Talbot Mackenzie & Associates
Consulting Arborists

137 Robertson St / 1848 Hollywood Crescent, Victoria

Construction Impact Assessment &

Tree Preservation Plan

Prepared For: Trevor Moat
247 St. Andrews Street
Victoria BC V8V 2N1

Prepared By: Talbot, Mackenzie & Associates
Michael Marcucci
ISA Certified # ON-1943A
TRAQ – Qualified

Date of Issuance: September 4, 2020
Revised: May 12, 2021
May 12, 2021

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Jobsite Property: 137 Robertson St, Victoria

Date of Site Visit(s): July 16, 2020

Site Conditions: No ongoing construction activity.

Summary:

- The proposal includes demolishing the existing house and constructing a duplex.
- 2 trees are listed as removals: #3 is a bylaw protected Douglas-fir and #4 is a small multi-stem Pyramidal Cedar tree (technically bylaw protected by size, as per the Parks department).
- We anticipate the Variegated Western Red Cedar (#2) in the front yard on Robertson St can be retained if the paved areas are constructed as per our recommendations.
- We recommend the storm and sanitary services be shifted to the south edge of the existing driveway from Hollywood Crescent, in order to minimize impacts to London Plane #5 (a municipal boulevard tree). This excavation should be completed under arborist supervision and less-invasive digging techniques may be recommended (e.g. a hydro-vac). Detailed engineering drawings were not available for assessment.

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 demolish the existing house and construct a duplex.
- 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. All trees with single stems measuring over 10cm in diameter at DBH were inventoried. No trees were tagged.
- 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 plans from Zebra Design (May 14, 2021).
- A Tree Protection Site Plan was created using the Landscape Plan provided.

Limitations:

- No exploratory excavations have been conducted. 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.

- No servicing plans have been completed by an engineer. Locations of proposed services are shown on the architectural site plans. In our experience, the municipal engineering department may decide on entirely different locations and tree impacts could change as a result. Locations on private property have not been determined.

- The location of hydro and telecommunication services is unknown; if they are installed underground, the least impact to trees would be connecting to a pole on Robertson St, as London Plane roots are likely to be encountered anywhere excavation takes place on the Hollywood Crescent frontage.

- Trees #1 and #8 have not been professionally surveyed.

Trees to be Removed

The following trees will require removal due to construction related impacts:

#3 Douglas-fir (31cm DBH) is bylaw protected and is located within the proposed parking space.

#4 Pyramidal Cedar (15, 13, 13, 13cm DBH) is located less than 1m from the proposed building.

Potential Impacts to Trees

#2 Variegated Cedar (43cm DBH)**:** The paved garbage disposal area is proposed 1.4m east of the centre of this bylaw protected tree and a permeable pathway is proposed 3m north. If these permeable paved areas can be raised above significant surface roots encountered and follow our "Paved Surfaces Above Tree Roots" recommendations, then the tree can be retained. The architect has confirmed that raising the grade of the pathway and garbage disposal area above existing grade is achievable while avoiding an unacceptable slope.

Clearance pruning and crown raising will be required on the east side of the tree over the garbage disposal area.

The patio retaining walls, foundation excavations and porch steps will account for potential root loss in an area less than 25% of the critical root zone; we anticipate the tree will recover. The project arborist should supervise these excavations.

#5 London Plane: According to the applicant, who has had discussions with the city engineering department, the proposed sanitary and storm services will be installed by city crews and can run along the south edge of the driveway adjacent to this tree. The existing site plan shows the proposed services closer to the tree (3.4m south from the centre of the tree). We recommend the services be installed as far south as possible and this be completed under the supervision of the project or municipal arborist, who may recommend less invasive digging techniques be used (e.g. a hydro-vac). The depth of the proposed services is not known to us; if they are deep and the resulting trench is wide, retention of roots will be difficult and health impacts are possible.

Removal of the existing driveway surface and any paving in the front yard within its CRZ should also be completed under arborist supervision and be completed towards the end of construction where possible. Excavation for the new pathway should be supervised as well.

#8 European Ash (16cm DBH) – This neighbour's tree is growing approximately 60cm from the property line. The existing house is 0.5m from the property line. The proposed below ground patio has been replaced with an above ground patio, almost 90cm from the property line, within what is now the existing building. The basement excavation is expected to be approximately 1.5m in depth at 2.65m from the property line (existing grade is 11.58, basement floor elevation is 10.20m) and therefore excavation should not extend beyond the existing house foundation adjacent to the tree. The project arborist should supervise the removal of the existing building and may recommend additional supervision or monitoring of the house foundation excavation depending on the roots observed.

Mitigation Measures

- **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:

    - Construction of pathways, stairs, foundation excavation, retaining walls and paved areas within the CRZ of Cedar #2
    - Installation of any underground services that cross the CRZs of trees to be retained, including the two London Planes along Hollywood Crescent.
    - Removal of existing paving within CRZs of London Planes and excavation for the new pathway within the CRZ of #5 London Plane
    - #7 Yew – Removal of pavement
    - #8 Ash – Removal of existing foundation and foundation excavation

- **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 (Pathways, sidewalks)**

  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.

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.

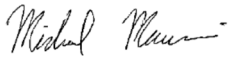
- **Landscaping and Irrigation Systems:** The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation 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.

- **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,



Michael Marcucci
ISA Certified # ON-1943A
TRAQ – Qualified
Talbot Mackenzie & Associates
ISA Certified Consulting Arborists

Attached:
1-page tree resource spreadsheet
1-page tree protection site plan
5-page architectural plans
1-page replacement tree plan
1-page existing survey
1-page paved surfaces specification
1-page barrier fencing specifications
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.

137 Robertson St / 1848 Hollywood Crescent, Victoria
Tree Resource Spreadsheet

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
1	Sweet Gum	*Liquidambar styraciflua*	7.0	2.0	~1.5	M	Fair/poor	Fair	Municipal boulevard tree ID# 19993. Recently planted	Municipal	Retain	
2	Variegated Western Red Cedar	*Thuja plicata* 'Zebrina'	43.0	7.0	6.5	P	Good	Good		Protected	Retain	Pathways, pedestrian clearance
3	Douglas-fir	*Pseudotsuga menziesii*	31.0	5.0	4.5	P	Good	Fair	Multiple tops. Possibly Douglas-fir cultivar	Protected	Removal	Within parking
4	Pyramidal Cedar	*Thuja occidentalis* 'Pyramidalis'	15, 13, 13, 13	1.5	~3	M	Good	Good	Beside entrance stairs	Protected	Removal	<1m from building
5	London Plane	*Platanus x acerifolia*	89.0	17.0	9.0	G	Fair	Fair	Municipal boulevard tree ID#: 19252. Pruned in V-shape due to hydro. Endweighted limbs.	Protected	Retain	SD, SS services
6	London Plane	*Platanus x acerifolia*	61.0	18.0	6.0	G	Fair	Fair/poor	Municipal boulevard tree ID# 19253. Pruned for hydro into V-shape.	Protected	Retain	
7	English Yew	*Taxus baccata*	19, 10, 10+*	4.0	3.0	G	Good	Good	DBH calculation dependent on where natural grade is: stem measurement is less if measured from on top of fill soil.	Possibly Protected	Retain	
8	European Ash	*Fraxinus excelsior*	16.0	4.0	2.0	M	Good	Fair	Neighbour's, ~60cm from PL. Rubbing against existing eavesdrough. Included bark	No	Retain	Foundation removal and excavation

Prepared by:
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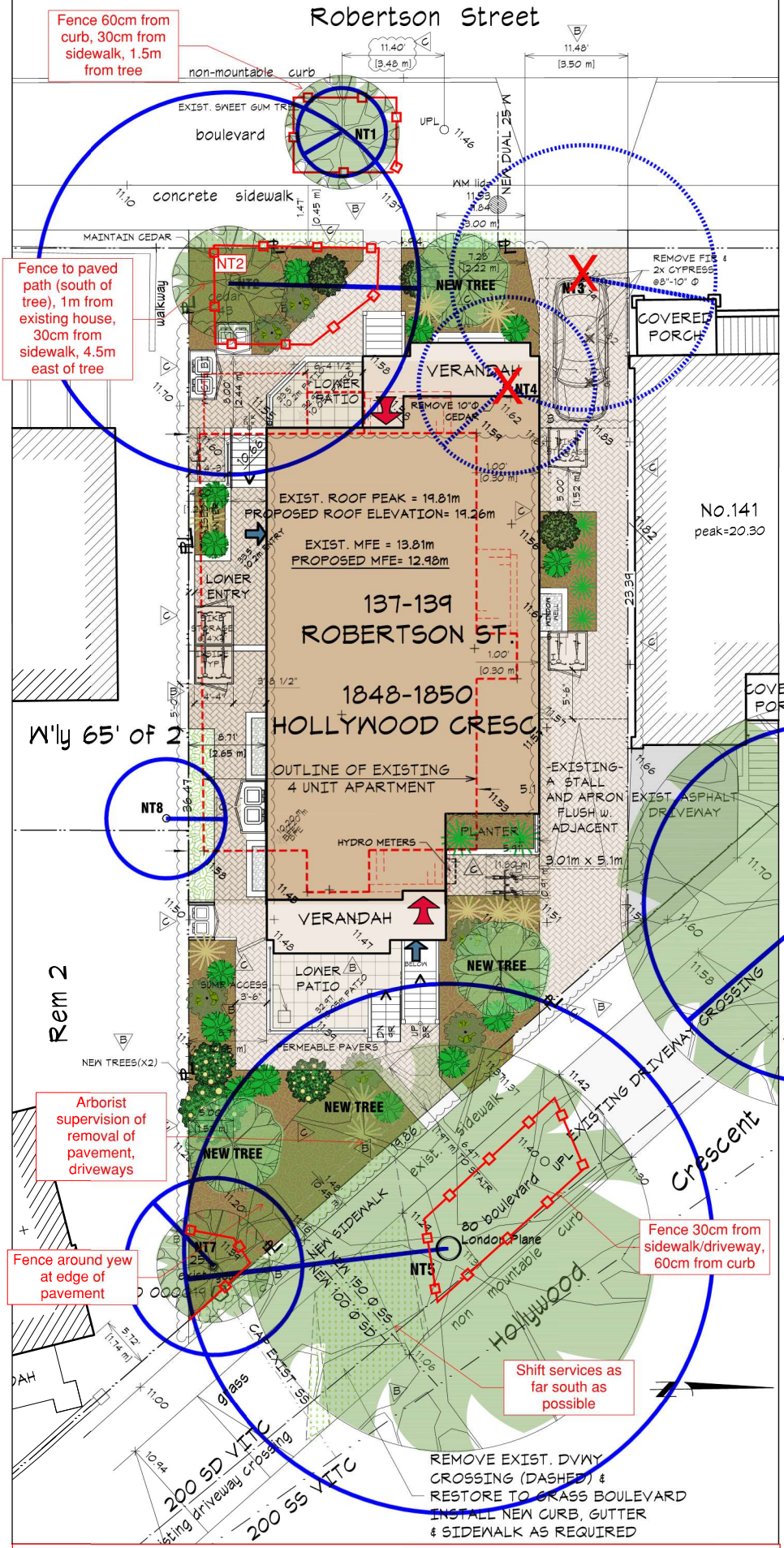

LANDSCAPE PLAN LEGEND

TREES/SHRUBS

SMALL SHRUBS

MEDIUM SHRUBS

GRASSES, FERNS

EXISTING TREE REMAINS

NEW TREE (X4)

PLANTS & GROUNDCOVER

PLANTING BEDS

HARD LANDSCAPING

12x12" CONC. PAVERS

4"x8" PERMEABLE PAVERS

FENCE

EGRESS

PRIMARY ENTRY

SECONDARY ENTRY

TREE DESIGNATIONS

NOT TAGGED - # REFER TO TPP — NT#

TREE REMOVAL — X

Critical Root Zones

Tree Protection Fence

Arborist Supervision

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- Removal of existing paving within CRZs of London Planes and excavation for the new pathway within the CRZ of #5
- #7 Yew Removal of pavement
- #8 Ash – Removal of existing foundation and foundation excavation

REVISIONS & ISSUES		
REV.	DESCRIPTION	DATE
A	SUBMITTAL FOR RE-ZONING	11.28.19
B	RE-SUBMITTAL FOR RE-ZONING	09.03.20
C	RE-SUBMITTAL FOR RE-ZONING	05.14.21

SK-4

1161 NEWPORT AVE
Victoria, B.C. V8S 5E6
(250) 360-2144
ZEBRADESIGN

Tree Protection Site Plan
137 Robertson St, 1848 Hollywood Crescent
Talbot Mackenzie & Associates
May 12, 2021

BC LAND SURVEYORS SITE PLAN OF:

Civic: 137 Robertson Street

Legal – Southerly 49 Feet of Lot 1, Block 2, Section 19, Victoria District, Plan 970

Parcel Identifier: 008–155–429 in the City of Victoria

Scale – 1 : 150 Distances are in metres.

0 2 5 10 15

The intended print size is 11" by 17".

LEGEND

Elevations are geodetic referred to Victoria Integrated Survey Monument 3-24A. (elev=12.476m)

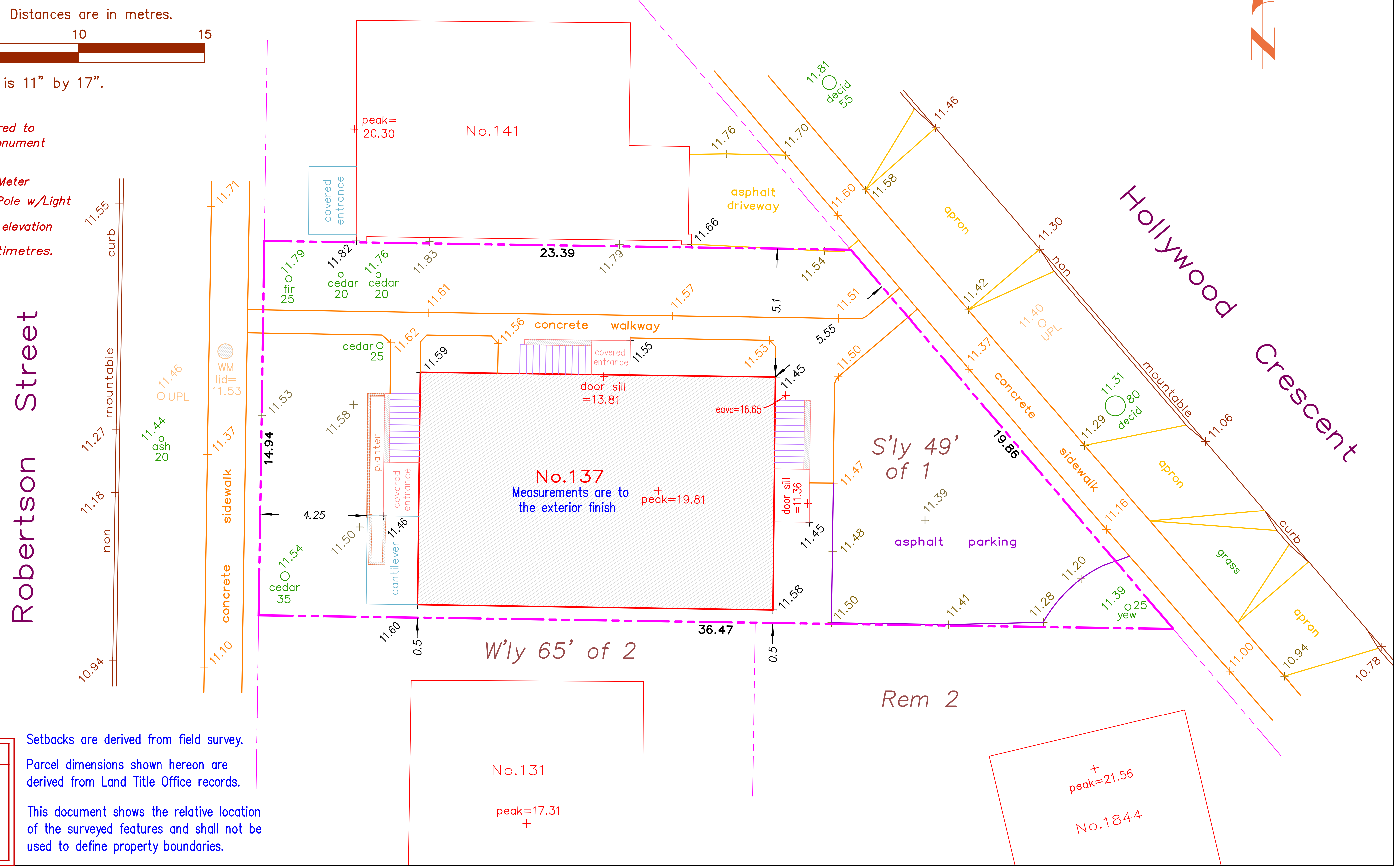
WM – denotes – Water Meter

UPL – denotes – Utility Pole w/Light

##.## + – denotes – existing elevation

Tree diameters are in centimetres.

Note – No lot posts were found in this block.
– Lot dimensions and building setbacks indicated are approxiamte subject to a full boundary survey.



July 14, 2015

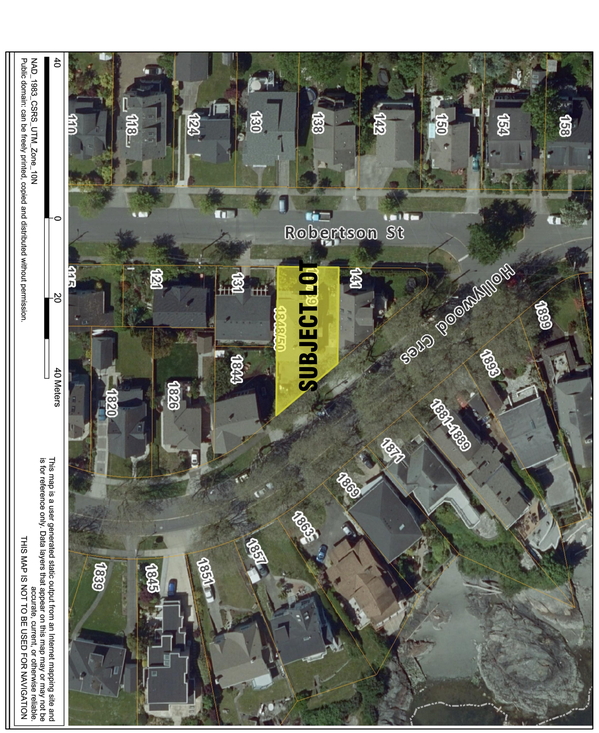
File : 12,106 – 3

POWELL & ASSOCIATES
B C Land Surveyors
250–2950 Douglas Street
Victoria, BC V8T 4N4
phone (250) 382–8855

Setbacks are derived from field survey.

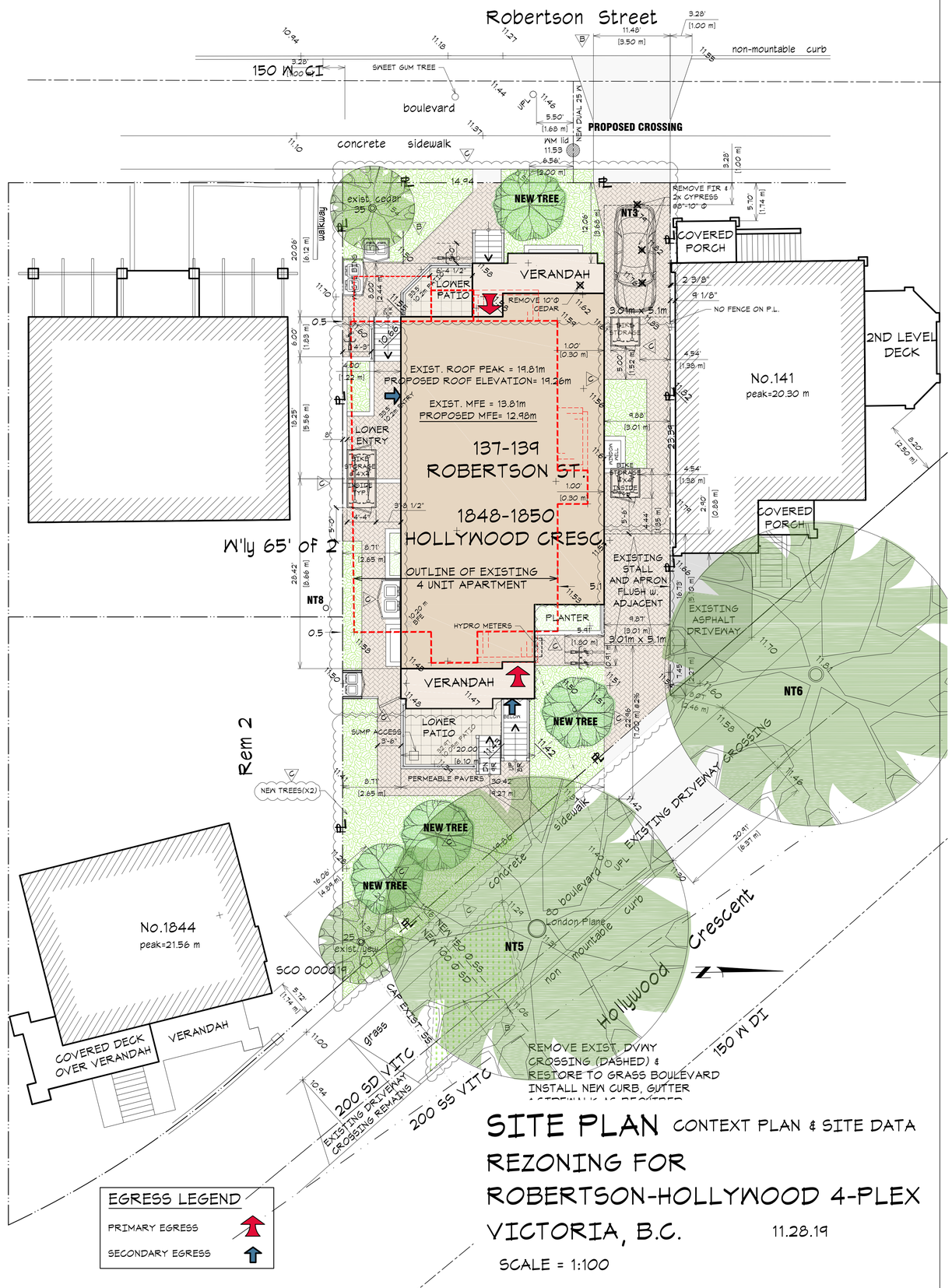
Parcel dimensions shown hereon are derived from Land Title Office records.

This document shows the relative location of the surveyed features and shall not be used to define property boundaries.



CONTEXTUAL AERIAL MAP

137-139 ROBERTSON ST. and 1848-1850 HOLLYWOOD CRESC.



EGRESS LEGEND

PRIMARY EGRESS

SECONDARY EGRESS

SITE PLAN CONTEXT PLAN & SITE DATA

REZONING FOR ROBERTSON-HOLLYWOOD 4-PLEX

VICTORIA, B.C. 11.28.19

SCALE = 1:100

PROJECT DATA

LEGAL DESCRIPTION
SOUTHERLY 49' OF LOT 1, BLOCK 2,SECTION 19, VICTORIA DISTRICT, PLAN 970

CURRENT STREET ADDRESS:
137-139 ROBERTSON AND 1848-1850 HOLLYWOOD CRESCENT

CURRENT ZONING
R1-G

PROPOSED ZONING
SITE SPECIFIC FOR
DUPLEX & SECONDARY SUITES

LOT AREA
4811.5 sf [447.0 sm]

C SITE COVERAGE
PROPOSED BLDG. = 1856.72/4811.5 = 38.5 %
(+BIKE LOCKERS) = 74.4 sf

COMPARE EXIST. = 1733.51/4811.5= 36.0%
PERMITTED R1-G = 30%
PERMITTED R-2 = 40% (TWO-FAMILY)

SETBACKS

	SETBACK TYPE	COMPARE MIN. R1-G	COMPARE EXIST. NON-CONFORMING R-1G	PROPOSED
C	FRONT HOLLYNOOD	7.5 m 24.6'	4.25m 13.94'	1.97m 6.47'
C	REAR ROBERTSON	.3x29.93=8.98 m 29.46'	5.5m 18.04'	2.15m 7.04'
C	SIDE NORTH	2.24 m 7.35'	3.76m 12.35'	3.01 m 9.88'
C	SIDE SOUTH	2.24 m 7.35'	0.5m 1.64'	2.65 m 8.71'
C	COMBINED SIDEYD	5.4 m 17.7'	4.26m 13.97'	5.66 m 18.59'

C COMBINED FLOOR AREA

UPPER	1416.5 sf (131.60 sm)
MAIN	1457.7 sf (135.42 sm)
LOWER (SEC. SUITES)	1552.3 sf (144.2 sm)
COMBINED FLOOR AREA	4426.5 sf (411.23 sm)

EXISTING COMBINED TOTAL FLOOR AREA

MAIN	1457.6 sf (135.41 sm)
LOWER	1348.8 sf (125.31 sm)
TOTAL	2806.4 sf (260.72 sm)

C PROPOSED TOTAL FLOOR AREA

UPPER	1416.5 sf (131.60 sm)
MAIN	1457.7 sf (135.42 sm)
TOTAL FLOOR AREA	2874.2 sf (267.02 sm)

C PROPOSED FLOOR SPACE RATIO
(MAIN + UPPER FLOOR / LOT AREA)
1416.5+1457.7/4811.5= .597 (excludes exterior bike/storage)

C EXISTING FLOOR SPACE RATIO:
2806.4/4811.5= .58

PERMITTED R1-G FSR: .5

PROPOSED UNITS
2 units + 2 secondary suites

EXISTING UNITS
4

C AVERAGE GRADE= 11.23 m (36.84')
REFER TO SPEADSHEET FOR CALCS.

C HEIGHT:
PROPOSED: 8.03 m = 26.35'
REFER TO SPREADSHEET FOR CALCULATIONS
PERMITTED R1-G SINGLE FAMILY HEIGHT: 7.6

B STOREY HEIGHT: 3 STOREYS

C OPEN SITE SPACE:
PROPOSED BLDG = 1759.66 sf = (1810.26-50.6)
PROPOSED DRIVEWAYS
STALLS, BINS +STORAGE = 618.5
TOTAL BLDG+PARKING = 2378.16 / 4811.5 sf = 49.4%
OPEN SITE SPACE = 50.6%

EXISTING OPEN SITE SPACE: 44.6%
MIN. REQ'D R1-G: 50%
MIN. REQ'D R-2: 30%

C PARKING
2 STALLS

C LONG TERM BIKE STORAGE: 8 SPACES, VERT. MOUNT
SHORT TERM BIKE PARKING: 4 SPACES, GROUND MOUNT

REVISIONS & ISSUES		
REV.	DESCRIPTION	DATE
		11.28.19
A	SUBMITTAL FOR REZONING	08.03.20
B	RE-SUBMITTAL FOR REZONING	05.14.21
C	RE-SUBMITTAL FOR REZONING	

SK-1

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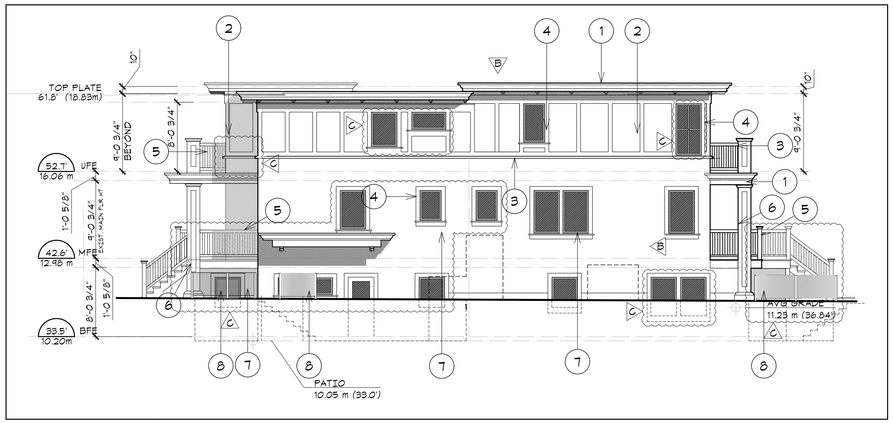
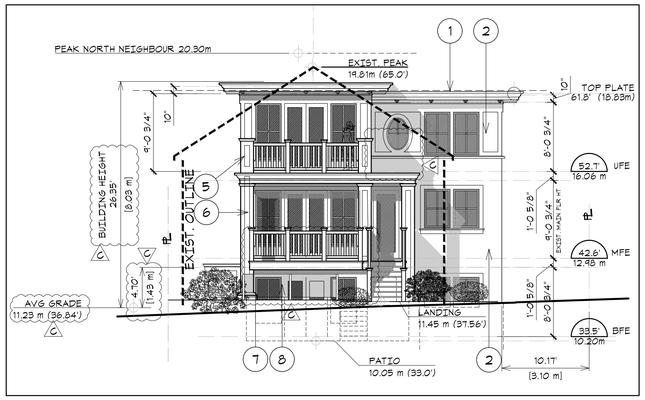
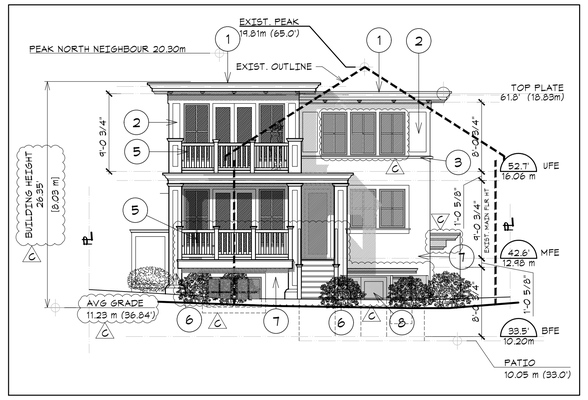


6 SK-2 SOUTH ELEVATION
SCALE: 1:100

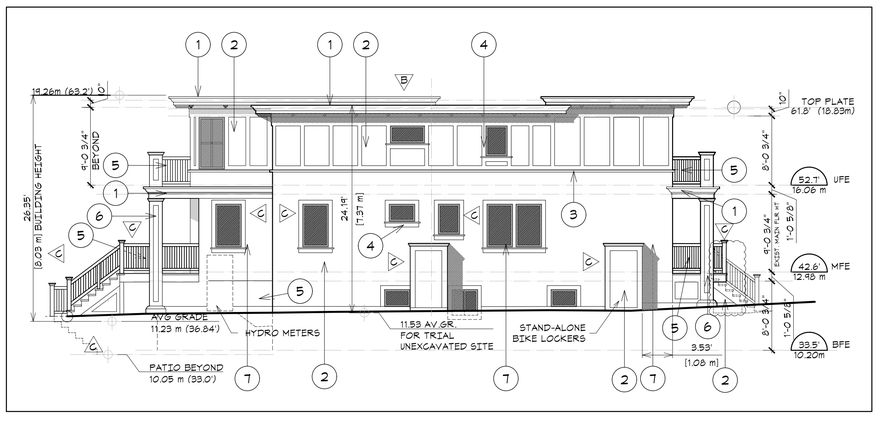


1 SK-2 EAST ELEVATION
SCALE: 1:100
HOLLYWOOD CRESCENT



2 SK-2 WEST ELEVATION
SCALE: 1:100
ROBERTSON ST.

FINISHES	
1	CORNICE & FASCIA w. BRACKETS AT EAVES
2	6"w TRIM ON CEMENTITIOUS PANELLING
3	3" GANTED WATERLINE
4	6"w WINDOW/DR TRIM
5	RAILING w. 3x3" PICKETS BETWEEN CAPPED POSTS, CASED COLUMNS, OR 18"x18" PIERS.
6	18"x18" CASED COLUMNS w. CAPS & 6"w TRIM
7	STUCCO
8	GLASS RAILING

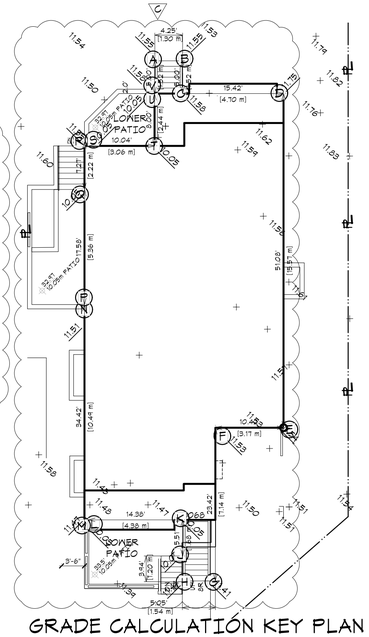


7 SK-2 NORTH ELEVATION
SCALE: 1:100

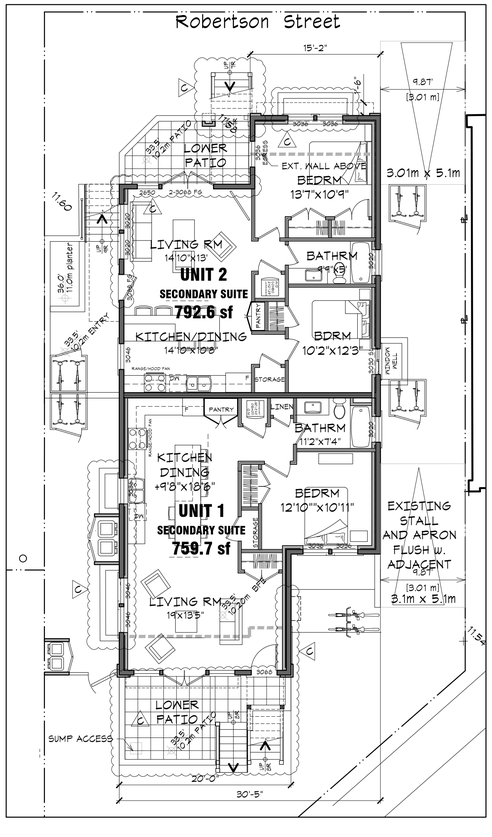
DUPLEX AT HOLLYWOOD AND ROBERTSON ST.
VICTORIA BC

AVERAGE GRADE CALCULATION 4/23/2021

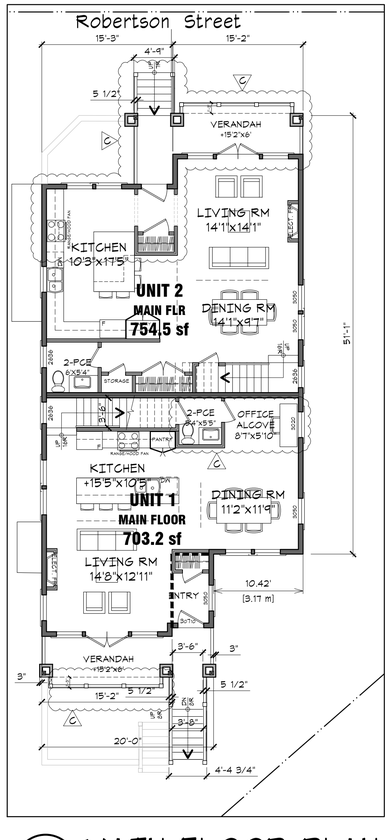
SEGMENT	Start	Finish	Average	Distance	Factor	TotalFactors	Perimeter	Average grade (total factors / perimeter)	Convert to imperial
AB	11.55	11.55	11.55	1.30	15.02	785.30	69.94	11.23	36.84
BC	11.55	11.58	11.57	1.52	17.58				
CD	11.58	11.75	11.67	4.70	54.83				
DE	11.75	11.54	11.65	15.57	181.31				
EF	11.54	11.53	11.54	3.17	36.57				
FG	11.53	11.41	11.47	7.14	81.90				
GH	11.41	11.41	11.41	1.33	15.18				
HJ	11.41	10.05	10.73	1.20	12.88				
JK	10.85	10.85	10.85	1.68	18.23				
KL	10.85	10.85	10.85	4.38	47.52				
MN	11.47	11.51	11.49	10.49	120.53				
PQ	10.05	10.05	10.05	5.36	53.87				
QR	10.05	11.55	10.80	2.22	23.98				
ST	10.05	10.05	10.05	3.06	30.75				
TU	10.05	10.05	10.05	2.44	24.52				
VA	11.58	11.55	11.57	4.38	50.65				
			TOTAL		69.94	785.30			



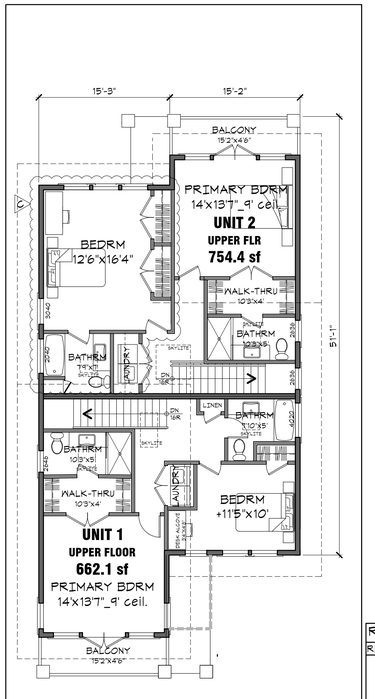
GRADE CALCULATION KEY PLAN



3 SK-2 LOWER FLOOR PLAN
SCALE: 1:100 1552.3 sf



4 SK-2 MAIN FLOOR PLAN
SCALE: 1:100 1457.6 sf



5 SK-2 UPPER FLOOR PLAN
SCALE: 1:100 1416.5 sf

REVISIONS & ISSUES		
REV.	DESCRIPTION	DATE
A	SUBMITTAL FOR RE-ZONING	11.28.19
B	RE-SUBMITTAL FOR RE-ZONING	04.03.20
C	RE-SUBMITTAL FOR RE-ZONING	05.14.21

FLOOR PLANS & ELEVATIONS AND AVERAGE GRADE KEY PLAN

REZONING FOR ROBERTSON-HOLLYWOOD 4-PLEX

VICTORIA, B.C. 11.28.19 SCALE = 1:100

SK-2

1161 NEWPORT AVE
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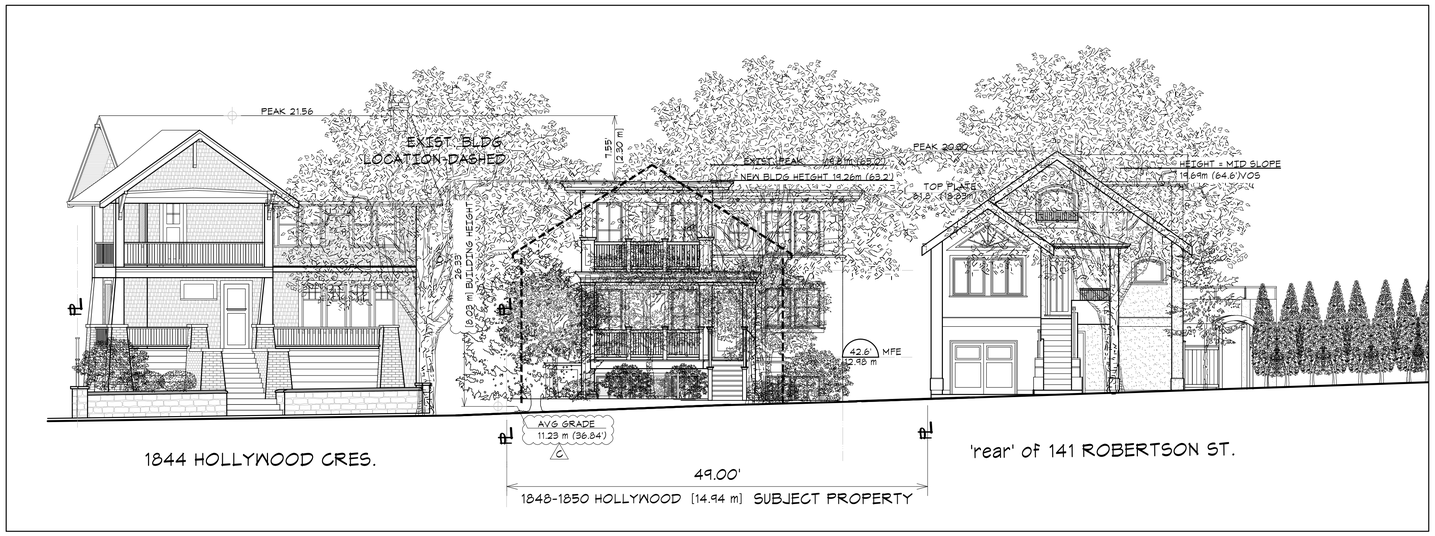
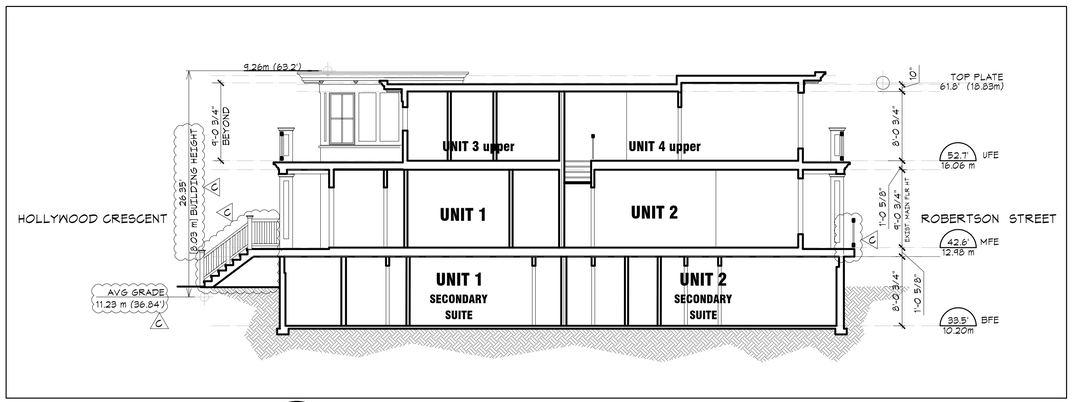
ZEBRADESIGN



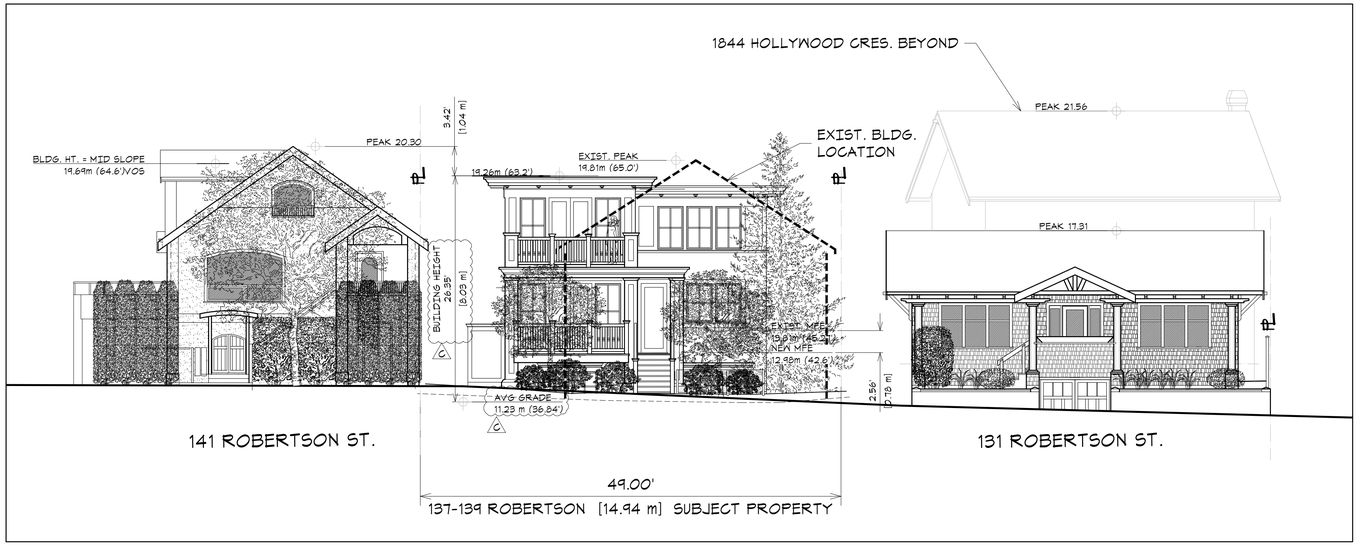
1 SK-3 STREETSCAPE HOLLYWOOD CRESCENT

SCALE: 1/8"=1'0"



3 SK-3 BUILDING SECTION

SCALE: 1:100



2 SK-5 STREETSCAPE ROBERTSON STREET

SCALE: 1/8"=1'0"

BUILDING SECTION, STREETSCAPES

& UNPROTECTED OPENING CALCULATIONS

REZONING FOR

ROBERTSON-HOLLYWOOD 4-PLEX

VICTORIA, B.C.

11.28.19

SCALE: 1:100

SK-3

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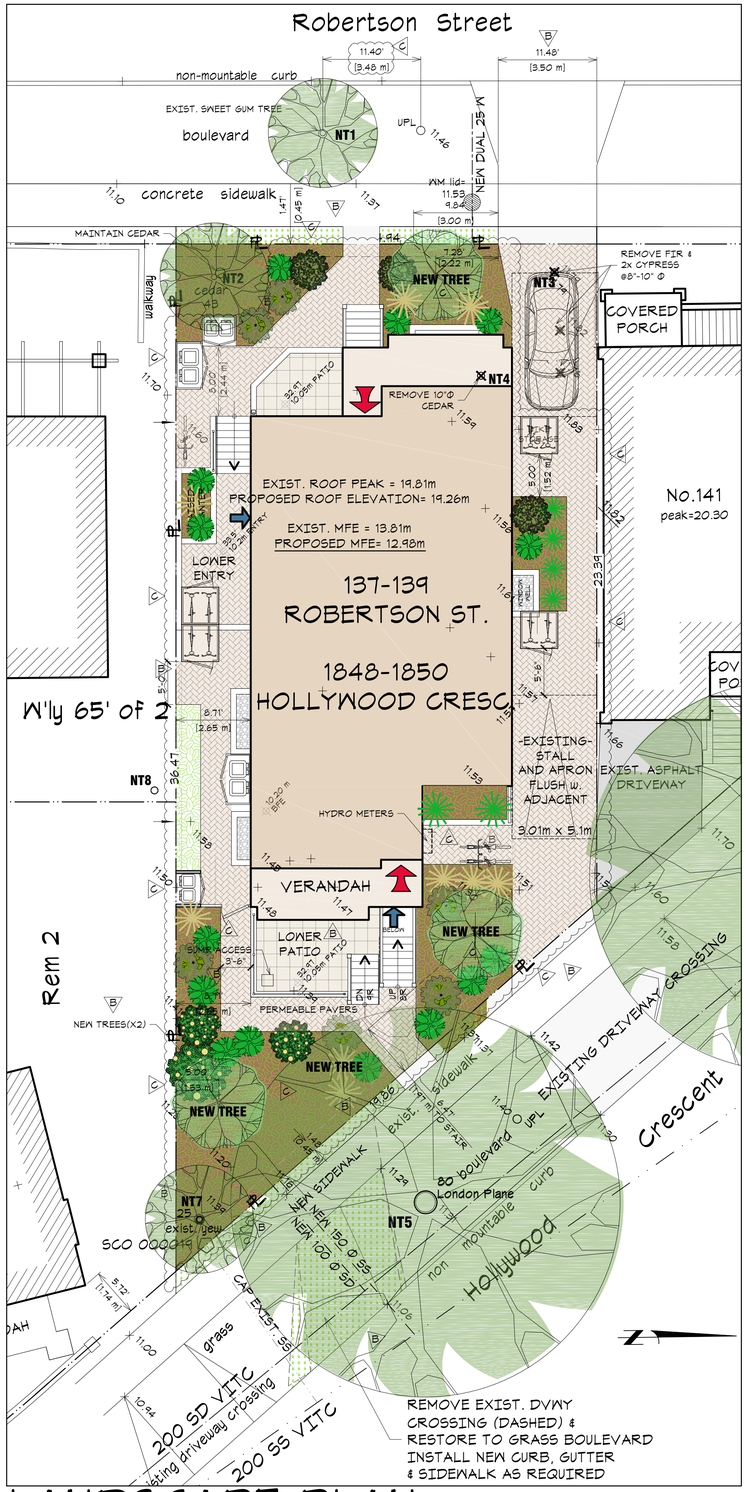
ZEBRADESIGN

REVISIONS & ISSUES		
REV.	DESCRIPTION	DATE
A	SUBMITTAL FOR RE-ZONING	11.28.19
B	RE-SUBMITTAL FOR RE-ZONING	04.03.20
C	RE-SUBMITTAL FOR RE-ZONING	05.14.21

SUGGESTED PLANT LIST

	Botanical Name	Common Name	Size
Trees			
C	Malus Fusca	Pacific Crabapple -N, PH	3 cm caliper
	Cornus Eddies White Wonder	Eddies White Wonder -N	1.5 cm caliper
	Acer circinatum	Vine Maple -N	2m height
Shrubs			
	Vaccinium Ovatum	Evergreen Huckleberry -N, E	#5 pot
	Berberis Thunbergii Atropurpurea	Barberry - LA, PH	#2
	Pinus Mugo 'Pumilio'	Dwarf Pine	#2
	Camelia Japonica	Red Camelia	#5
	Cistus Ladanifer	Crimson Rock Rose	#3
	Erica Carnea Springwood	White Heather -LA, PH	#1
	Escallonoia Newport Dwarf	Dwarf Escallonia -LA, PH	#2
	Hebe "Pattys purple"	Hebe -PH	#2
	Lavendula Augustifolia Hidcote	Hidcote Lavender - LA, PH	#1
	Ribes Saguineaum King Edward	Pink Flowering Currant -N	#5
	Armeria Aaliacea	Sea Thrift -N, LA, PH	#3
	Gaultheria Shallon	Salal -N, E	#3
	Rhododendron Macropyllum	Pacific Rhododendron - N, LA, PH	#5
	Holodiscus discolor	Ocean Spray -N	#5
	Lithosperum Diffusum	Lithodora	#5
	Spirea Prunifolia	Bridal Wreath Spirea	#5
	Viburnum Davidii	Evergreen Viburnum -LA, PH	#3
	Rosmarinus officinalis	Rosemary -E, LA, PH	#2
	Salvia officinalis	Sage -E, LA	#1
	Mahonia Nervosa	Cascade Berry -N, E, PH	#1
Grasses			
	Festuca Glauca	Festuca Grass	#1
	Helictotrichon Sempervirens	Blue Oat Grass	#1
Ferns			
	Polystichum Munitum	Sword Fern -N, LA	#1
	Adiantum Aleuticum	Maidenhair Fern -N, LA	#1
Bulbs			
C	Camassia Leichtlinii	Camas - N, PH	#1
Groundcovers			
	Arctostaphylos uva-ursi var. "Vancouver Jade"	Bearberry/Kinnikinnick -N, PH	10 cm pot
	Thymus Praecox	Creeping Thyme - E	Sp3, 30 cm o.c.
Abbreviations	N = Native, E = Edible, PH= Pollinator Habitat LA = Low Allergen	NOTE: 1. 30% of planted landscaped areas shall be either Native, Edible, or Pollinator Habitat as indicated 2. Shrubs and trees shall not be planted within 45 cm of city property	



LANDSCAPE PLAN
REZONING FOR
ROBERTSON-HOLLYWOOD 4-PLEX

VICTORIA, B.C. 18.10.20
SCALE = 1:100

LANDSCAPE PLAN LEGEND

TREES/SHRUBS
- SMALL SHRUBS
- MEDIUM SHRUBS
- GRASSES, FERNS
- EXISTING TREE REMAINS
- NEW TREE (X4)

PLANTS & GROUNDCOVER
- PLANTING BEDS

HARD LANDSCAPING
- 12x12" CONC. PAVERS
- 4"x8" PERMEABLE PAVERS

FENCE

EGRESS
- PRIMARY ENTRY
- SECONDARY ENTRY

TREE DESIGNATIONS
- NOT TAGGED # REFER TO TPP — NT#
- TREE REMOVAL — ×

REVISIONS & ISSUES

REV.	DESCRIPTION	DATE
A	SUBMITTAL FOR RE-ZONING	11.28.19
B	RE-SUBMITTAL FOR RE-ZONING	08.03.20
C	RE-SUBMITTAL FOR RE-ZONING	05.14.21

SK-4

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14.94

3.60' [1.10 m]

6.96' [2.12 m]

NT2
cedar
43

NEW TREE

3m SIGHT TRIANGLE

137-139
ROBERTSON ST.

1848-1850
HOLLYWOOD CRESC.

8.71' [2.65 m]

exist. ash
NT8

36.47

10.20 m BFE

32.97
10.05m PATIO

8.71' [2.65 m]

5.00' [1.53 m]

13.76' [4.20 m]

4.27' [2.82 m]

NEW TREE

NEW TREE

NEW TREE

6.59' [2.01 m]

6.90' [2.10 m]

23.39

15.86' [1.97 m]

6.47' TO STAIR

11.49' [3.50 m]

4.95' [1.51 m]

13.79' [4.20 m]

UPL

80
London Plane

NT5

NT7
25
exist. yew

5.72' [1.74 m]

TREE PLANTING PLAN

REZONING FOR
ROBERTSON-HOLLYWOOD 4-PLEX
VICTORIA, B.C.

05.11.21

SCALE = 1/8"=1'-0"

SK-4a

ZEBRADESIGN
1161 NEWPORT AVE
Victoria, B.C. V8S 5E6
(250) 360-2144

14.94

NT2
cedar
43

NEW TREE

3m SIGHT TRIANGLE

3.60'
[1.10 m]

6.96'
[2.12 m]

7.28'
[2.22 m]

137-139
ROBERTSON ST.

1848-1850
HOLLYWOOD CRESC.

23.39

8.71'
[2.65 m]

exist. ash
NT8

36.47

10.20 m
BFE

32.97
10.05m PATIO

NEW TREE

6.59'
[2.01 m]

6.90'
[2.10 m]

8.71'
[2.65 m]

5.00'
[1.53 m]

13.76'
[4.20 m]

9.24'
[2.82 m]

NEW TREE

NEW TREE

11.49'
[3.50 m]

4.95'
[1.51 m]

15.86'
[1.97 m]

6.47'
TO STAIR

UPL

13.79'
[4.20 m]

80
London Plane

NT5

NT7
25
exist. yew

5.72'
[1.74 m]

TREE PLANTING PLAN

REZONING FOR
ROBERTSON-HOLLYWOOD 4-PLEX
VICTORIA, B.C.

05.11.21

SCALE = 1/8"=1'-0"

SK-4a

ZEBRADESIGN
1161 NEWPORT AVE
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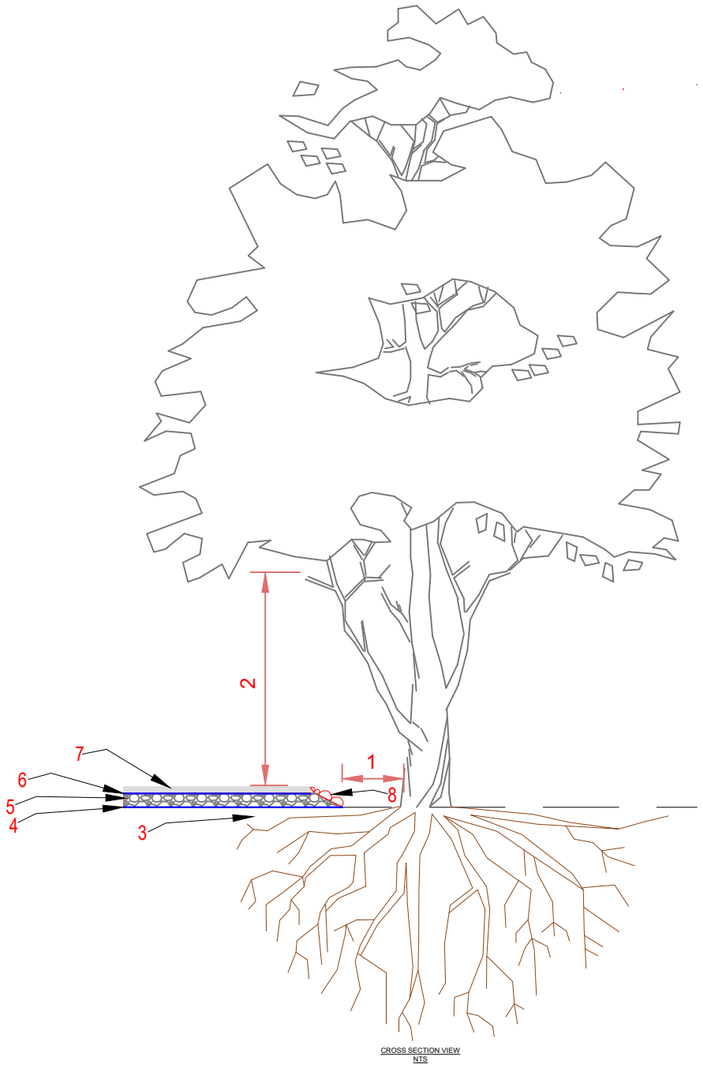
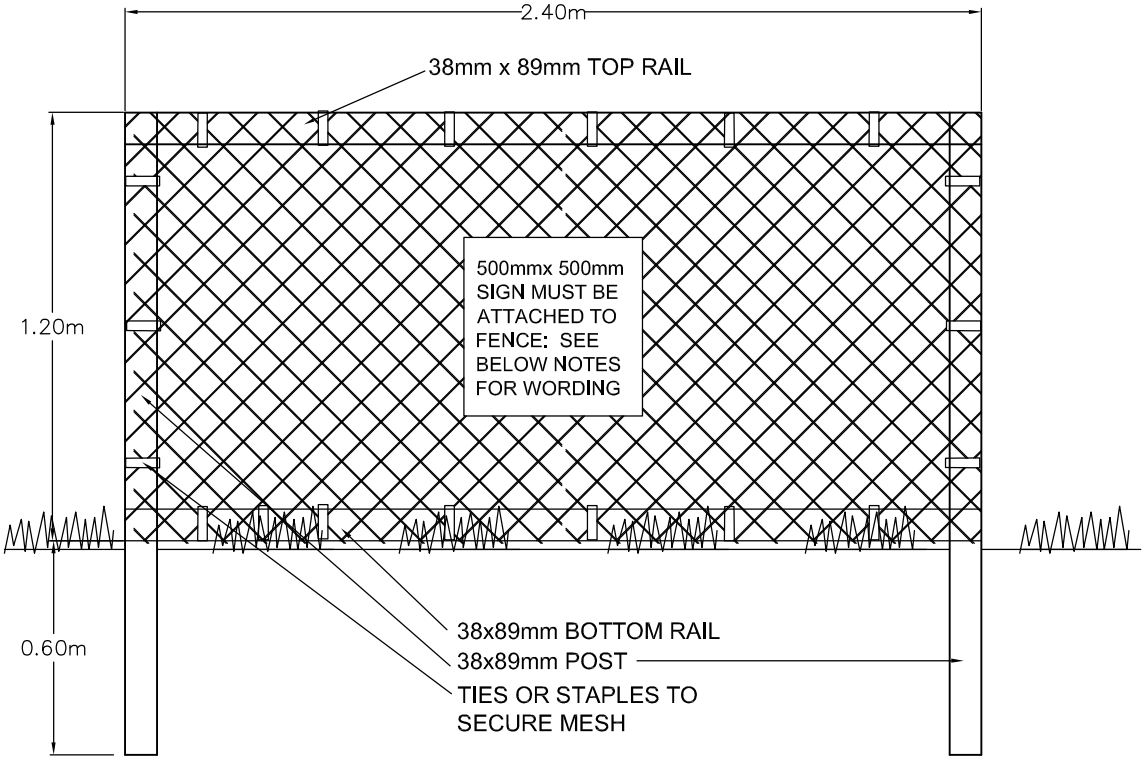
HARD SURFACE ABOVE TREE ROOTS DETAIL



CROSS SECTION VIEW
NTS

HARD SURFACE ABOVE TREE ROOTS NOTES

1. Maintain as large a setback between the fill encroachment and the root collar of the tree as possible.
2. Review any canopy clearance pruning requirements to accommodate vehicle or pedestrian clearances (Pruning to be performed to ANSI A300 standards).
3. Excavate the new footprint of the driveway or sidewalk under the supervision of the project arborist. Excavation will be limited to the removal of the existing sod layer. Excavation around root structures must be performed by hand, airspade, or hydroexcavation.
4. Install a two-dimensional (such as Combigrid $\frac{30}{30}$) or Three-dimensional geogrid reinforcement.
5. Install a 150mm depth layer of clear crushed gravel (no fines) using 20mm and/or 75mm diameter material or approved equivalent. *Note - the depth may be less than 150mm in some situations (dependant on grading constraints).
6. Install meduim weight geotextile fabric (such as Nilex 4535 or similar) over the clear crushed gravel layer to prevent fine particles of sand from infiltrating this layer.
7. The bedding or base layer and new driveway or sidewalk surface can be installed directly on top of the felted filter fabric.
8. Fill slopes - where possible install loose stacked boulders to reduce the footprint of the fill slopes that encroach within the critical root zone. Fill slope materials must be permeable to air and water. Do not pile fill material directly against the trunk of a tree.



TREE PROTECTION FENCING

1. FENCE WILL BE CONSTRUCTED USING 38 mm X 89mm WOOD FRAME: TOP, BOTTOM AND POSTS * USE ORANGE SNOW-FENCING MESH AND SECURE THE WOOD FRAME WITH"ZIP" TIES OR GALVANIZED STAPLES.

2. ATTACH A 500mm X 500mm SIGN WITH THE FOLLOWING WORDING: WARNING- TREE PROTECTION AREA. THIS SIGN MUST BE AFFIXED ON EVERY FENCE OR AT LEAST EVERY 10 LINEAR METERS.

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

Talbot Mackenzie & Associates
Consulting Arborists

Box 48153 RPO - Uptown Victoria, BC V8Z 7H6
Ph: (250) 479-8733
Fax: (250) 479-7050
Email: tmtreehelp@gmail.com

Tree Resource Spreadsheet Methodology and Definitions

Revised November 28, 2019

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 generally not tagged ("NT #").

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.
~ 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 local 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

This method is solely a mathematical calculation that does not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean). To calculate the critical root zone of trees with multiple stems below 1.4m, the diameter is considered the sum of 100% of the diameter of the largest stem and 60% of the diameter of the next two largest stems. This however can result in multi-stem trees having exaggerated CRZs. Where noted, sometimes the CRZ for trees with multiple stems will be calculated using the diameter of the trunk below the unions. In specific cases, some CRZs will be approximate (~).

Note that in most cases, our inventories include a Level 1 Limited Visual Assessment, which only comprises a brief assessment to identify obvious defects and conditions. The inspection may have only been completed from one-side of the tree, depending on the defined scope of work, property lines and/or site conditions.

Health Condition:

- Poor – Tree is weak, under significant stress and/or declining
- Fair – Tree has average vigour for its species and site conditions
- Good – Tree is growing well and appears to be free of significant health stress

Structural Condition:

- Poor – Significant structural defects observed
- Fair – Moderate to minor structural concerns; mitigation measures likely feasible
- Good - No visible or only minor structural concerns

Retention Status:

- Removal (or "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.