E.	18
F. Onsite replacement tree deficit (A-E) Re			F.	0
	-		1.	
ONSITE Minimum tree	s per lot requireme	nt (onsite trees)		
G. Tree minimum on lot*			G.	13
H. Protected trees retained (other than		X 1	H.	0
specimen trees)	0			
I. Specimen trees retained	0	X 3	I.	0
J. Trees per lot deficit (G - (B+C+H+I) Reco	rd 0 if negative numb	per	J.	0
OFFSITE Minimum replac	ement tree require	ment (offsite trees)		
K. Protected trees Removed	0	X 1	K.	0
L. Replacement trees proposed per		X 1	L.	0
Schedule "E", Part 1 or Part 3	0	V 0 5	1.4	•
M. Replacement trees proposed from Schedule "E", Part 2	0	X 0.5	М.	0
N. Total replacement trees proposed (L+ M)	<u> </u>	arest whole number	N.	0
O. Offsite replacement tree deficit (K - N) Ro			О.	0
	in-lieu requirement			
P. Onsite trees proposed for cash-in-lieu Ennumber		ever is the greater	P.	0
Q. Offsite trees proposed for cash-in-lieu E	nter 0.		Q.	0
R. Cash-in-lieu proposed ((P+Q) X \$2,000)			R.	0
Summary prepared and submitted by: Date: July 20, 2021	?			

#### **APPENDIX D - SITE PHOTOGRAPHS**



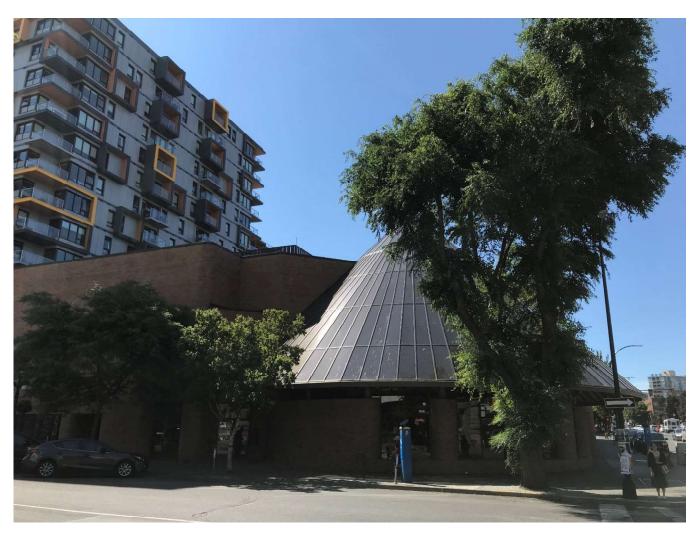
Photograph 1-3. Lindsay Plum 9674 (looking west, upper left) with recent mechanical damage (upper right), context with existing building and Lindsay Plum 9673 (below).



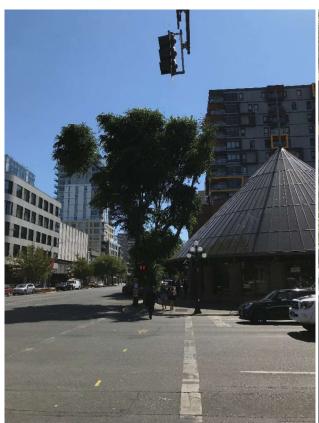




Photograph 4-6 – Lindsay Plum 4673 with structural defects as outlined in inventory.



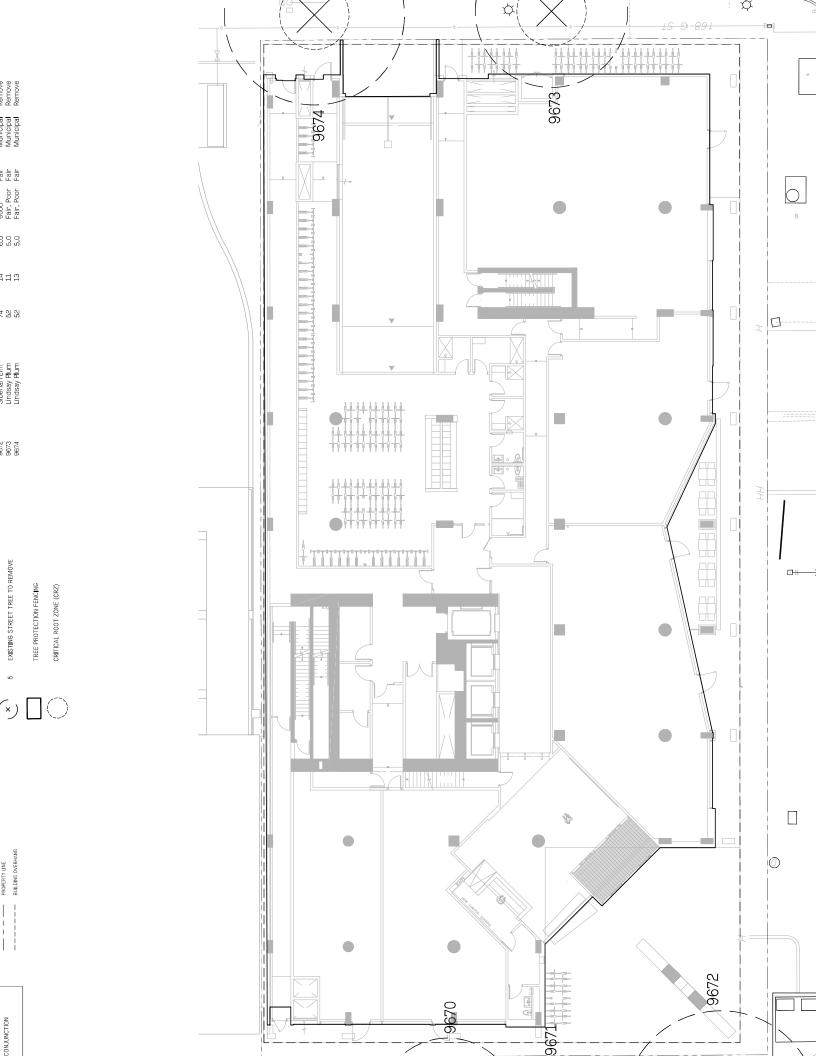
Photograph 7 – Trees 4670-4072 in context with existing building, looking south from Yates St.







Photograph 8-10 — Siberian Elm 4672 (upper left, note unorthodox pruning) looking east from Blanshard St., White Birch 4671 (upper right, note dieback in canopy) looking west from Yates St., Honey Locust 4670 (lower left) in relation to existing building, looking west from Yates St.



# CONCEPT PLANT SCHEDULE

























<u>DER</u> virens / Common Boxwood	126.5 m²	#5
ER ammen / Bearberry Cotoneaster	75.4 m²	#
STORY ant / Deer Fern anates / The Beatles Sarge / Japanese Tool Lily	359.8 m²	####
I Showy Aster Batun / Wody Sunfover poecunides Litte Burny Yuttle Burny Fountain Grass	45.6 m²	###

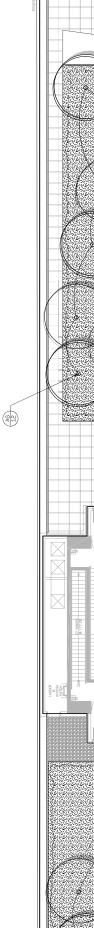


4. CONFIDENT FOR ADMINISTRED LOCATIONS, AND PLANTING LANGUT WITH LANDSCAPE
A ADCHIECT ON SITE.
A MOST ADMINISTRED AND ADMINISTRED LINE B. REPROFED WITH PLOT SUBMITTAL REPORTED WITH MITHOUS OF ANY MATERIAL WAN RESE PRESTS TO THE STREAM ANAMERED FOR LANDINISTRED WITH SUBMITTAL RESES MAY BE REPORTED TO THE GENERAL MANAMERED FOR THE PRESENCE RECORD MAY BE REPORTED WITH A PROPERTY BY AND RESENCE FOR FOR SUBMITTAL MANAGER FOR SUBMITTAL MAY BE ADMINISTRED MAY BE ADMINISTR









(SAG)

