



## CITY OF COLWOOD

3300 Wishart Road | Colwood | BC V9C 1R1 | 250-294-8153  
[planning@colwood.ca](mailto:planning@colwood.ca) | [www.colwood.ca](http://www.colwood.ca)

File: DP-22-026

### DEVELOPMENT PERMIT DP-22-026

THIS PERMIT, issued September 29, 2023 is,

ISSUED BY: CITY OF COLWOOD, a municipality incorporated under the *Local Government Act*, 3300 Wishart Road, Victoria, BC, V9C 1R1

(the "City")

PURSUANT TO: Section 490 of the *Local Government Act*, RSBC 2015, Chapter 1

ISSUED TO: GREATER VICTORIA HOUSING SOCIETY  
2326 Government Street  
Victoria, BC V8T 5G5

(the "Permittee")

- 
1. At its regular Council meeting on August 28, 2023, Council authorized the issuance of this Development Permit, DP-22-026.
  2. This Form and Character (Centres) Development Permit applies to those lands within the City of Colwood described below, and any and all buildings, structures, and other development thereon:

LOT A, SECTION 1, ESQUIMALT DISTRICT, PLAN 38886  
1901 Jerome Road  
(formerly 85 Belmont Road)

(the "Lands");

3. This Development Permit regulates the development of the Land, and supplements the "Colwood Land Use Bylaw, 1989" (Bylaw No. 151), to ensure the form and character considerations of a 6-storey, 139 unit affordable rental apartment building and associated site improvements are consistent with the design guidelines for areas designated as "Centres" in the City of Colwood Official Community Plan (Bylaw No. 1700).
4. This Development Permit is NOT a Building Permit or a subdivision approval.
5. This Development Permit is issued subject to compliance with all of the bylaws of the City of Colwood that apply to the development of the Lands, except as specifically supplemented by this Permit.

6. The Director of Development Services may approve minor variations to the schedules attached to and forming part of this Development Permit, provided that such minor variations are consistent with the overall intent of the original plans and do not alter the form and character of the development authorized by those plans.
7. If the Permittee does not substantially start the construction permitted by this Permit within 24 months of the date of this Permit, the Permit shall lapse and be of no further force and effect.
8. The following plans and specifications are attached to and form part of this permit:

Schedule 1	Architectural Drawings prepared by Cascadia Architects Inc, dated May 30, 2023
Schedule 2	Landscape Concept & Tree Preservation Plan prepared by LADR Landscape Architects Ltd, BCSLA, dated December 6, 2022
Schedule 3	Landscape Cost Estimate prepared by LADR Landscape Architects Ltd, BCSLA, dated September 25, 2023
Schedule 4	Arborist report prepared by Talbot Mackenzie & Associates, dated November 15, 2022.
9. This Development Permit authorizes the construction of a 6-storey, 139-unit affordable rental apartment building along with any associated site works and landscaping on the Land. The Land shall not be altered, nor any buildings or structures constructed, except in accordance with the following conditions:

#### FORM AND CHARACTER CONDITIONS

##### Building Features

- 9.1. The form and character of the buildings to be constructed on the Lands shall conform to the Architectural Drawings prepared by Cascadia Architects Inc. (Schedule 1).
- 9.2. Any future additions of telecommunications antennas or equipment to the exterior of the buildings and/or structures included in this Permit shall be architecturally integrated into the buildings and/or structures they are mounted on or screened from views so as not to be visually obtrusive, to the satisfaction of the Director of Development Services.
- 9.3. No future construction/installation of unenclosed or enclosed outdoor storage areas, and recycling/refuse collection and storage areas shall be undertaken without the issuance of a further Development Permit or amendment to this Permit.
- 9.4. All mechanical roof elements, including mechanical equipment, elevator housings, and vents shall be visually screened with sloped roofs or parapets, or other forms of solid screening to the satisfaction of the Director of Development Services.

##### Signage

- 9.5. This Development Permit does not include any signage approvals.

##### Landscaping

- 9.6. The design and construction of the proposed landscaping shall be in substantial compliance with the Landscape Concept & Tree Preservation Plan prepared by LADR Landscape Architects BCSLA (Schedule 2).
- 9.7. Prior to the issuance of Building Permit, provide the City with a written undertaking from the landscape architect confirming supervision and installation of the landscape work in accordance with the approved



landscape plan and provide a final inspection and report to the City confirming substantial compliance with the approved landscape plan.

- 9.8. Prior to the issuance of Building Permit, provide the City in the form of an irrevocable letter of credit or certified cheque security for **\$321,556.40** (110% of the estimated cost for landscape installation), which amount, or a portion thereof, as the case may be, shall be returned upon receipt of a signed statement of partial or substantial completion from a registered landscape architect, to the satisfaction of the Director of Development Services (Schedule 3).

#### **Tree Management**

- 9.9. Development on the Lands shall comply with the recommendations contained in the Arborist Report (Schedule 4) prepared by Talbot Mackenzie & Associates to the Satisfaction of the Director of Development Services.
- 9.10. The issuance of this Development Permit by no means permits tree removal outside private property and any and all permits required by CRD and BCTFA must be obtained prior to tree removal and proposed works within the Galloping Goose Trail.
- 9.11. Any trees slated for removal within private property of neighbouring sites must obtain a separate Tree Management Permit and are no means authorized by the issuance of this Development Permit.
- 9.12. Tree Protection Fencing must be installed along the perimeter of all trees identified for preservation and must be inspected by the Project Arborist and installation photos submitted to the City for approval prior to land alterations, to the satisfaction of the Director of Development Services.
- 9.13. Any works proposed to be within the CRZ of municipal trees must be supervised by the Project Arborist and approved by the Parks Department Manager prior to land alterations. The removal of municipal trees are by no means approved by this Development Permit and compensation and an off-site replanting plan must be submitted and approved to the satisfaction of the Parks Department Manager.

#### **CONSTRUCTION MANAGEMENT CONDITIONS**

- 9.14. The following best management practices shall be implemented on the construction site to minimize mud tracking from the construction site, debris entering and transported by watercourses, and windblown dust:
- 9.14.1. Stockpiles shall be located away from watercourses, environmentally sensitive areas, drainage courses, ravines, and existing adjacent developments. Stockpiles may need to be stabilized against erosion immediately following stripping operations. Stabilization can include, but not limited to, establishment of a cover crop or mulch and hydro-seed application;
- 9.14.2. All construction vehicles shall leave the site at designated points. Graveling or paving (where practical) of frequently used access roads will help ensure that minimal material such as mud is tracked off-site. The access road shall consist of a bed of non-erodible coarse material (i.e. drainage gravel) of enough length and width to ensure that no site soil material (mud) is tracked offsite into adjacent municipal streets;
- 9.14.3. Internal haul roads and/or track packs can also be designated and maintained to help reduce

offsite tracking. In situations where mud tracking becomes a major problem, a high-pressure pump and hose installation may be used to provide a wash-down facility for truck wheels. Water used in the wash-down process must have sediment removed prior to it leaving the site;

- 9.14.4. All temporary and permanent water detention facilities (i.e. sediment ponds and traps) must be constructed prior to the installation of any services on the site or the commencement of stripping and grading;
- 9.14.5. During dry conditions dust control measures shall be implemented to minimize air borne dust. Typical practices for exposed soils include providing a temporary protective cover (such as mulch or tackifier) or by temporary consolidating the material with water or binding agents;
- 9.14.6. Temporary structures shall be removed and properly disposed of once construction activities are complete.

#### SPILL PREVENTION CONDITIONS

8.13. The following best management practices shall be implemented on the construction site to minimize the potential impact of spills:

- 8.13.1. Activities that carry a risk of materials' spills shall take place within a bermed staging area. These activities include mixing concrete or other materials, any vehicle fuelling, and other maintenance of equipment that is done on site;
- 8.13.2. If a spill does occur, it shall immediately be reported to the Provincial Emergency Program. Written notification shall follow within two weeks of the verbal report;
- 8.13.3. If a spill does occur, site personnel shall immediately take steps to stop the discharge (if possible). As quickly as possible, they shall contain the spill, clean up the affected area and dispose of waste materials at an approved disposal site;
- 8.13.4. All hydraulic systems, fuel systems and lubricating systems shall be in good repair;
- 8.13.5. Equipment shall be inspected before commencing work. Equipment with fuel or fluid leaks shall not be permitted to work within or above any watercourse. Any equipment that develops a leak shall immediately be removed from the site and repaired.

ISSUED ON THIS 21<sup>st</sup> DAY OF SEPTEMBER, 2023.



YAZMIN HERNANDEZ, MCIP RPP  
DIRECTOR OF DEVELOPMENT SERVICES



# Schedule 1



## SHEET LIST

Architectural		Civil	
A000	Cover	C01	General Notes, Site Plan, and Location Plan
A050	Survey and Project Data	C02	On-Site Servicing Plan
A051	Building Code Review	C03	On-Site Grading Plan
A052	Spatial Separation	C04	Frontage Improvements & Details
A100	Site Plan		
A101	Parkade Plan		
A102	Plan - Level 1		
A103	Plan - Typical Levels 2-5		
A104	Plan - Level 6		
A105	Roof Plan		
A200	Elevations and Materials		
A201	Elevations and Materials		
A300	Building Sections		
A900	Renderings		
		Landscape	
		L01	Landscape Schematic Plan
		L02	Tree Preservation Plan

## LOCATION PLAN



VIEW FROM BELMONT ROAD

## PROJECT CONTACTS

### OWNER

**Greater Victoria Housing Society**  
2326 Government Street  
Victoria, BC

Contact  
James Munro, Director of  
Development  
james@greatervichousing.org

### CIVIL ENGINEER

**Gwaii Engineering Ltd.**  
623 Discovery St  
Victoria, BC

Mike Achtem, P.Eng. PMP.  
CCA  
machtem@gwaiieng.com

### ARCHITECT

**Cascadia Architects**  
101-804 Broughton Street  
Victoria, BC  
250.590.3223

Peter Johannknecht, Architect  
AIBC, LEED® AP, MRAIC, cert.  
Passive House Designer  
peter@cascadiaarchitects.ca

### GEOTECHNICAL

**Ryzuk Geotechnical**  
Crease Avenue  
Victoria, BC

Christian Flanagan  
christian@ryzuk.com

### LANDSCAPE ARCHITECT

**LADR Landscape Architects**  
3-864 Queens Avenue  
Victoria, BC

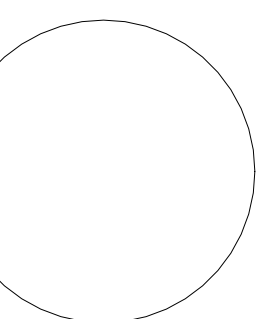
Bev Windjack, MBCSLA, AALA  
CSLA, ASLA, LEED, PSCertER  
bwindjack@ladrla.ca

### ARBORIST

**Talbot Mackenzie**  
3575 Douglas Street  
Victoria, BC

Robbie McRae  
robbie@talmack.ca

Date	May 30, 2023
Revision	1
Project #	2139
Sheet #	A000

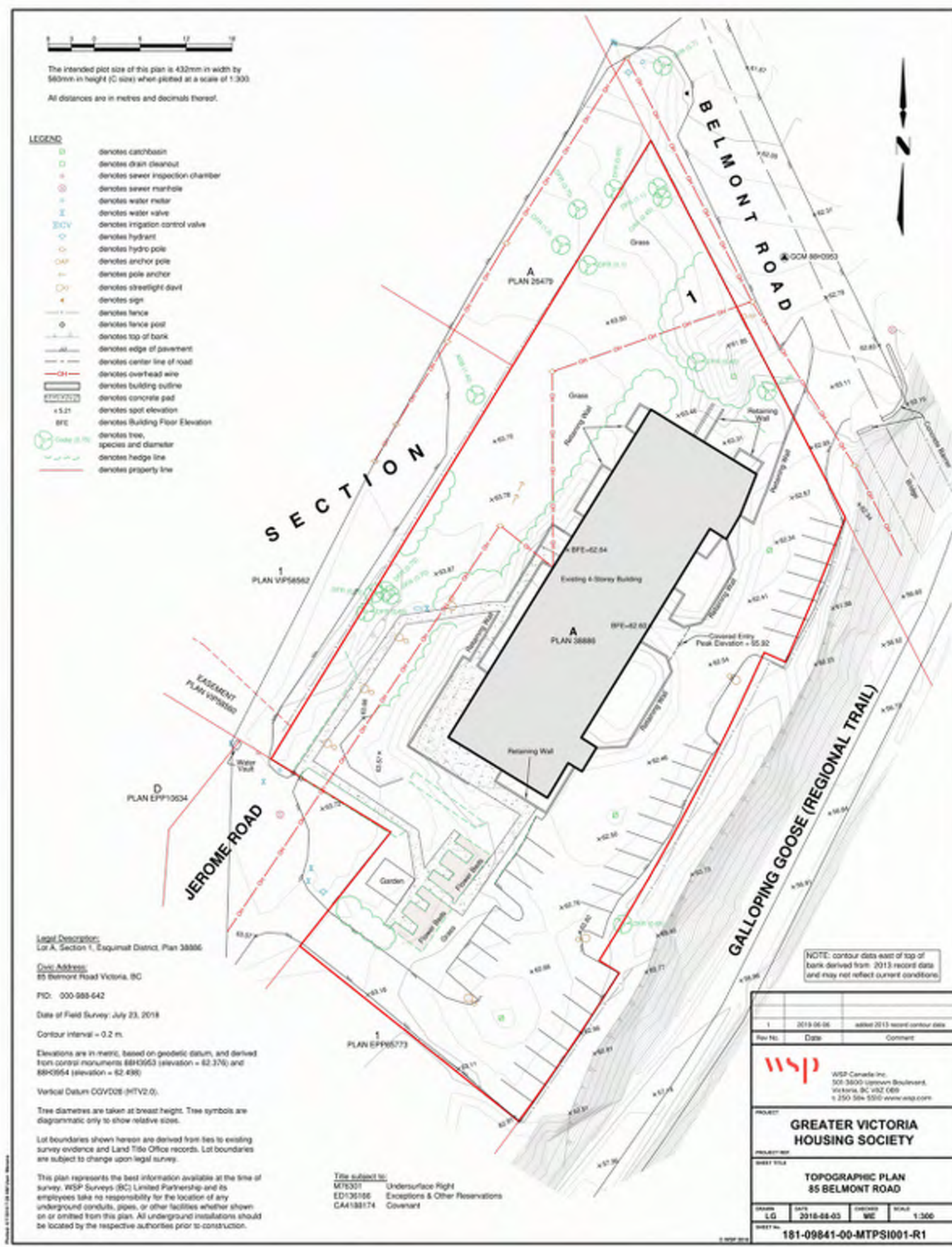


CASCADIA ARCHITECTS INC  
101-804 Broughton Street  
Victoria, BC V8W 1E4 Canada  
250.590.3223  
cascadiaarchitects.ca



Greater Victoria Housing Society  
**GVHS - 1901 Jerome**  
DP Application R1 - May 30, 2023





### Average Natural Grade Calculation

GRADE POINTS	CALCULATION	Dist. (m)	
A	63.21		
B	63.84		
C	64.05		
D	62.65		
E	61.92		
F	62.38		
G	62.22		
H	61.76		
I	61.90		
J	62.91		
K	63.50		
L	63.25		
M	62.91		
N	63.23		
O	63.30		
P	62.82		

### Average Proposed Grade Calculation

GRADE POINTS	CALCULATION	Dist. (m)	
A	63.78		
B	63.90		
C	63.90		
D	63.66		
E	63.70		
F	63.90		
G	63.90		
H	63.78		
I	63.74		
J	63.90		
K	63.90		
L	63.71		
M	63.86		
N	63.90		
O	63.90		
P	63.70		

### Building Code Grade Calculation

GRADE POINTS	CALCULATION	
H	63.78	
I	63.74	

### ZONING DATA

ZONE	CD27	
USE	APARTMENTS	
REGULATORY CONDITIONS	ALLOWABLE	PROVIDED
SITE AREA	2500 m <sup>2</sup>	4711.92 m <sup>2</sup>
GROSS FLOOR AREA	12,959 m <sup>2</sup>	9,930 m <sup>2</sup>
COMMERCIAL FLOOR AREA	0 m <sup>2</sup>	0 m <sup>2</sup>
BUILDING HEIGHT (from Natural Grade)	55 m	22.33 m
SETBACKS		
NORTH (REAR)	1.5 m	1.7 m
EAST (SIDE)	5 m	5.2 m
SOUTH (FRONT)	4 m	5.1 m
WEST (SIDE)	5 m	14.6 m
EXTERIOR OPEN SPACE	450 m <sup>2</sup>	900 m <sup>2</sup> *
FLOOR AREA RATIO (FAR)	2.75	2.18
LOT COVERAGE	40 %	36.9 %
OPEN SITE SPACE	-- %	46.1 %
OPEN SITE SPACE WITH DRIVEWAY	-- %	61.3 %
PARKING	REQUIRED	PROVIDED
VEHICLES	0.6 stalls/unit 139 units x 0.6 = 84 stalls	84 stalls (2 accessible)
BICYCLES	REQUIRED	PROVIDED
CLASS 1 (LONG-TERM)	1.5 spaces/unit 139 units x 1.5 = 209	209 spaces
CLASS 2 (SHORT-TERM)		16 spaces

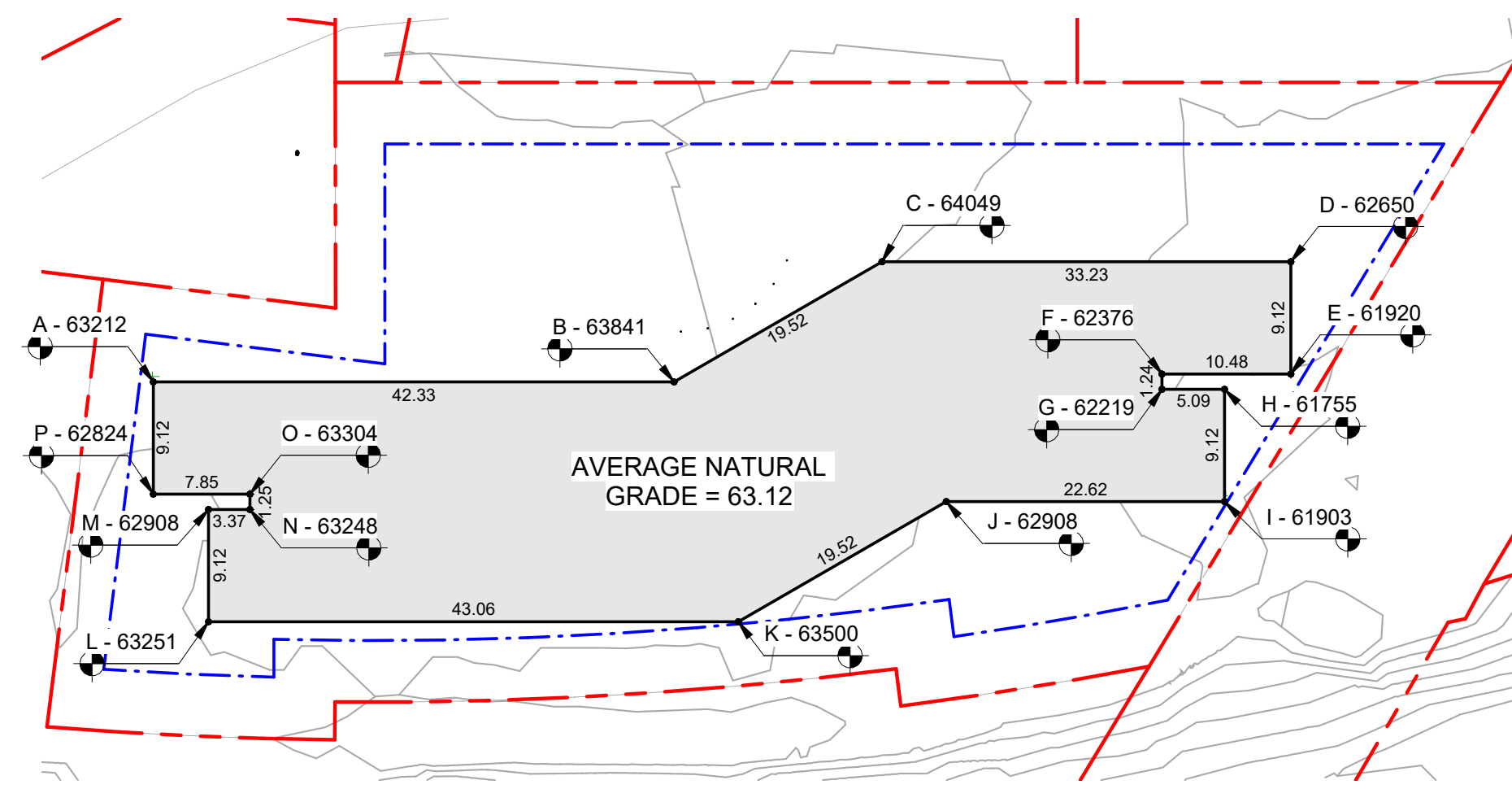
### UNITS

UNIT TYPES	REQUIRED	PROVIDED
STUDIO x 34 (ACCESSIBLE) STUDIOS x 7 1 BEDROOM x 58 (ACCESSIBLE) 1 BEDROOM x 6 2 BEDROOM x 10 3 BEDROOM x 18 4 BEDROOM x 6	--	139
TOTAL UNITS	--	139

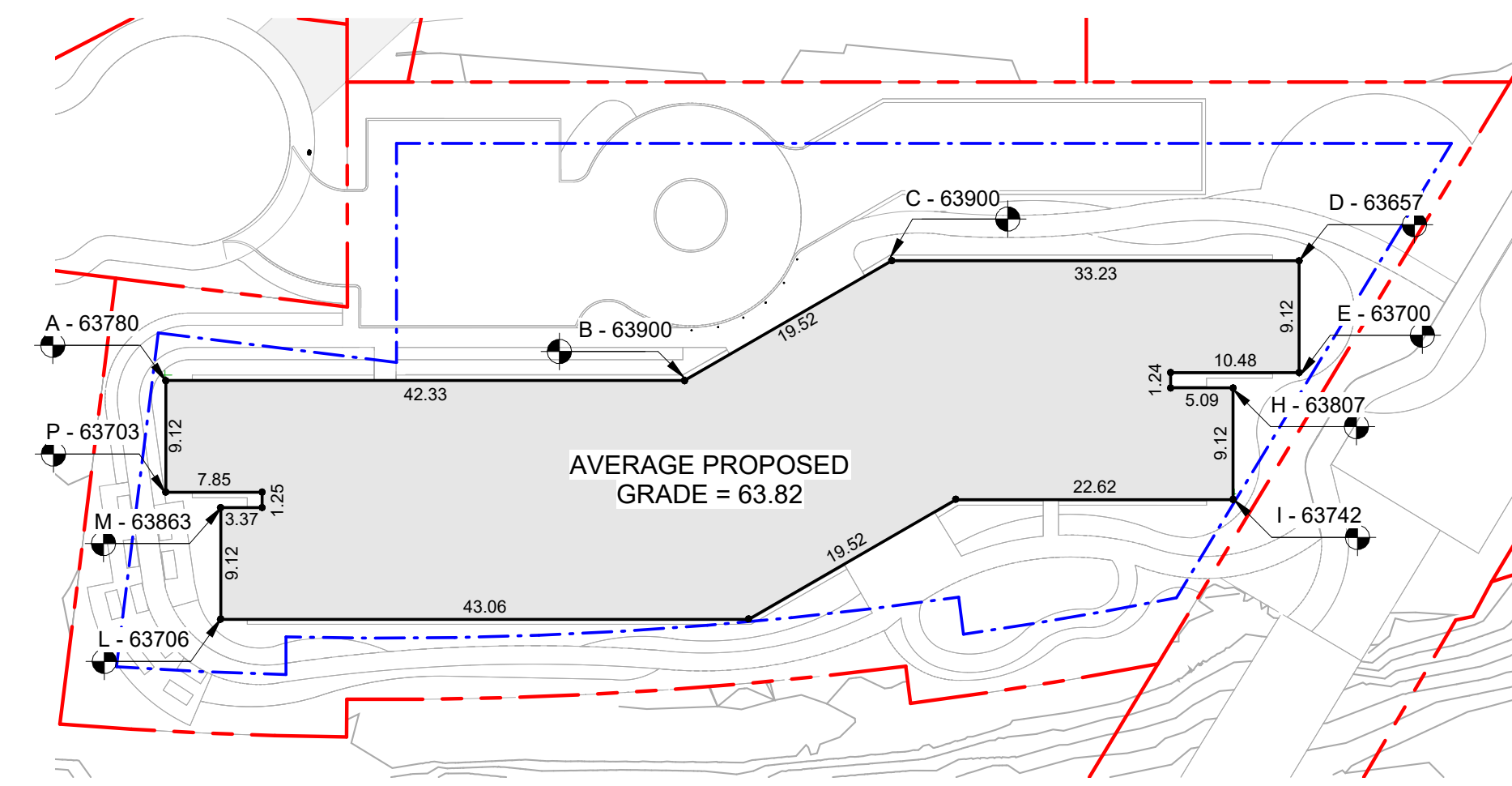
  

### NORTH DESIGNATION

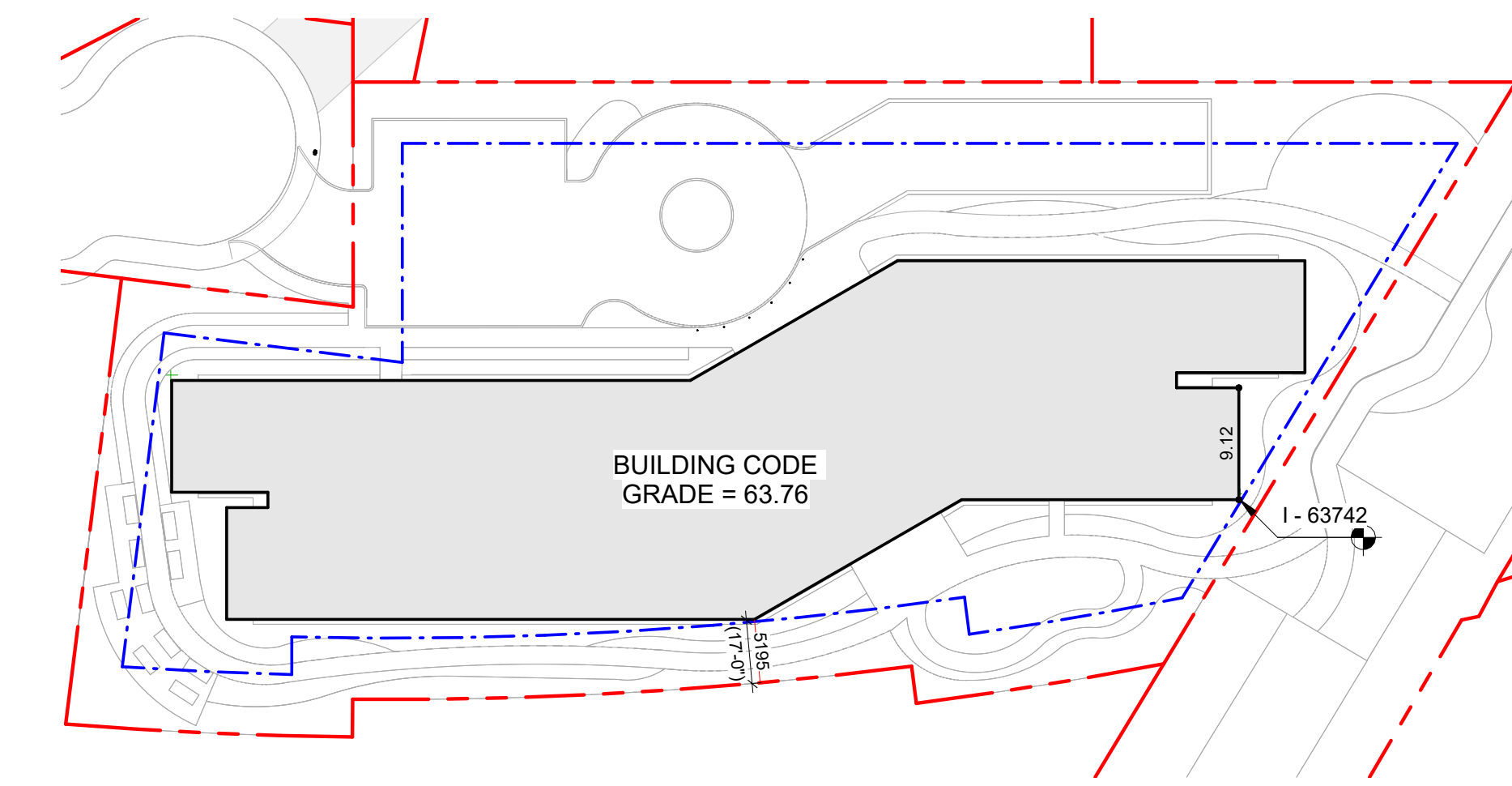
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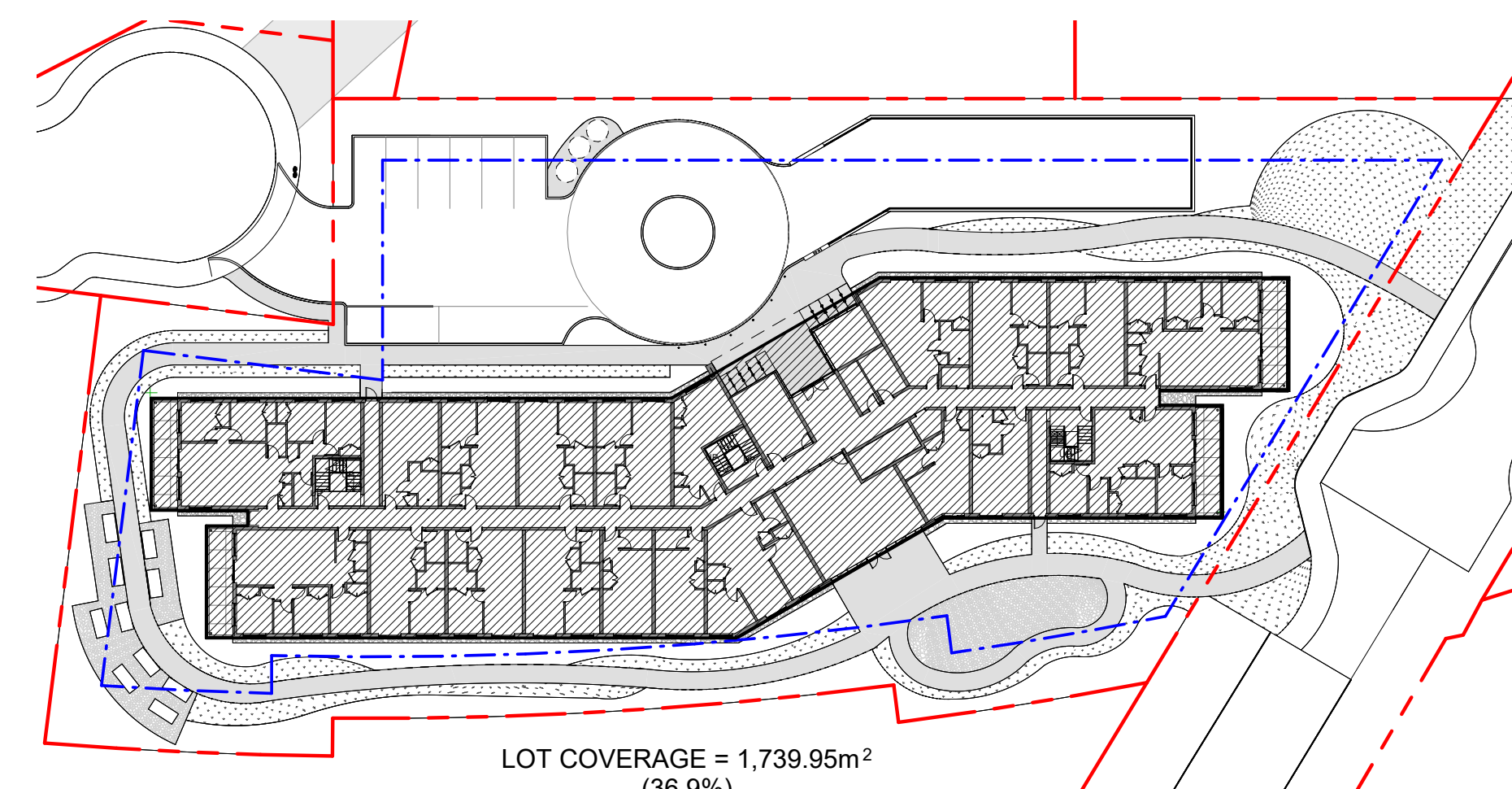
5 Average Natural Grade Plan  
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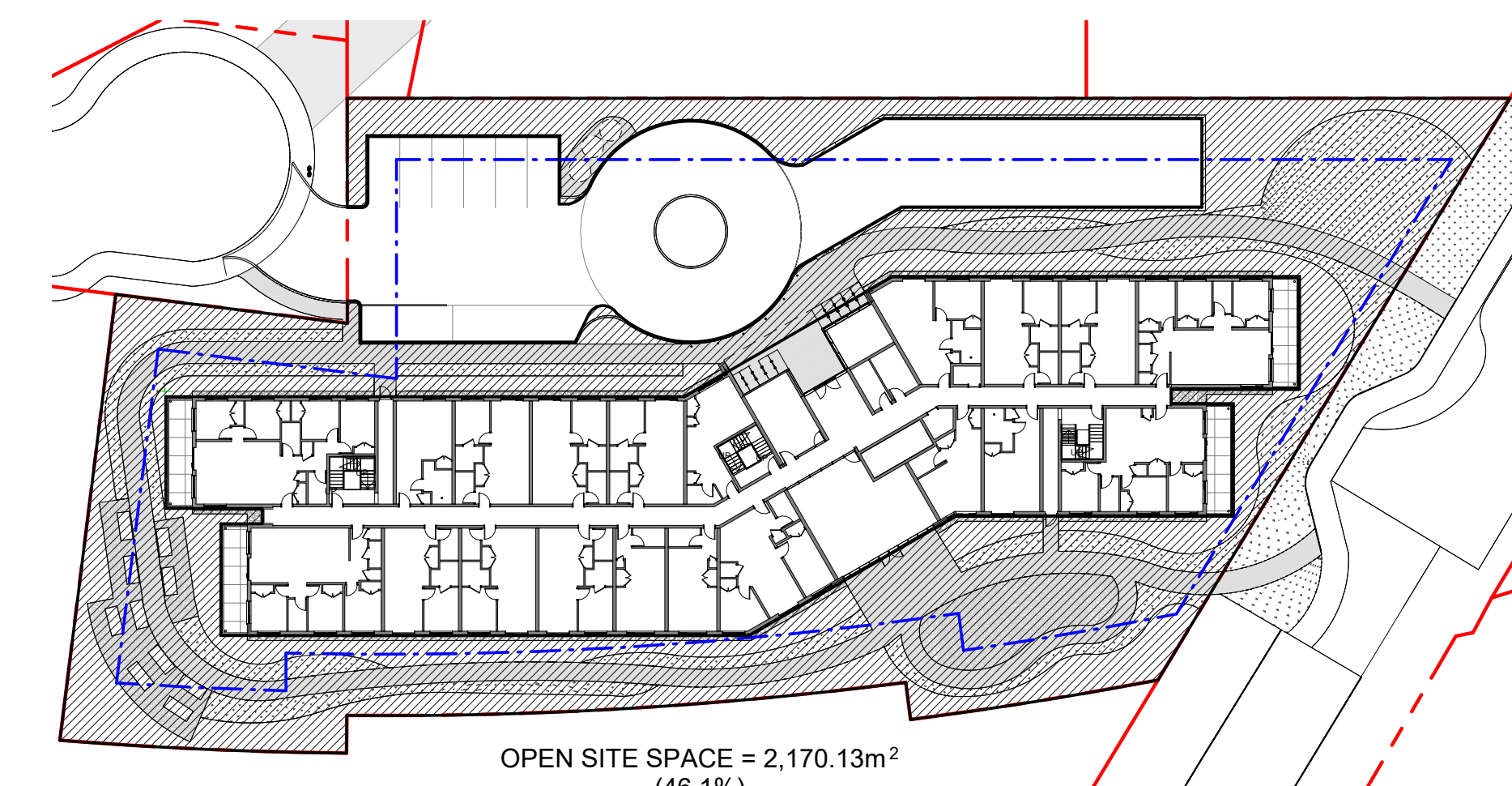
6 Average Proposed Grade Plan  
SCALE = 1 : 500



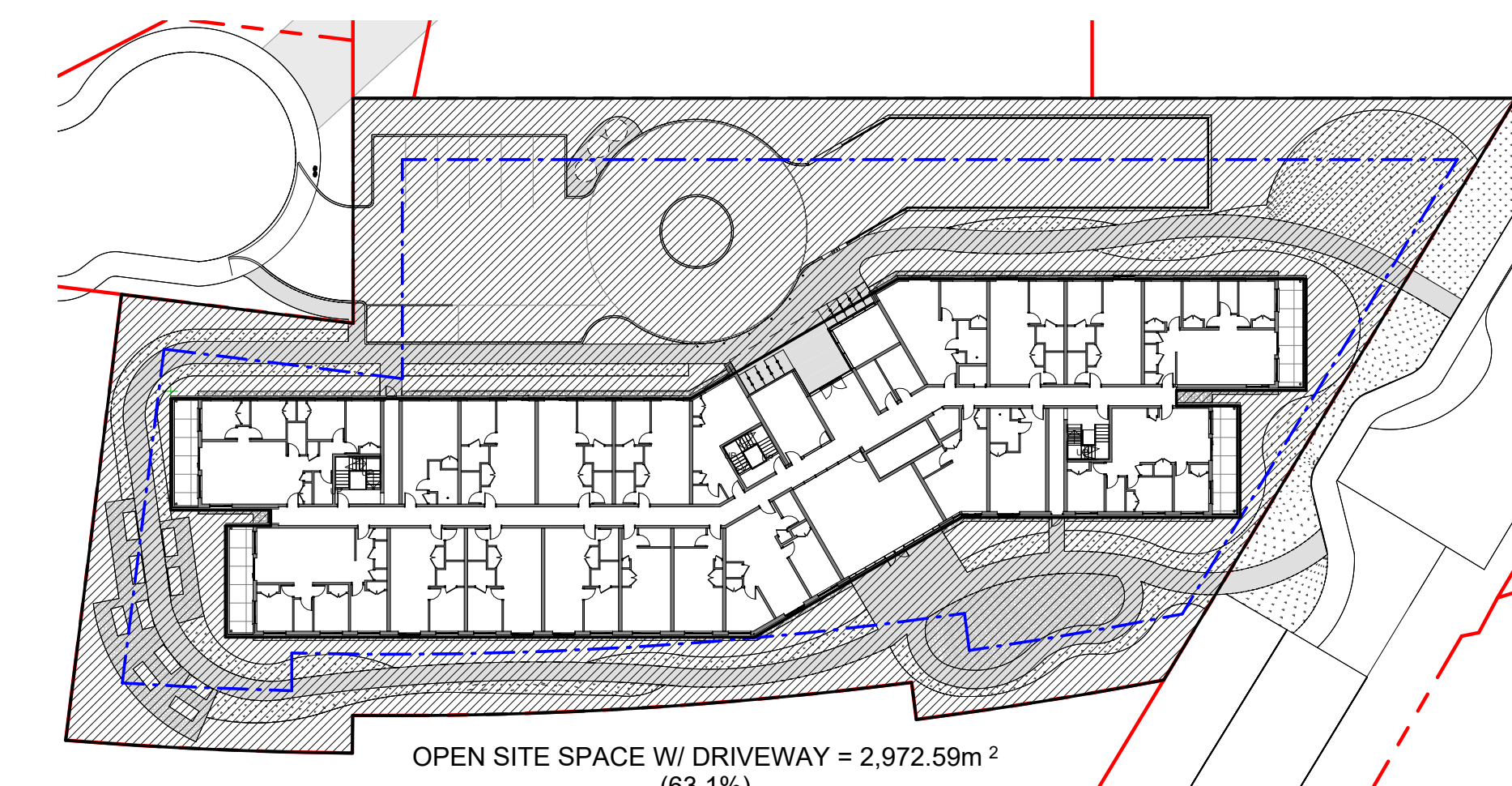
7 Building Code Grade  
SCALE = 1 : 500



1 Lot Coverage  
SCALE = 1 : 500



3 Open Site Space  
SCALE = 1 : 500



2 Open Site Space with Driveway  
SCALE = 1 : 500

DEVELOPMENT PERMIT APPLICATION   DEC 9, 2022		
NO.	DESCRIPTION	DATE



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**GVHS - 1901 Jerome**

Greater Victoria Housing Society

Project North

Sheet Name  
**Survey and Project Data**

Date  
May 30, 2023

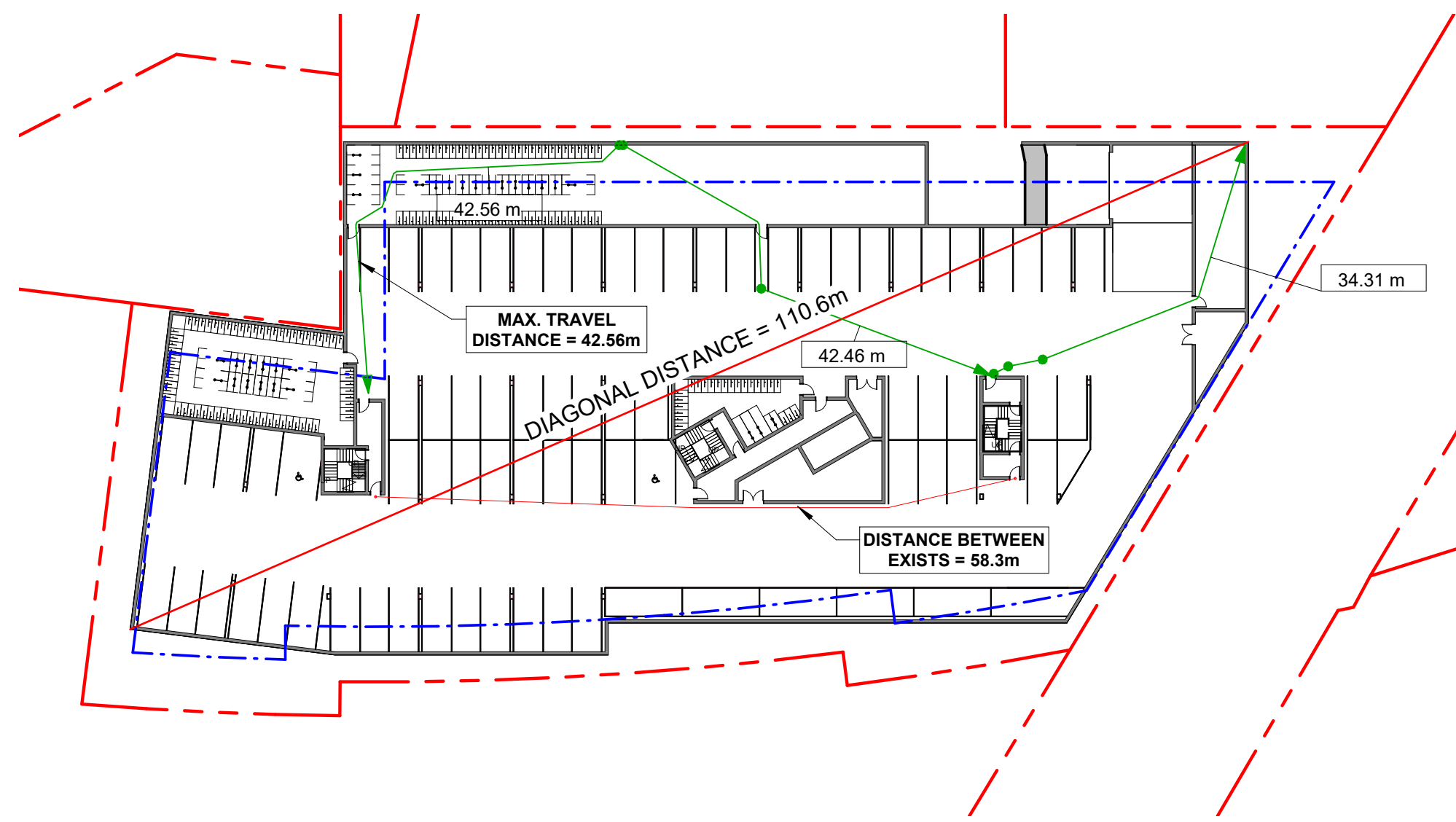
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Project #  
2139

Revision  
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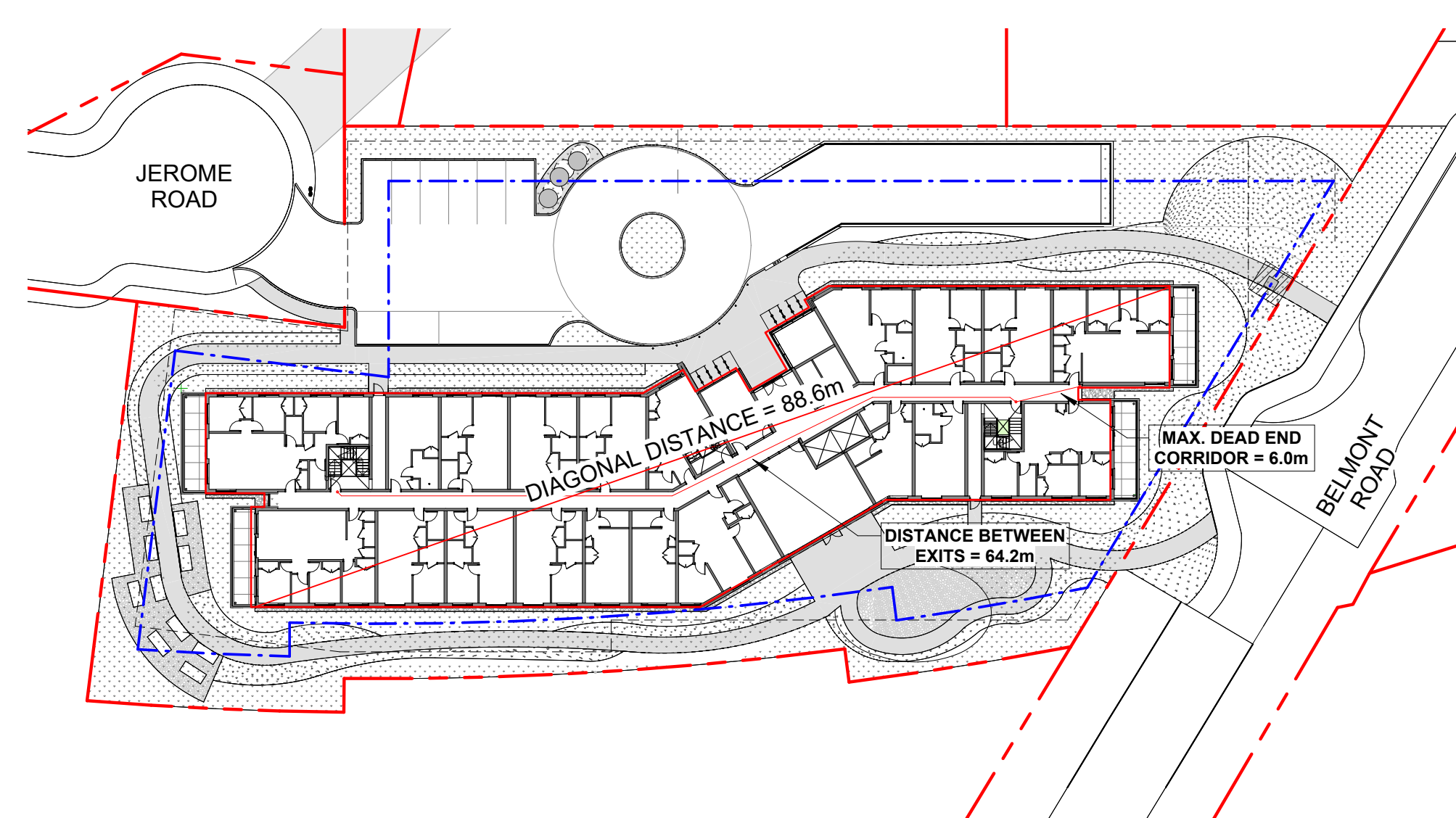
Sheet #  
**A050**





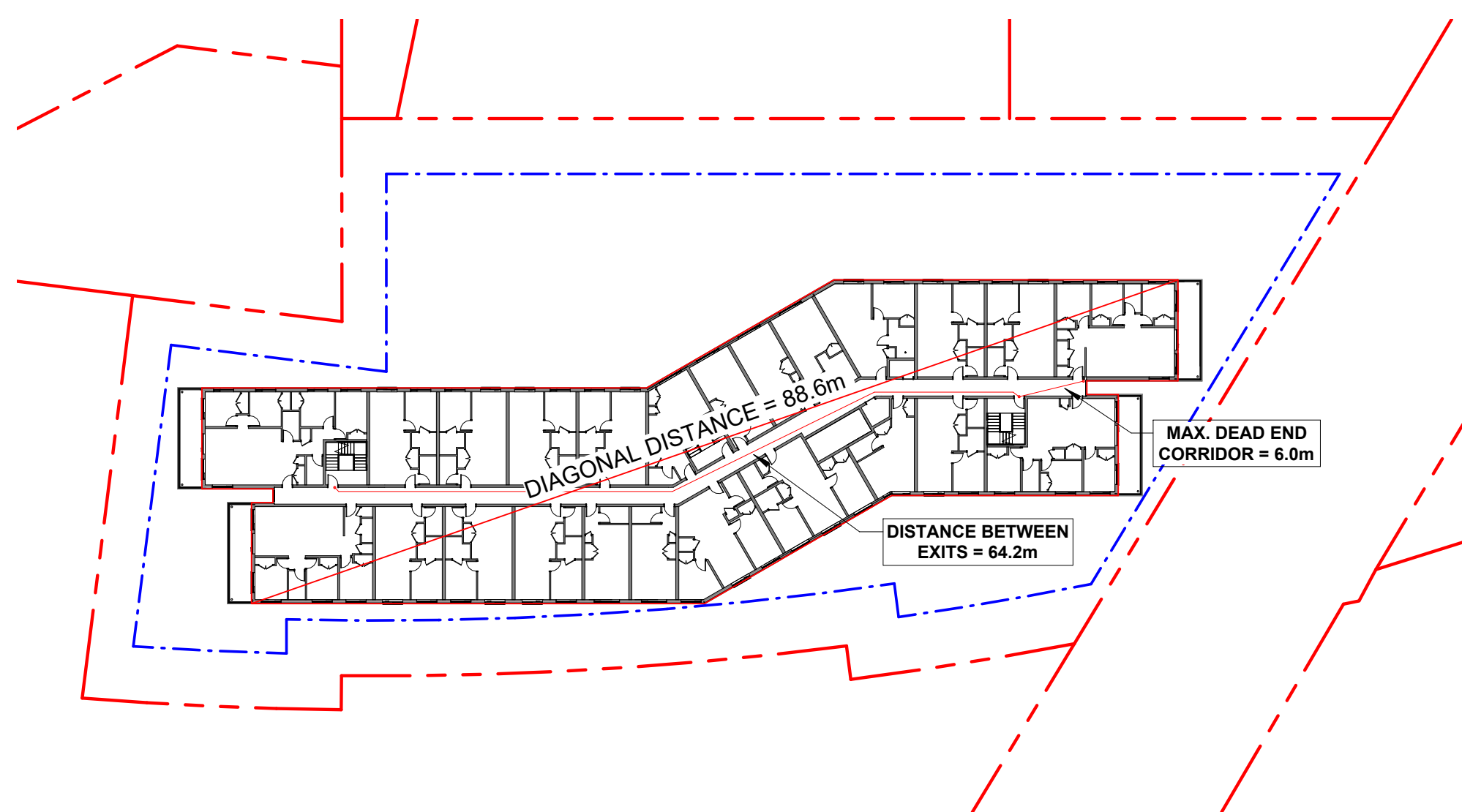
1 Level 0 - Parkade - Code Plan  
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**PARKADE**  
 Min. Separation of Exits: 55.3m  
 Max. Travel: 45m  
 Occupancy: F, Div. 3 - Storage Garage  
 Occupant Load  
 Net Area: 3503 m<sup>2</sup>  
 Storage Garage: 46 sq.m/person  
 3503/46 = 77 people  
 Min. Exit Width  
 Ramps, Corridors, Passageways  
 6.1mm/person x 77 = 470mm  
 Stairs  
 8mm/person x 77 = 616mm



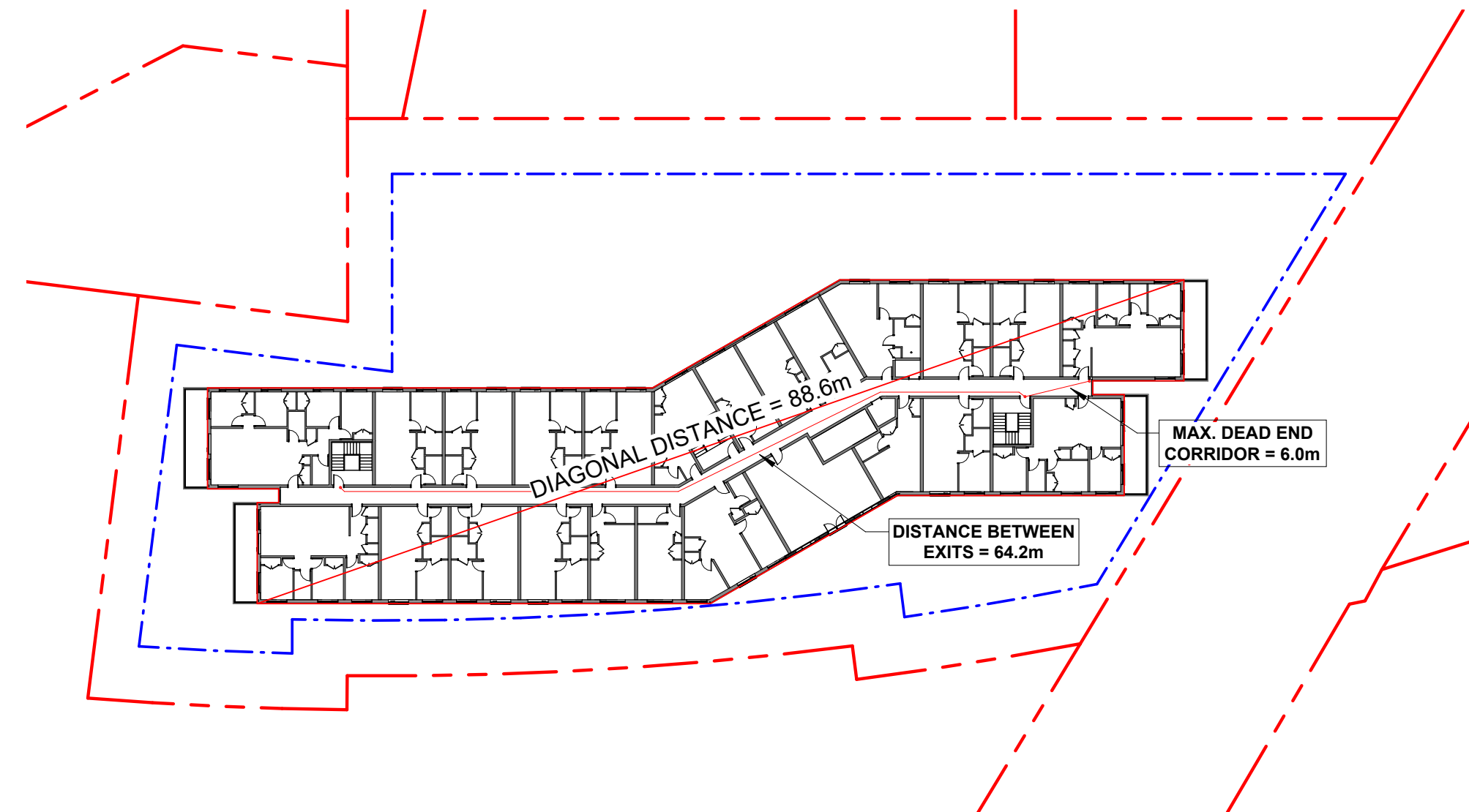
2 Level 1 - Code Plan  
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**GROUND FLOOR**  
 Occupancy: Group C  
 Occupant Load  
 Common Area  
 Area = 94.6m<sup>2</sup>  
 0.95m<sup>2</sup>/person for space with non-fixed tables and seating (BCBC 3.1.17.1)  
 Load = 100 people  
 Office  
 Area = 9.3m<sup>2</sup>  
 9.30m<sup>2</sup>/person for office use (BCBC 3.1.17.1)  
 Load = 1 person  
 Scooter Room & Mail Room  
 Area = 21.9m<sup>2</sup>  
 46.00m<sup>2</sup>/person for storage use (BCBC 3.1.17.1)  
 Load = 1 person  
 30 bedrooms x 2 people/bedroom = 60 people  
 Total Occ. Load = 100 + 1 + 1 + 60 = 162 people  
 Min. Exit Width  
 Ramps, Corridors, Passageways  
 6.1mm/person x 162 = 988.2mm  
 Stairs  
 8mm/person x 162 = 1296mm  
 Area = 1630 m<sup>2</sup>



3 Levels 2-5 - Code Plan  
SCALE = 1 : 500

**SECOND FLOOR**  
 Occupancy: Group C  
 Occupant Load  
 35 bedrooms x 2 people/bedroom = 70 people  
 Min. Exit Width  
 Ramps, Corridors, Passageways  
 6.1mm/person x 70 = 427mm  
 Stairs  
 8mm/person x 70 = 560mm  
 Area = 1660m<sup>2</sup>



4 Level 6 - Code Plan  
SCALE = 1 : 500

**SECOND FLOOR**  
 Occupancy: Group C  
 Occupant Load  
 Common Area  
 Area = 69.4m<sup>2</sup>  
 0.95m<sup>2</sup>/person for space with non-fixed tables and seating (BCBC 3.1.17.1)  
 Load = 74 people  
 33 bedrooms x 2 people/bedroom = 66 people  
 Total Occ. Load = 74 + 66 = 140 people  
 Min. Exit Width  
 Ramps, Corridors, Passageways  
 6.1mm/person x 140 = 854mm  
 Stairs  
 8mm/person x 140 = 1120mm  
 Area = 1660m<sup>2</sup>

DEVELOPMENT PERMIT APPLICATION DEC 9, 2022		
NO.	DESCRIPTION	DATE

**BUILDING CODE ANALYSIS**

GENERAL INFORMATION			
PROJECT TYPE	NEW CONSTRUCTION <input checked="" type="checkbox"/> RENOVATION <input type="checkbox"/> ADDITION <input type="checkbox"/>		
GOVERNING BUILDING CODE	2018 BC BUILDING CODE PART 3		
MAJOR OCCUPANCIES	A1 <input type="checkbox"/> A2 <input type="checkbox"/> A3 <input type="checkbox"/> A4 <input type="checkbox"/> B1 <input type="checkbox"/> B2 <input type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F1 <input type="checkbox"/> F2 <input type="checkbox"/> F3 <input checked="" type="checkbox"/>	3.1.2.1.	
MULTIPLE MAJOR OCCUPANCIES	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.1.3.	
BUILDING AREA	1630 m <sup>2</sup> (Outside face of Exterior Walls)	3.1.2.	
GRADE	63.76 m	1.4.1.2.	
BUILDING HEIGHT (STOREYS, m)	6 STOREYS ABOVE GRADE 16.215 m 1 STOREYS BELOW GRADE	1.4.1.2.	
HIGH BUILDING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	3.2.6.	
FIRE ALARM & DETECTION SYSTEM	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.2.4.	
AUTOMATIC SPRINKLER SYSTEM	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.2.2.18. 3.2.5.12.	
MEZZANINE(S) / AREA	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	3.2.8.	
INTERCONNECTED FLOOR SPACE	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	3.2.8.	
NUMBER OF STREETS FACING	2	3.2.2.10.	
FIRE DEPARTMENT ACCESS	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.2.5.4.	
ROOF ACCESS	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.2.5.3.	

GENERAL INFORMATION (CONTINUED)			
STANDPIPE SYSTEM	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.2.5.8.	
LIGHTING AND EMERGENCY POWER	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.2.7.4.	
EMERGENCY GENERATOR	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	3.2.7.8.	
BARRIER-FREE DESIGN	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	3.8.2.	
ALTERNATIVE SOLUTION(S)	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	3.1.2.	

BUILDING CONSTRUCTION CLASSIFICATION			
CLASSIFICATION	GROUP C, 6 STOREYS, SPRINKLERED, NONCOMBUSTIBLE CONSTRUCTION	3.2.2.48.	
MAXIMUM BUILDING AREA	6000 m <sup>2</sup> *	3.2.2.50.	
CONSTRUCTION TYPES PERMITTED	COMBUSTIBLE <input type="checkbox"/> NON - COMBUSTIBLE <input checked="" type="checkbox"/>	3.2.2.48.	

EXITS FROM FLOOR AREAS			
NUMBER OF EXITS REQUIRED	2	3.4.2.1.	
SEPERATION OF EXITS (MIN.)	ONE HALF MAXIMUM FLOOR AREA DIAGONAL, BUT NO LESS THAN 9 M SEPARATION BETWEEN EXITS	3.4.2.3	
MAX. TRAVEL DISTANCE ALLOWED	GROUP C 45 m	3.4.2.5.	

FIRE RESISTANCE RATINGS AND SEPARATIONS			
HORIZONTAL SEPARATIONS	1.5 hr BETWEEN STORAGE GARAGE AND RESIDENTIAL	3.2.1.2.	
	1 hr FLOORS N/A MEZZANINE N/A ROOF	3.2.2.48.	
	N/A ROOF THAT SUPPORTS OCCUPANCY	3.2.2.13.	
LOADBEARING STRUCTURE	F.R.R. NOT LESS THAN SUPPORTED ASSEMBLY	3.2.2.48.	
BETWEEN SUITES	1 hr	3.3.1.1.	
BETWEEN SUITES & PUBLIC CORRIOR	1 hr	3.3.4.2.	
STORAGE ROOMS	1 hr	3.3.4.3.	
STORAGE GARAGE FROM OTHER OCCUPANCIES	1.5 hr	3.3.5.6.	
EXIT ENCLOSURES	1 hr	3.4.4.1.	
ELEVATOR HOISTWAY	1 hr	3.5.3.1.	
SERVICE ROOMS (CONTAINING FUEL FIRED APPLIANCES)	1 hr	3.6.2.1.	
COMBUSTIBLE REFUSE STORAGE	1 hr	3.6.3.5.	
VERTICAL SERVICE SPACES	1 hr	3.6.3.1.	
FIREWALL(S)	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	3.2.3.4.	



CASCADIA ARCHITECTS INC

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**GVHS - 1901 Jerome**

Greater Victoria Housing Society

Project North

Sheet Name  
**Building Code Review**

Date  
May 30, 2023

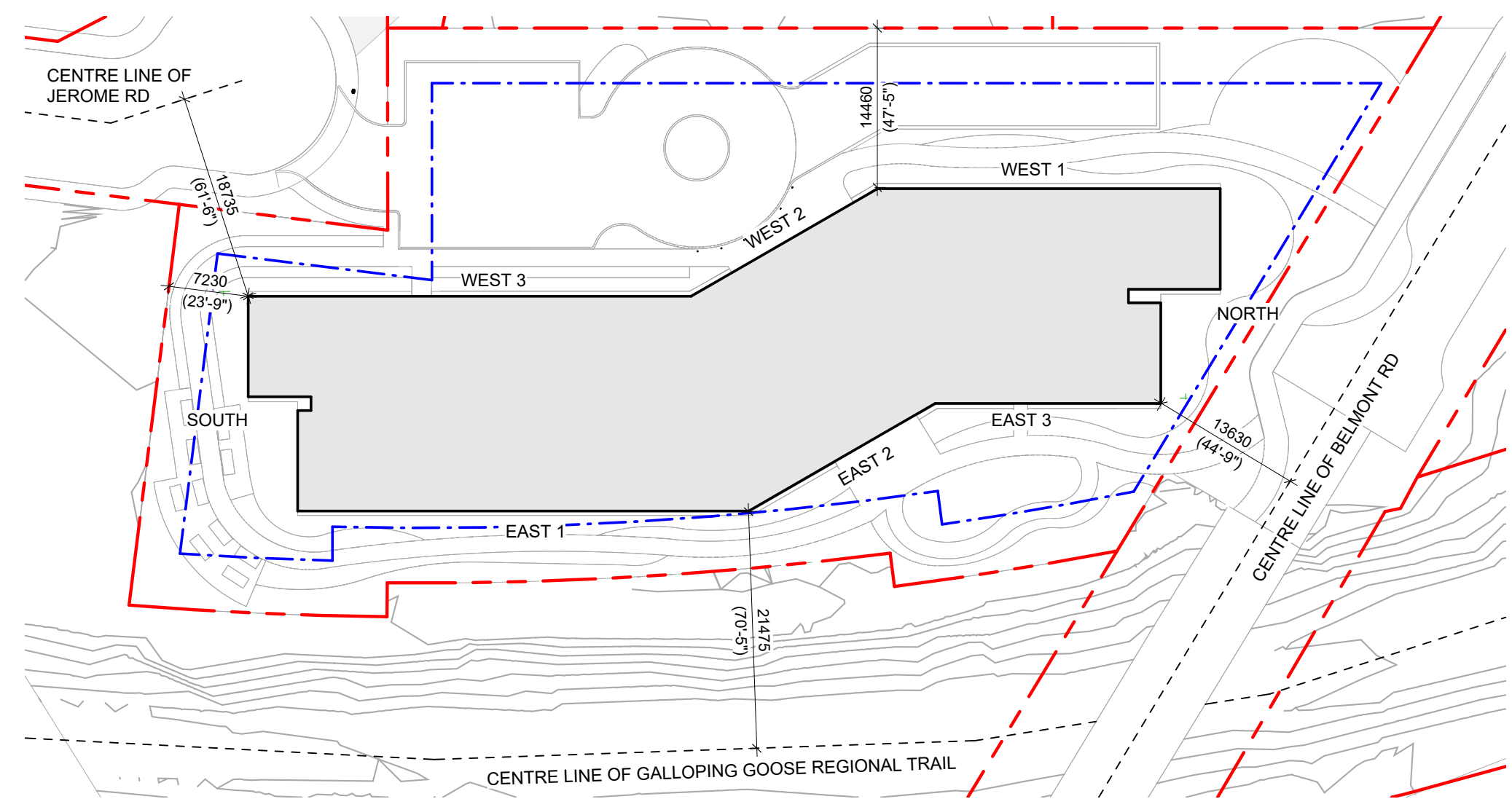
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2139

Revision  
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Sheet #  
**A051**





1 Limiting Distance Key  
SCALE = 1 : 500



2 Spatial Separation - North  
SCALE = 1 : 200

**NORTH ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 384.1 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 133.5 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 35%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



3 Spatial Separation - East 1  
SCALE = 1 : 200

**EAST 1 ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 931.7 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 243.0 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 26%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



NOTE: ELEVATION FACES ARE FOLDED OUT

4 Spatial Separation - East 2  
SCALE = 1 : 200

**EAST 2 ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 396.8 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 122.7 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 31%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



NOTE: ELEVATION FACES ARE FOLDED OUT

5 Spatial Separation - East 3  
SCALE = 1 : 200

**EAST 3 ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 534.8 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 116.9 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 22%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



6 Spatial Separation - South  
SCALE = 1 : 200

**SOUTH ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 384.1 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = 7.24 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 66%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 133.5 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 35%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = > 50 TO < 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = 45 MIN  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



7 Spatial Separation - West 1  
SCALE = 1 : 200

**WEST 1 ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 646.2 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 163.3 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 25%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



NOTE: ELEVATION FACES ARE FOLDED OUT

8 Spatial Separation - West 2  
SCALE = 1 : 200

**WEST 2 ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 396.8 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 100.4 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 25%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE



NOTE: ELEVATION FACES ARE FOLDED OUT

9 Spatial Separation - West 3  
SCALE = 1 : 200

**WEST 3 ELEVATION**  
**TABLE 3.2.3.1-D. GROUP C. SPRINKLERED**  
ACTUAL AREA OF EXPOSED BUILDING FACE = 831.6 m<sup>2</sup>  
ACTUAL LIMITING DISTANCE = > 9.0 m  
ALLOWABLE AREA OF UNPROTECTED OPENINGS = 100%  
ACTUAL AREA OF UNPROTECTED OPENINGS = 216.7 m<sup>2</sup>  
ACTUAL AREA OF UNPROTECTED OPENINGS = 26%

**MINIMUM CONSTRUCTION REQUIREMENTS FOR EXPOSING BUILDING FACE**  
MAXIMUM AREA OF UNPROTECTED OPENINGS PERMITTED = 100%  
MINIMUM REQUIRED FIRE-RESISTANCE RATING = N/A  
TYPES OF CONSTRUCTION REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE  
TYPED OF CLADDING REQUIRED = COMBUSTIBLE OR NONCOMBUSTIBLE

DEVELOPMENT PERMIT APPLICATION DEC 9, 2022		
NO.	DESCRIPTION	DATE



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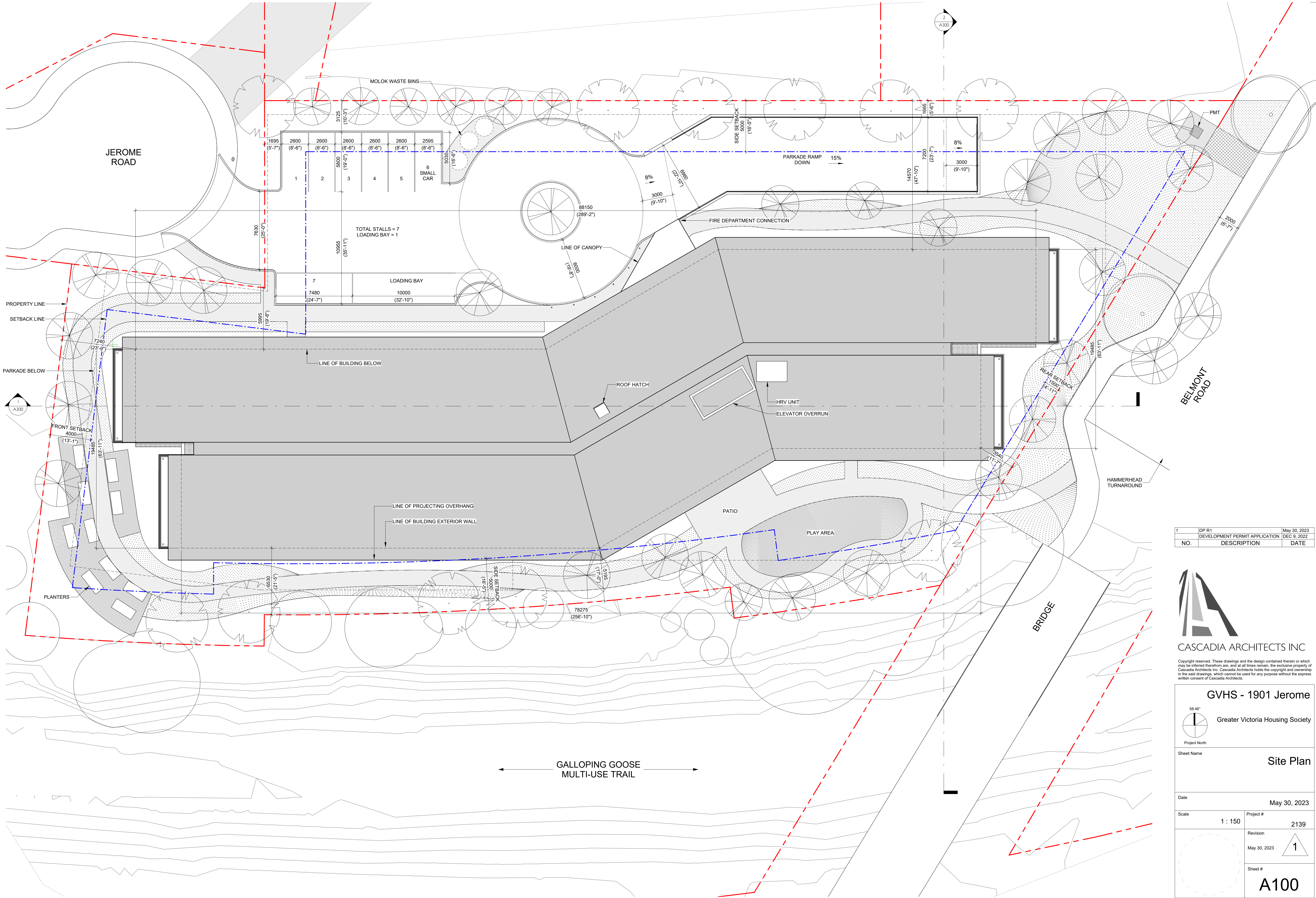
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**GVHS - 1901 Jerome**  
Greater Victoria Housing Society  
Project North  
Sheet Name

**Spatial Separation**

Date	May 30, 2023
Scale	As indicated
Project #	2139
Revision	△
Sheet #	<b>A052</b>





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1	DP R1 DEVELOPMENT PERMIT APPLICATION	May 30, 2023
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**GVHS - 1901 Jerome**

Greater Victoria Housing Society

Project North

Sheet Name: **Site Plan**

Date: **May 30, 2023**

Scale: **1 : 150**

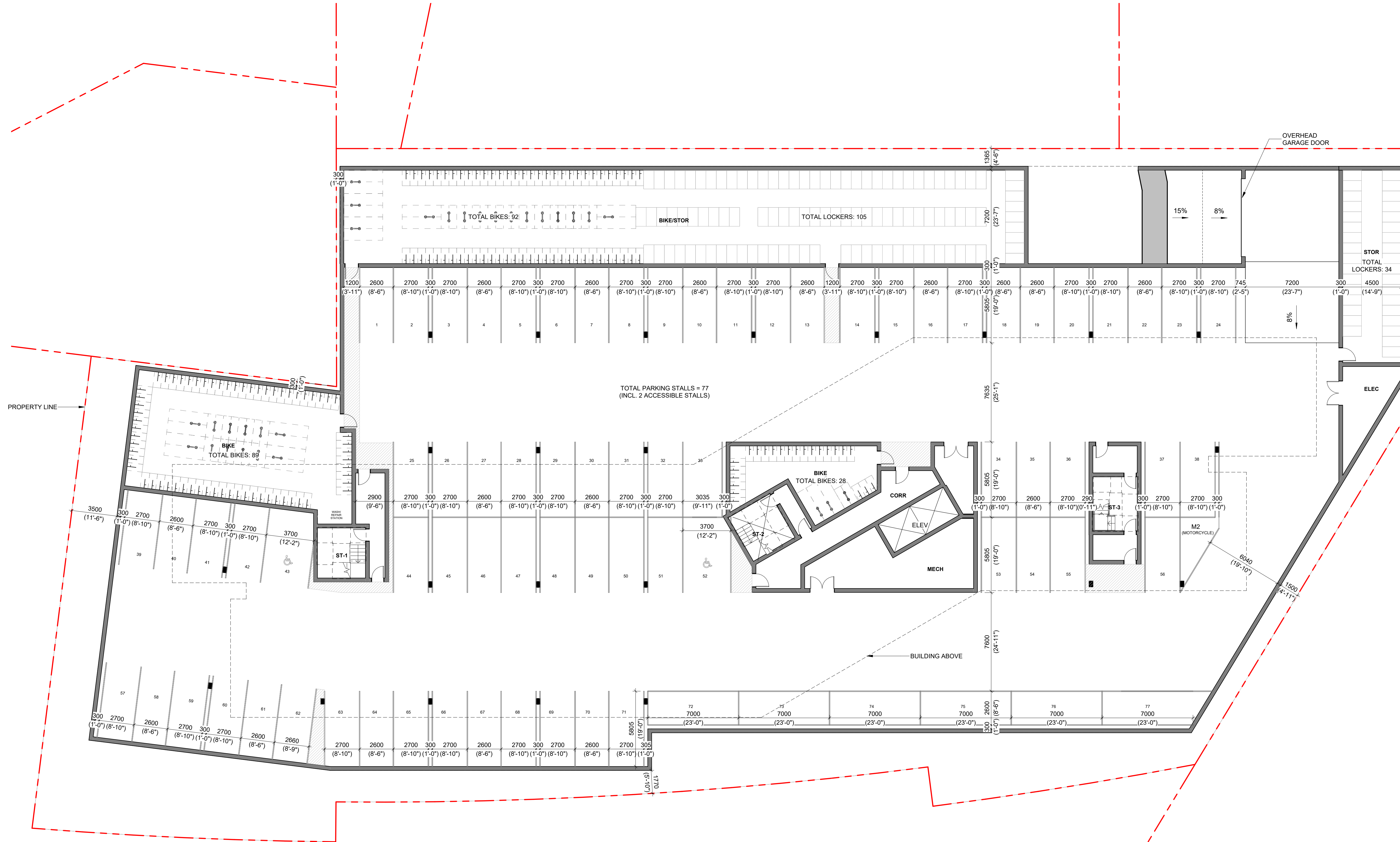
Project #: **2139**

Revision: **1**

May 30, 2023

Sheet #: **A100**





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**GVHS - 1901 Jerome**

58.46°  
Project North  
Greater Victoria Housing Society

Sheet Name  
**Parkade Plan**

Date  
May 30, 2023

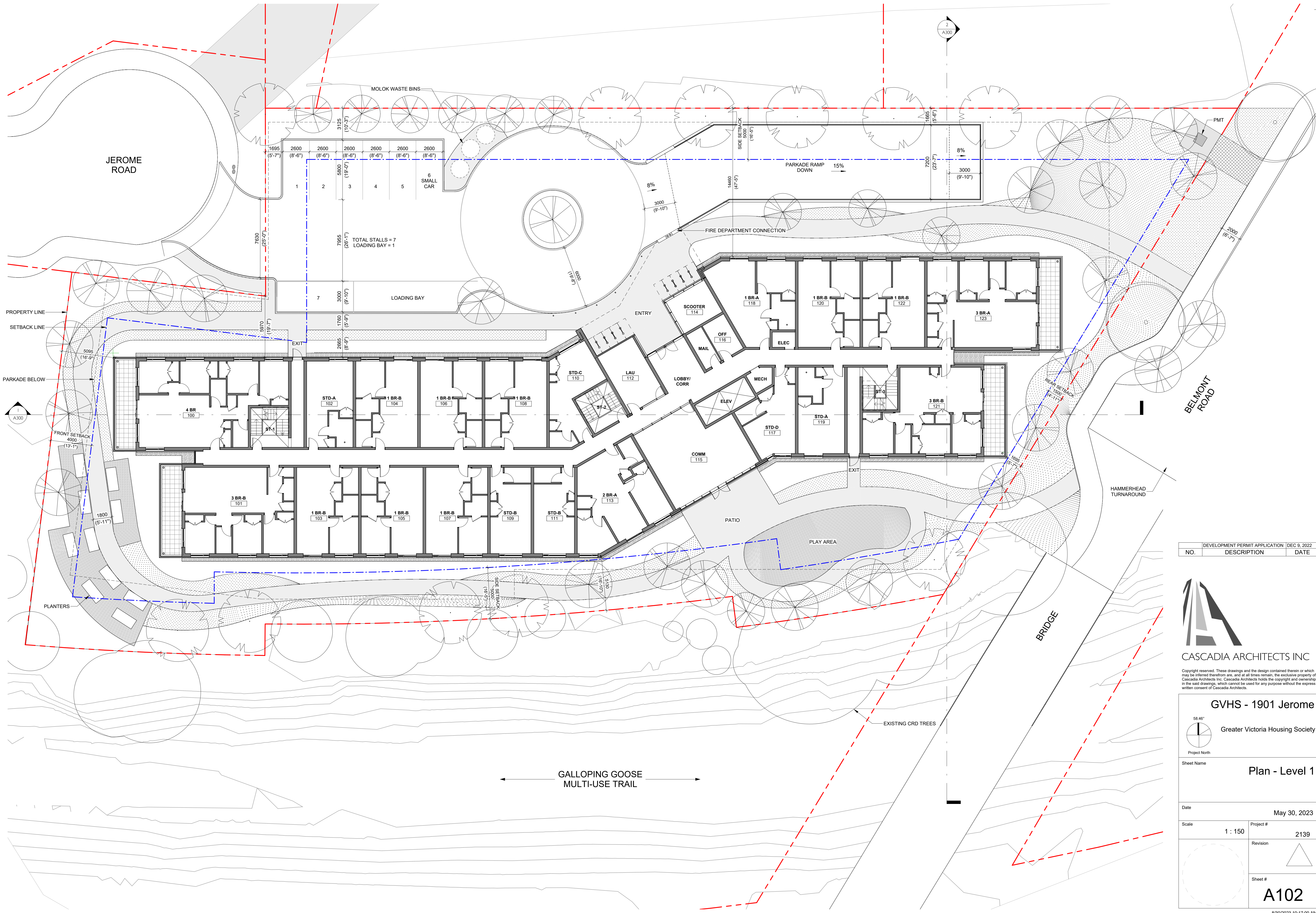
Scale  
1 : 150

Project #  
2139

Revision  
[Symbol]

Sheet #  
**A101**





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58.46°  
Project North

Sheet Name  
**Plan - Level 1**

Date  
May 30, 2023

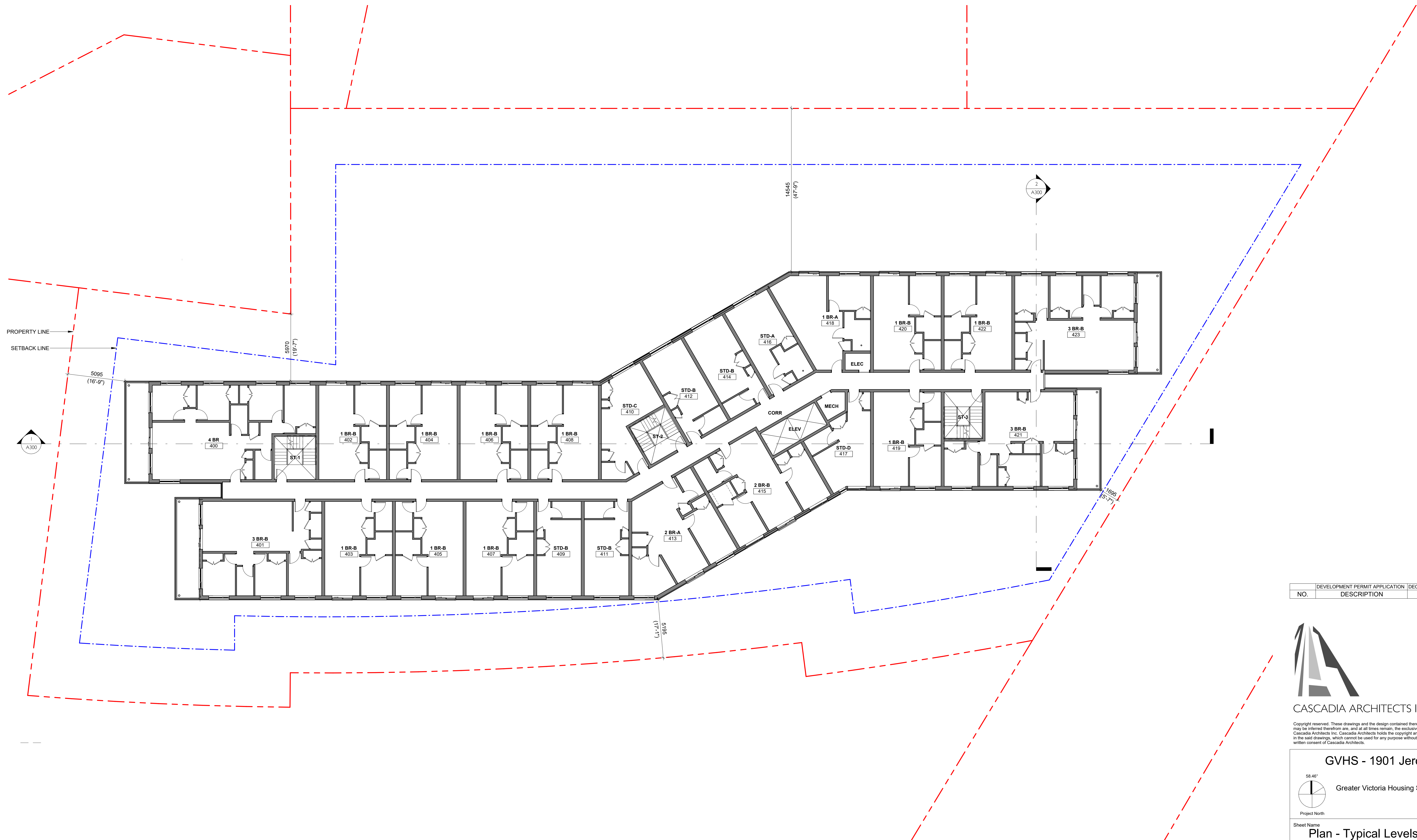
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Project #  
2139

Revision  
A

Sheet #  
**A102**

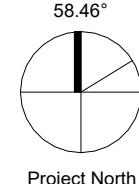
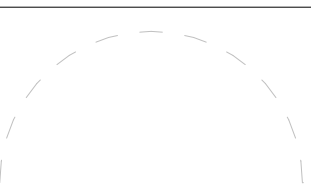
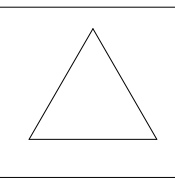




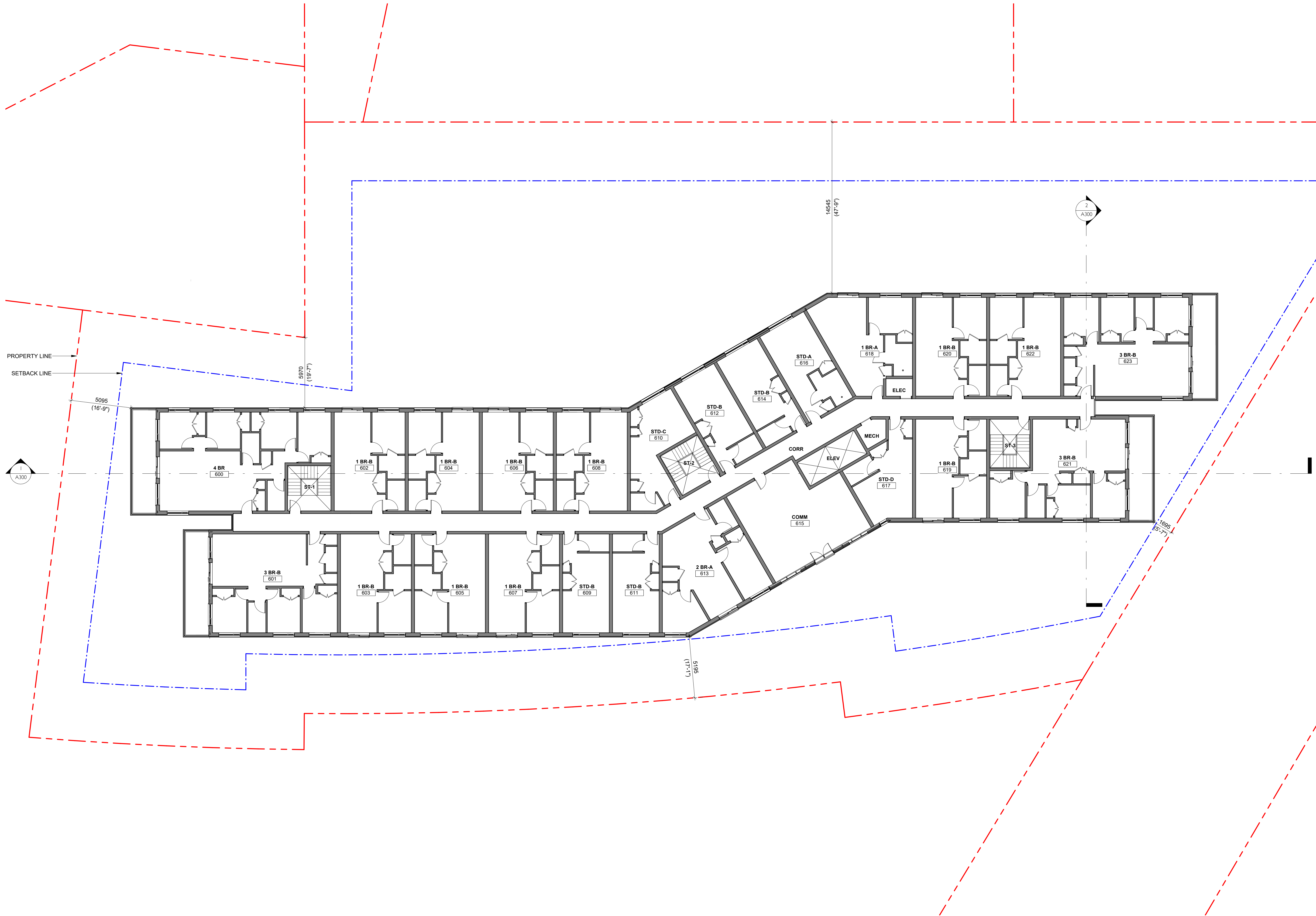
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NO.	DESCRIPTION	DATE



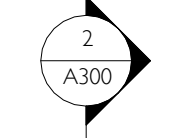
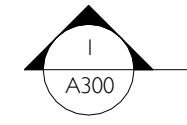
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<b>GVHS - 1901 Jerome</b>	
58.46°  Project North	Greater Victoria Housing Society
Sheet Name <b>Plan - Typical Levels 2-5</b>	
Date May 30, 2023	
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	Sheet # <b>A103</b>





PROPERTY LINE  
SETBACK LINE



DEVELOPMENT PERMIT APPLICATION DEC 9, 2022		
NO.	DESCRIPTION	DATE

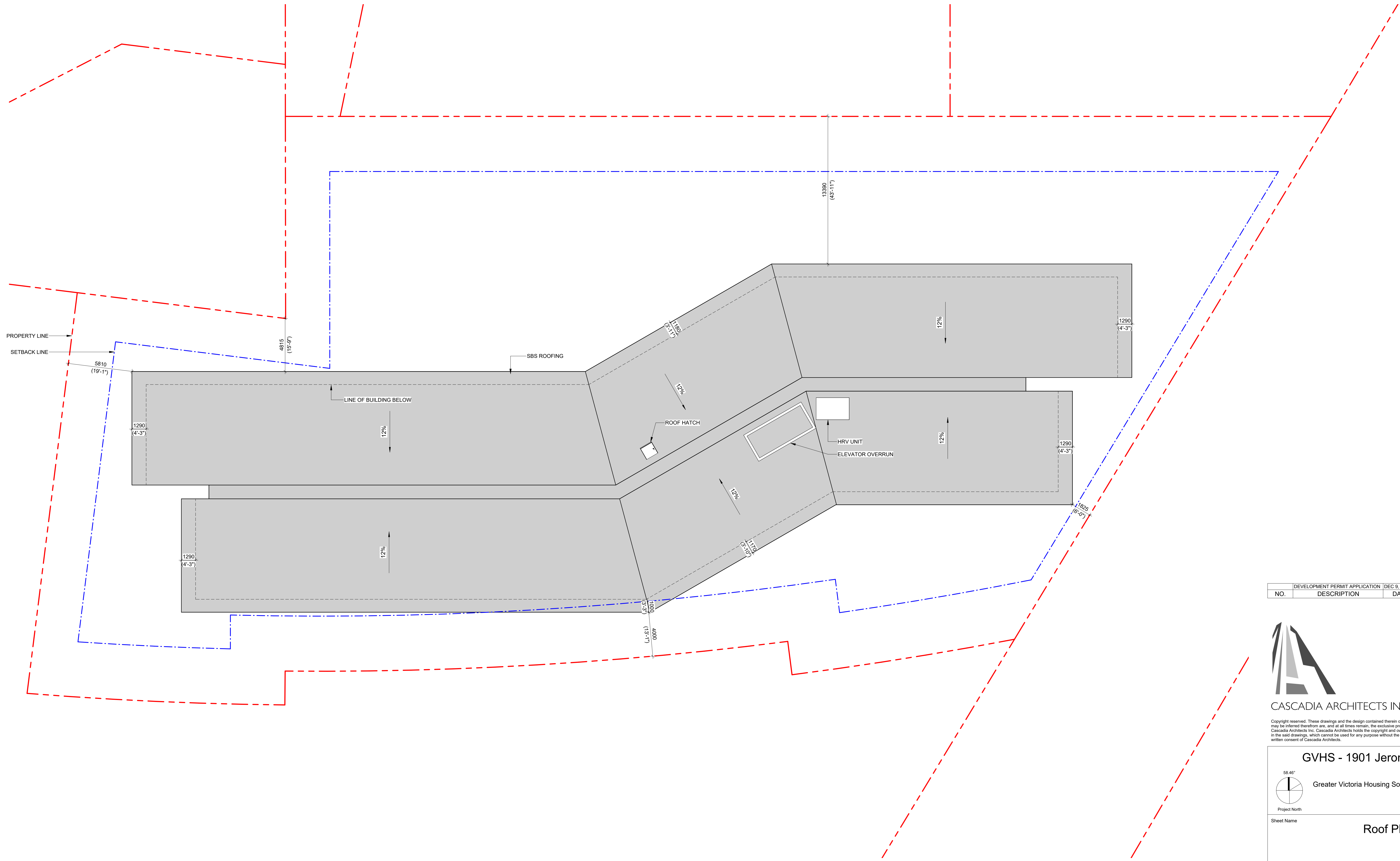


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<b>GVHS - 1901 Jerome</b>	
58.46° 	Greater Victoria Housing Society
Project North	
Sheet Name <b>Plan - Level 6</b>	
Date May 30, 2023	
Scale 1 : 150	Project # 2139
	Revision 
Sheet # <b>A104</b>	



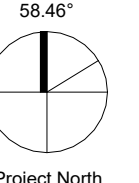
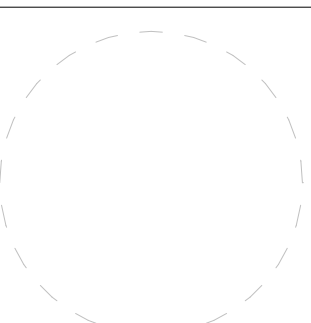
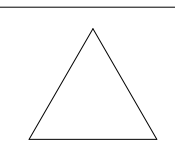


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NO.	DESCRIPTION	DATE



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<b>GVHS - 1901 Jerome</b>	
58.46°  Project North	Greater Victoria Housing Society
Sheet Name <b>Roof Plan</b>	
Date May 30, 2023	
Scale 1 : 150	Project # 2139
	Revision 
Sheet # <b>A105</b>	





1 East Elevation  
SCALE = 1 : 150



2 North Elevation  
SCALE = 1 : 150

## EXTERIOR MATERIAL LEGEND

1	Fiber Cement Shingle Siding - Type 1 James Hardie or similar Dream Collection - Brown Clay		
2	Fiber Cement Shingle Siding - Type 2 James Hardie or similar Dream Collection - Coral Sand		
3	Fiber Cement Shingle Siding - Type 3 James Hardie or similar Dream Collection - East Coast Blue		
4	Fiber Cement Shingle Siding - Type 4 James Hardie or similar Dream Collection - Transparent Blue		
5	Prefinished Metal Wall Panel - Type 1 Longboard Panelboard Graphite - Solid Colors		
6	Prefinished Metal Wall Panel - Type 2 Tongue and Groove Solid Color - Cream		
7	Masonry Stacked Bond Brick Interstate - Sawgrass		
8	Prefinished Metal Fascia Stone Grey Cascadia Metals		
9	Aluminum Curtain Wall Anodized Aluminum - Black		
10	Masonry Stacked Bond Brick Mutual Material Coal Creek		

Brick images for colour only. Application to be stacked bond brick pattern.

NO.	DESCRIPTION	DATE
1	DP R1 DEVELOPMENT PERMIT APPLICATION	May 30, 2023



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Sheet Name  
Elevations and Materials

Date  
May 30, 2023

Scale  
1 : 150

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2139

Revision  
May 30, 2023

Sheet #  
A200





1 West Elevation  
SCALE = 1 : 150



2 South Elevation  
SCALE = 1 : 150

### EXTERIOR MATERIAL LEGEND

<p><b>1</b> Fiber Cement Shingle Siding - Type 1 James Hardie or similar Dream Collection - Brown Clay</p> <p><b>2</b> Fiber Cement Shingle Siding - Type 2 James Hardie or similar Dream Collection - Coral Sand</p> <p><b>3</b> Fiber Cement Shingle Siding - Type 3 James Hardie or similar Dream Collection - East Coast Blue</p> <p><b>4</b> Fiber Cement Shingle Siding - Type 4 James Hardie or similar Dream Collection - Transparent Blue</p> <p><b>5</b> Prefinished Metal Wall Panel - Type 1 Longboard Panelboard Graphite - Solid Colors</p> <p><b>6</b> Prefinished Metal Wall Panel - Type 2 Tongue and Groove Solid Color - Cream</p> <p><b>7</b> Masonry Stacked Bond Brick Interstate - Sawgrass</p> <p><b>8</b> Prefinished Metal Fascia Stone Grey Cascadia Metals</p> <p><b>9</b> Aluminum Curtain Wall Anodized Aluminum - Black</p> <p><b>10</b> Masonry Stacked Bond Brick Mutual Material Coal Creek</p>	
---	--

Brick images for colour only. Application to be stacked bond brick pattern.

NO.	DESCRIPTION	DATE
1	DP R1 DEVELOPMENT PERMIT APPLICATION	May 30, 2023
		DEC 9, 2022

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**GVHS - 1901 Jerome**

Greater Victoria Housing Society

Sheet Name  
**Elevations and Materials**

Date  
May 30, 2023

Scale  
1 : 150

Project #  
2139

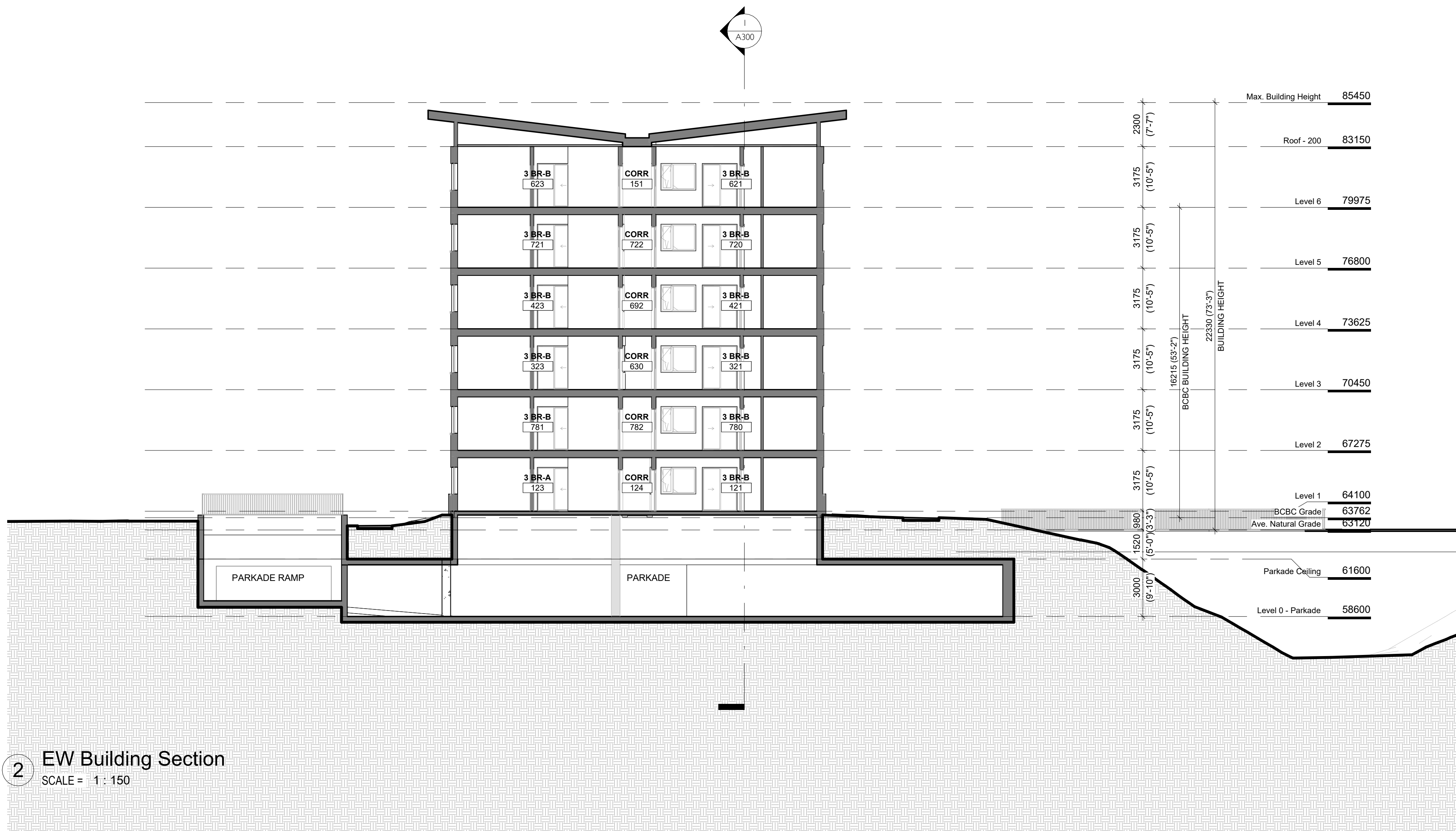
Revision  
May 30, 2023 **1**

Sheet #  
**A201**





1 NS Building Section  
SCALE = 1 : 150



2 EW Building Section  
SCALE = 1 : 150

DEVELOPMENT PERMIT APPLICATION   DEC 9, 2022		
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58.46°	Greater Victoria Housing Society
Project North	
Sheet Name	Building Sections
Date	May 30, 2023
Scale	1 : 150
Project #	2139
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Sheet #	A300





VIEW FROM BELMONT ROAD



VIEW FROM JEROME ROAD



VIEW FROM RAVINE TOWARDS PLAY AREA



LOBBY ENTRANCE



VIEW OF LOBBY FROM BELMONT



CLOSE UP VIEW OF LOBBY FROM BELMONT PATH



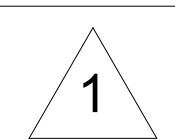
VIEW OF LOBBY FROM TURNAROUND

1	DP R1	May 30, 2023
	DEVELOPMENT PERMIT APPLICATION	DEC 9, 2022
NO.	DESCRIPTION	DATE

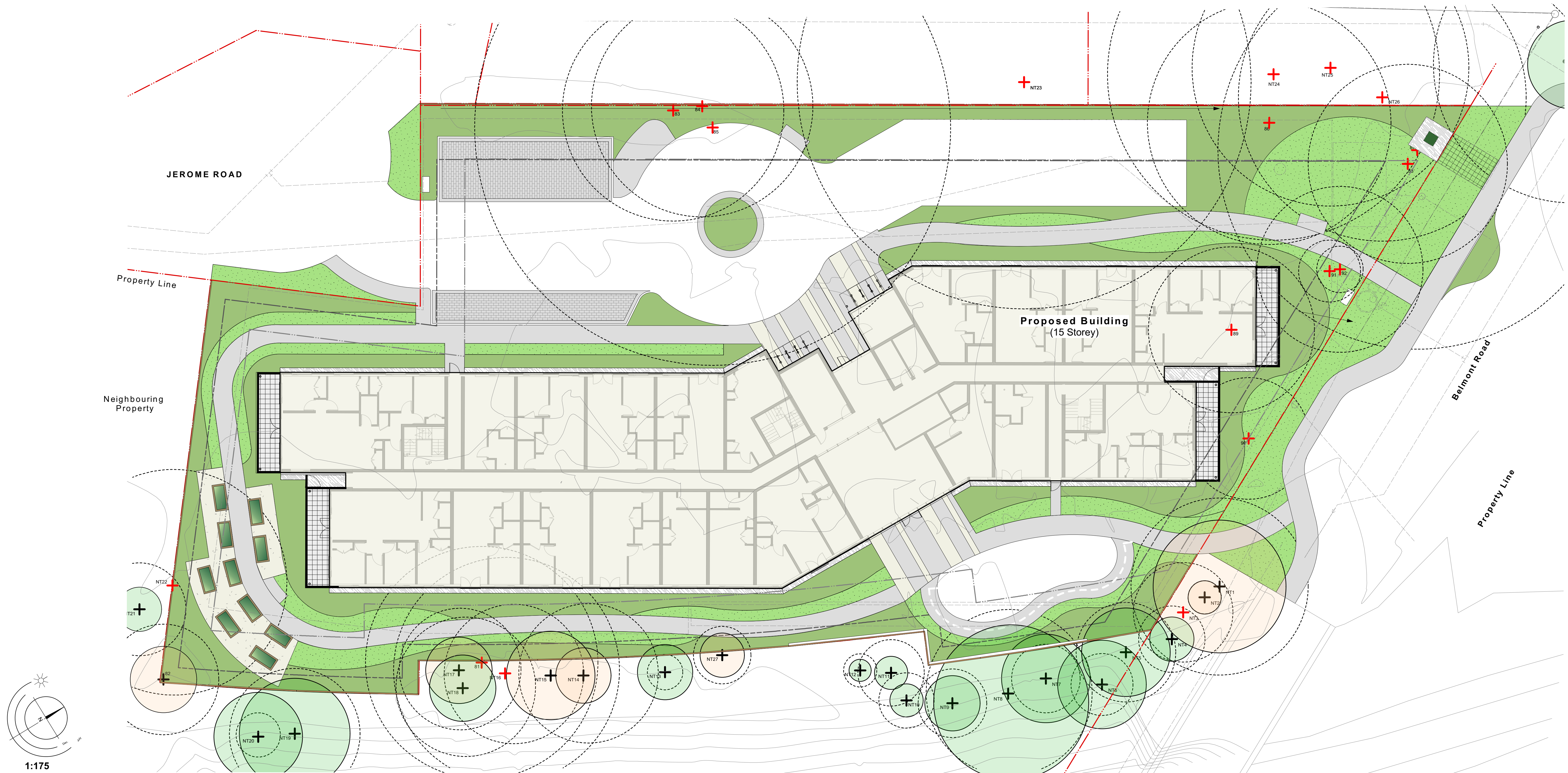


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<b>GVHS - 1901 Jerome</b>	
Greater Victoria Housing Society	
Sheet Name	<b>Renderings</b>
Date	May 30, 2023
Scale	Project # 2139
	Revision May 30, 2023 <b>1</b>
	Sheet # <b>A900</b>



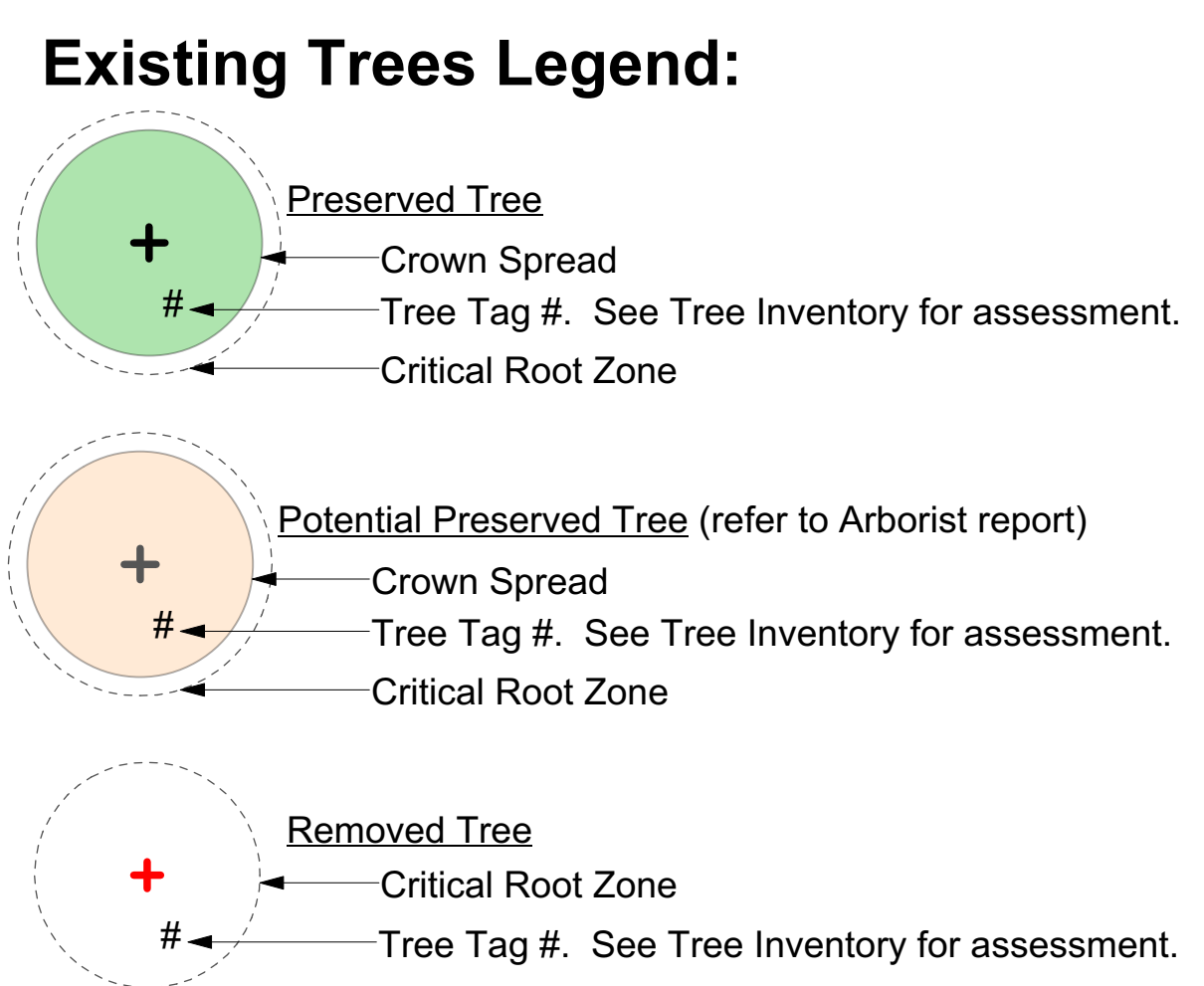


Tag #	Species?	Location (D, CR, S, CV)	Bylaw Protected (Y/N)	Tree Name	Common	DBH (cm)	Height (m)	Condition	Relative Value	Retention	General Field Observations	Tree Retention / Location	Retention
81	Yes	Shared CRZ	Yes	Grand Fir	Abies grandis	69	12	10.4	Poor	Good	On property line, shared ownership, asymmetric crown.	Conflict with underground parking	X
82	Yes	On-site	No	Holly	Ilex spp.	25.21	6	3.7	Good	Fair	Included back in survey.	May be impacted by underground parking, invasive species.	TBD
83	Yes	On-site	Yes	Douglas Fir	Pseudotsuga menziesii	66	10	9.9	Poor	Good	Deadwood, multiple leaders. Distance with CRZ best side.	Conflict with underground parking	X
84	Yes	Shared	Yes	Douglas Fir	Pseudotsuga menziesii	65	10	10.2	Poor	Good	Distance with CRZ (best side).	Conflict with underground parking	X
85	Yes	On-site	Yes	Douglas Fir	Pseudotsuga menziesii	90.88	12	18.9	Poor	Good	Condition crown at base, show some top with defoliated leader. Distance with CRZ best side.	Within underground parking boundary	X
86	Yes	On-site	Yes	Douglas Fir	Pseudotsuga menziesii	72	10	10.8	Poor	Good	Asymmetric crown due to wind, show some top with defoliated leader. Distance with CRZ best side.	Within underground parking boundary	X
87	Yes	On-site	Yes	Douglas Fir	Pseudotsuga menziesii	120	12	18	Poor	Good	Corrected lean, damaged surface root system - CRZ from back.	Conflict with underground parking & adjacent tree	X
88	Yes	On-site	Yes	Garry Oak	Quercus garryana	82	18	6.2	Good	Fair	Asymmetric crown due to adjacent to 87, blocked canopy and damaged trees.	Conflict with removal of 87	X
89	Yes	On-site	Yes	Douglas Fir	Pseudotsuga menziesii	49	10	7.4	Poor	Fair	Condition crown at top, functionally dead.	Within building footprint	X
90	Yes	On-site	Yes	Western Red Cedar	Thuja plicata	36	6	5.4	Poor	Good	Within underground parking footprint.	X	

91	Yes	On-site	Yes	Douglas Fir	Pseudotsuga menziesii	37	5	5.6	Poor	Good	Subtle lean.	Conflict with underground parking	X		
92	Yes	On-site	Yes	Western Red Cedar	Thuja plicata	30	6	4.5	Poor	Good	Fair	Subtle	Conflict with underground parking	X	
93	Yes	Municipal	Yes	Douglas Fir	Pseudotsuga menziesii	82	8	12.3	Poor	Good	N/A	Located -7.5m from fence corner.	Appears to have been removed.	N/A	
94	Yes	Municipal	Municipal	Douglas Fir	Pseudotsuga menziesii	63	12	7.9	Poor	Fair	Fair	N/A	Flagged for hygiene tree clearance.	Potential impacts from adjacent tree removal.	TBD
95	Yes	Municipal	Municipal	Douglas Fir	Pseudotsuga menziesii	50	3	1.5	Poor	Fair	Fair	N/A	Suppressed, dead aerial stems.	Potential impacts from adjacent tree removal.	TBD
96	Yes	Municipal	Municipal	Western Red Cedar	Thuja plicata	30"	5	4.5	Poor	Good	N/A	Up on trunk, asymmetric crown.	Conflict with underground parking	X	
97	Yes	Municipal	Municipal	Cherry	Prunus spp.	Multi-trunk	4	3	Moderate	Fair	Fair	N/A	Crowned in tree - 10 stems up to 15m DBH, 1m from property corner.	Conflict with underground parking	X
98	Yes	CRD	CRD	Garry Oak	Quercus garryana	-30.25	6	3.9	Good	Good	N/A	On slope, very trained - 1.5m from property line.	May be impacted by underground parking.	Retain	
99	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	Multi-trunk	6	3	Moderate	Fair	N/A	Located -4.5m from fence, 17 stems up to 20m DBH.	May be impacted by adjacent tree removal.	Retain	
100	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	Multi-trunk	6	3	Moderate	Fair	N/A	Located -3m from fence, 10 stems up to 20m DBH.	May be impacted by adjacent tree removal.	Retain	
101	Yes	CRD	CRD	Black Cottonwood	Populus trichocarpa	-20.95	10	13	Poor	Good	N/A	Located -4.5m from fence, on slope.	May be impacted by underground parking.	Retain	
102	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	Multi-trunk	5	3.5	Moderate	Fair	N/A	Located -3m from fence, up to 20m DBH.	May be impacted by adjacent tree removal.	Retain	

103	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	-20	3	2.4	Moderate	Good	Fair	N/A	Located -1.5m from fence.	Retain		
104	Yes	CRD	CRD	Black Cottonwood	Populus trichocarpa	-20	3	3	Poor	Good	Good	N/A	Located -1.5m from fence.	Retain		
105	Yes	CRD	CRD	Black Cottonwood	Populus trichocarpa	-10	2	1.9	Poor	Good	Fair	N/A	Located -1.5m from fence.	Retain		
106	Yes	CRD	CRD	Grand Fir	Abies grandis	-20	5	4.5	Poor	Good	Good	N/A	Located -1m from fence.	May be impacted by underground parking & landscape path.	TBD	
107	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	25.21	5	4.5	Moderate	Good	Fair	N/A	Located -2m from fence, asymmetric crown.	Potential conflict with underground parking & landscape path.	TBD	
108	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	50	6	6	Moderate	Good	Fair	N/A	Located -2m from fence, asymmetric crown, sound at base with decay.	Potential conflict with underground parking & landscape path.	TBD	
109	Yes	CRD	CRD	Grand Fir	Abies grandis	66	8	9.9	Poor	Fair	Fair	N/A	Near property boundary, possibly trained historically.	Conflict with underground parking.	X	
110	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	26.24	6	4.6	Moderate	Good	Poor	N/A	Probably shared, asymmetric crown, large canopy at base.	Potential conflict with underground parking & landscape path, and adjacent tree removal.	TBD	
111	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	26.23	11.2	8	6.1	Moderate	Good	Fair	N/A	Near property boundary, asymmetric crown.	May be impacted by adjacent tree removal.	Retain
112	Yes	CRD	CRD	Big Leaf Maple	Acer macrophyllum	-40	10	6	Poor	Good	Fair	N/A	Located -2m from fence at top of slope, crown overhanging at 5m.	Conflict with underground parking.	Retain	
113	Yes	CRD	CRD	Cherry	Prunus spp.	Multi-trunk	8	2	Moderate	Fair	Fair	N/A	Located -2m from fence, 11 stems up to 15m DBH.	Conflict with underground parking.	Retain	
114	Yes	CRD	CRD	Western Red Cedar	Thuja plicata	-20	4	4.9	Poor	Good	Fair	N/A	Located -2m from fence, 10 stems up to 20m DBH.	Potential impacts from underground parking, adjacent tree removal.	Retain	

Quantity of Existing trees	# of Trees Retained	# of Trees Removed	Retention Bylaw section (if applicable)	Retention Tree Ratio	Replacement Trees Required
11	0	11 (B&S err.)	Part 6 - Section 9 (2)	2:1	22
On-site (Bylaw-protected)					
1	1	0	N/A	N/A	0
18	16	2	N/A	N/A	TBD by CRD
4	3	1	N/A	N/A	TBD Council
Off-site Trees (Bylaw-protected)					
4	0	4	Part 6 - Section 9 (2)	2:1	8
1	1	0	N/A	N/A	0
30	23	16	Total	30	48



PREPARED BY: Talmack Urban Forestry Consultants Ltd.  
Robert McRae - Consulting Arborist  
ISA Certified # PN-7125A  
Tree Risk Assessment Qualified  
Tree Appraisal Qualified Technician

# Tree Preservation Plan - 1901 Jerome Road

**LADR LANDSCAPE ARCHITECTS**  
Project No: 2002 24 Sept 2020  
Revision C: Dec. 6/22  
Revision B: Dec. 2/22  
Revision A: Nov. 16/22  
#3-864 Queens Ave. Victoria B.C. V8T 1M5  
Phone: (250) 598-0105




 #3-864 QUEENS AVE  
 VICTORIA, BC  
 V8T 1M5

 P. 250.598.0105  
 ADMIN@LADRLA.CA  
 WWW.LADRLA.CA

## 1901 Jerome: Landscape Budget Estimate

A. SOFT LANDSCAPE	Quantity	Units	Price	Extension
<b>1. PLANTS</b>				
Trees (6 cm caliper)	46	each	\$525.00	\$24,150.00
Trees (2.5m ht)	2	each	\$190.00	\$380.00
Shrubs (2m ht)	39	each	\$150.00	\$5,850.00
Shrubs (#7 pot)	64	each	\$135.00	\$8,640.00
Shrubs (#5 pot)	338	each	\$75.00	\$25,350.00
Shrubs (#3 pot)	53	each	\$57.00	\$3,021.00
Shrubs, Perennials, Annuals, Ferns, Groundcovers (#1 pot)	1224	each	\$16.50	\$20,196.00
<b>SUB-TOTAL PLANTS</b>				<b>\$87,587.00</b>
<b>2. GRASS</b>				
Sod	690	m.sq.	\$14.00	\$9,660.00
Grass Grid	14	m.sq.	\$50.00	\$700.00
<b>3. SOIL</b>				
Soil	720	m.cu.	\$32.00	\$23,040.00
Mulch	98	m.cu.	\$40.00	\$3,920.00
<b>SUBTOTAL SOFT LANDSCAPE</b>				<b>\$124,907.00</b>
<b>B. HARD LANDSCAPE</b>				
<b>1. IRRIGATION ALLOWANCE</b>				\$19,200.00
<b>2. SURFACING AND AGGREGATE</b>				
River Rock 155mm depth	14	m.cu.	\$98.00	\$1,372.00
Gravel 155mm depth	15	m.cu.	\$46.00	\$690.00
Decorative Concrete Pavers	69	m.sq.	\$135.00	\$9,315.00
Permeable Pavers	119	m.sq.	\$150.00	\$17,850.00
<b>4. SITE FURNISHINGS</b>				
Inverted 'U' Bicycle Racks	8	each	\$400.00	\$3,200.00
Benches	4	each	\$1,300.00	\$5,200.00
Raised Planters	10	each	\$400.00	\$4,000.00
<b>5. FENCING</b>				
Timber Perimeter Fence	935	l.m.	\$114.00	\$106,590.00
<b>SUBTOTAL HARD LANDSCAPE</b>				<b>\$167,417.00</b>
<b>TOTAL LANDSCAPE BUDGET ESTIMATE</b>				<b>\$292,324.00</b>
				<b>Exclusive of GST</b>
Prices include labour and materials. For bonding purposes only; this is not a construction estimate.				
Prepared by LADR Landscape Architects				25-Sep-23





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# **1901 JEROME ROAD (85 BELMONT ROAD)—COLWOOD, BC**

## **CONSTRUCTION IMPACT ASSESSMENT & TREE MANAGEMENT PLAN**

PREPARED FOR: Greater Victoria Housing Society  
2326 Government Street  
Victoria, BC  
V8T 5G5

PREPARED BY: Talmack Urban Forestry Consultants Ltd.  
Robert McRae – Consulting Arborist  
ISA Certified # PN-7125A  
Tree Risk Assessment Qualified  
Tree Appraisal Qualified Technician

DATE OF ISSUANCE: November 15, 2022



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## APPENDICES

Appendix A Tree Management Plan (T1)

Appendix B Hard Surfaces Above Tree Roots diagram

## REVISION RECORD

REVISION	DESCRIPTION	DATE (YYYY-MM-DD)	ISSUED BY
0	Original TMP report for the proposed construction	2019-04-04	NB
1	TMP report based on updated construction plans	2020-09-11	RM
2	TMP report based on updated construction plans	2020-11-05	RM
3	TMP report based on new design for construction proposal	2022-11-15	RM



# 1. INTRODUCTION

Talmack Urban Forestry Consultants Ltd. was engaged to complete a tree inventory, construction impact assessment and tree management plan for the trees at the following proposed project:

Site:	1901 Jerome Road (85 Belmont Road)
Municipality	City of Colwood
Client Name:	Greater Victoria Housing Society
Dates of Site Visit(s):	March 22, 2019 (initial inventory); August 24, 2020; November 4, 2020; October 19, 2022
Site Conditions:	Existing multi-storey housing complex with at grade parking. Off-site construction ongoing.
Weather During Site Visit:	Clear and sunny

The purpose of this report is to address requirements of the City of Colwood arborist report terms of reference and bylaw No. 1735. The construction impact assessment section of this report (section 8) is based on plans reviewed to date, including site architectural plans from Cascadia Architects (dated October 14, 2022). At this time, we have not reviewed a site servicing plan.

# 2. TREE INVENTORY METHODOLOGY

For the purposes of this report: the size, health, and structural condition of trees were documented. For ease of identification in the field, numerated metal tags are attached to the lower trunks of onsite trees. 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 building plans, eleven (11) on-site or shared bylaw-protected trees, four (4) off-site bylaw-protected trees, two (2) CRD-owned or shared trees, and one (1) Colwood-owned tree are likely to require removal due to impacts from the proposed construction.

As per Part 6—Section 9 (2) of Bylaw No. 1735, the fifteen (15) protected trees proposed for removal shall be replaced at a 2:1 ratio—a total of twenty-two (22) replacement trees will be required on-site and eight (8) off-site. Compensation for removal of publicly-owned trees shall be determined by the City of Colwood and the CRD.



## 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 vigor. 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). **For the purposes of this report regarding multi-stemmed trees (as per Colwood bylaw No. 1735): each trunk was measured 1.4 metres above the highest point of the natural grade of the ground measured from grade and the DBH of the tree was calculated as the square root of the sum of all squared stem DBHs rounded to the nearest centimeter (e.g.  $\sqrt{[(12\text{cm})^2 + (14\text{ cm})^2 + (17\text{cm})^2]} = \sqrt{1629} = 25\text{ cm}$ ).**

**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



Table 1. Tree Inventory

Tag or ID #	Surveyed? (Yes/No)	Location (On, Off, Shared, City)	Bylaw protected? (Yes/No)	Name		dbh (cm)	Dripline diameter (m)	Critical root zone radius (m)	Relative tolerance	Condition		Retention Suitability (onsite trees)	General field observations/remarks	Tree retention / location comments	Retention status
				Common	Botanical					Health	Structural				
81	Yes	Shared CRD	Yes	Grand Fir	<i>Abies grandis</i>	69	12	10.4	Poor	Good	Fair	Conditional	On property line, shared ownership, asymmetric crown.	Conflict with underground parking.	X
82	Yes	On-site	No	Holly	<i>Ilex spp.</i>	25,21,18	6	3.7	Good	Fair	Fair-poor	Conditional	Included bark in unions.	May be impacted by underground parking, invasive species.	TBD
83	Yes	On-site	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	66	10	9.9	Poor	Good	Fair	Suitable	Deadwood, multiple leaders. Disturbance within CRZ (west side).	Conflict with underground parking.	X
84	Yes	Shared	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	68	10	10.2	Poor	Good	Fair	Suitable	Disturbance within CRZ (west side).	Conflict with underground parking.	X
85	Yes	On-site	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	90,88	12	18.9	Poor	Good	Fair	Suitable	Codominant union at base, 90cm stem topped with deflected leader. Disturbance within CRZ (west side).	Within underground parking footprint.	X
86	Yes	On-site	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	72	10	10.8	Poor	Good	Fair	Suitable	Asymmetric crown due to competition, topped, corrected lean. Disturbance within CRZ (west side).	Within underground parking footprint.	X
87	Yes	On-site	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	120	12	18	Poor	Good	Fair	Suitable	Corrected lean, damaged surface root in lawn ~7m from trunk.	Conflict with underground parking & adjacent tree removals.	X
88	Yes	On-site	Yes	Garry Oak	<i>Quercus garryana</i>	62 below union	18	6.2	Good	Fair	Fair	Suitable	Asymmetric crown due to adjacent fir 87, dieback, crossing and damaged limbs.	Conflict with removal of #87.	X
89	Yes	On-site	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	49	10	7.4	Poor	Poor	Fair	Unsuitable	Codominant union at 3m, functionally dead.	Within building footprint.	X
90	Yes	On-site	Yes	Western Red Cedar	<i>Thuja plicata</i>	36	6	5.4	Poor	Good	Fair	Suitable		Within underground parking footprint.	X



91	Yes	On-site	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	37	5	5.6	Poor	Good	Fair	Suitable	Slight lean.	Conflict with underground parking.	X
92	Yes	On-site	Yes	Western Red Cedar	<i>Thuja plicata</i>	30	6	4.5	Poor	Good	Fair	Suitable		Conflict with underground parking.	X
601	Yes	Municipal	Yes	Douglas-fir	<i>Pseudotsuga menziesii</i>	82	8	12.3	Poor	Good	Good	N/A	Located ~7.5m from fence corner.	Appears to have been removed.	N/A
NT1	Yes	Municipal	Municipal	Douglas-fir	<i>Pseudotsuga menziesii</i>	52	12	7.8	Poor	Fair	Fair-poor	N/A	Topped for hydro line clearance.	Potential impacts from underground parking.	TBD
NT2	Yes	Municipal	Municipal	Douglas-fir	<i>Pseudotsuga menziesii</i>	10	3	1.5	Poor	Fair	Fair-poor	N/A	Suppressed, dead central leader.	Potential impacts from adjacent tree removals.	TBD
NT3	Yes	Municipal	Municipal	Western Red Cedar	<i>Thuja plicata</i>	30*	5	4.5	Poor	Good	Fair	N/A	Ivy on trunk, asymmetric crown.	Conflict with underground parking.	X
NT4	Yes	Municipal	Municipal	Cherry	<i>Prunus spp.</i>	Multistem	4	3	Moderate	Fair	Fair-poor	N/A	Covered in ivy, ~10 stems up to 15cm DBH, ~1m from property corner.		Retain
NT5	Yes	CRD	CRD	Garry Oak	<i>Quercus garryana</i>	~30,25	8	3.9	Good	Good	Fair	N/A	On slope, ivy, located ~1.5m from property line	May be impacted by underground parking.	Retain*
NT6	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	Multistem	8	3	Moderate	Fair	Fair	N/A	Located ~4-5m from fence, ~7 stems up to 25cm DBH.		Retain
NT7	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	Multistem	8	3.5	Moderate	Fair	Fair	N/A	Located ~3m from fence, ~10 stems up to 20cm DBH.		Retain
NT8	Yes	CRD	CRD	Black Cottonwood	<i>Populus trichocarpa</i>	~50, 50, 50	14	13	Poor	Good	Fair	N/A	Located ~4-5m from fence, on slope.	May be impacted by underground parking.	Retain*
NT9	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	Multistem	5	3.5	Moderate	Fair	Fair	N/A	Located ~3m from fence, up to 20cm DBH.		Retain



NT10	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	~20	3	2.4	Moderate	Good	Fair	N/A	Located ~2m from fence.		Retain
NT11	Yes	CRD	CRD	Black Cottonwood	<i>Populus trichocarpa</i>	~20	3	3	Poor	Good	Good	N/A	Located ~1.5m from fence.		Retain
NT12	Yes	CRD	CRD	Black Cottonwood	<i>Populus trichocarpa</i>	~10	2	1.5	Poor	Good	Fair	N/A	Located ~1.5m from fence.		Retain
NT13	Yes	CRD	CRD	Grand Fir	<i>Abies grandis</i>	~30	5	4.5	Poor	Good	Good	N/A	Located ~1m from fence.	May be impacted by underground parking & landscape path.	TBD
NT14	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	25,21,18	5	4.5	Moderate	Good	Fair	N/A	Located ~1m from fence, asymmetric crown.	Potential conflict with underground parking & landscape path.	TBD
NT15	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	50	8	6	Moderate	Good	Fair	N/A	Located next to fence, asymmetric crown, wound at base with decay.	Potential conflict with underground parking & landscape path.	TBD
NT16	Yes	CRD	CRD	Grand Fir	<i>Abies grandis</i>	66	8	9.9	Poor	Fair	Fair	N/A	Near property boundary, possibly topped historically.	Conflict with underground parking.	X
NT17	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	28,26,6	6	4.6	Moderate	Good	Poor	N/A	Possibly shared, asymmetric crown, large cavity at base.	Potential conflict with underground parking, landscape path, and adjacent tree removals.	TBD
NT18	Yes	CRD	CRD	Big Leaf Maple	<i>Acer macrophyllum</i>	28,23,19,12	6	5.1	Moderate	Good	Fair	N/A	Near property boundary, asymmetric crown	May be impacted by adjacent tree removals.	Retain*
NT19	Yes	CRD	CRD	Douglas-fir	<i>Pseudotsuga menziesii</i>	~40	10	6	Poor	Good	Fair	N/A	Located ~2m from fence at top of slope, codominant union at 5m		Retain
NT20	Yes	CRD	CRD	Cherry	<i>Prunus spp.</i>	Multistem	8	2	Moderate	Fair	Fair	N/A	Located ~2m from fence, 11 stems up to ~10cm DBH.		Retain
NT21	Yes	Off-site	No	Norway Spruce	<i>Picea abies</i>	~30	4	4.5	Poor	Good	Fair-poor	N/A	Located ~2m from fence, topped at 4m with deflected leader, pitch on trunk	Possible impacts from underground parking, adjacent tree removal.	Retain*



<b>NT22</b>	Yes	Shared	<b>Yes</b>	Douglas-fir	<i>Pseudotsuga menziesii</i>	~70	10	10.5	Poor	Good	Fair-poor	Conditional	Located next to fence, uplifting driveway, previously topped at 5m. Large limb failure recently.	Conflict with underground parking.	<b>X</b>
<b>NT23</b>	Yes	Off-site	<b>Yes</b>	Arbutus	<i>Arbutus menziesii</i>	94,73	14	17.9	Poor	Poor	Fair-poor	N/A	Advanced health decline, located next to fence, large pruning wound near base with decay, cavity on main stem at 3m.	Conflict with underground parking, existing health condition.	<b>X</b>
<b>NT24</b>	Yes	Off-site	<b>Yes</b>	Douglas-fir	<i>Pseudotsuga menziesii</i>	99	12	14.9	Poor	Good	Fair	N/A	Located ~1.5m from fence, topped near apex	Conflict with underground parking, off-site impacts.	<b>X</b>
<b>NT25</b>	Yes	Off-site	<b>Yes</b>	Douglas-fir	<i>Pseudotsuga menziesii</i>	84	10	12.6	Poor	Fair	Fair	N/A	Located ~2m from fence with stump in between, pitch and <i>Porodaedalea pini</i> fruiting body on trunk, topped near apex.	Conflict with underground parking, off-site impacts.	<b>X</b>
<b>NT26</b>	Yes	Off-site	<b>Yes</b>	Douglas-fir	<i>Pseudotsuga menziesii</i>	87	12	13.1	Poor	Good	Fair	N/A	Next to fence, topped historically.	Conflict with underground parking, off-site impacts.	<b>X</b>
<b>NT27</b>	Yes	CRD	<b>CRD</b>	Grand Fir	<i>Abies grandis</i>	~15	4	2.3	Poor	Good	Good	N/A	Possibly shared ownership, on west side of fence near east property boundary.	Potential impacts from underground parking & landscape path.	<b>TBD</b>



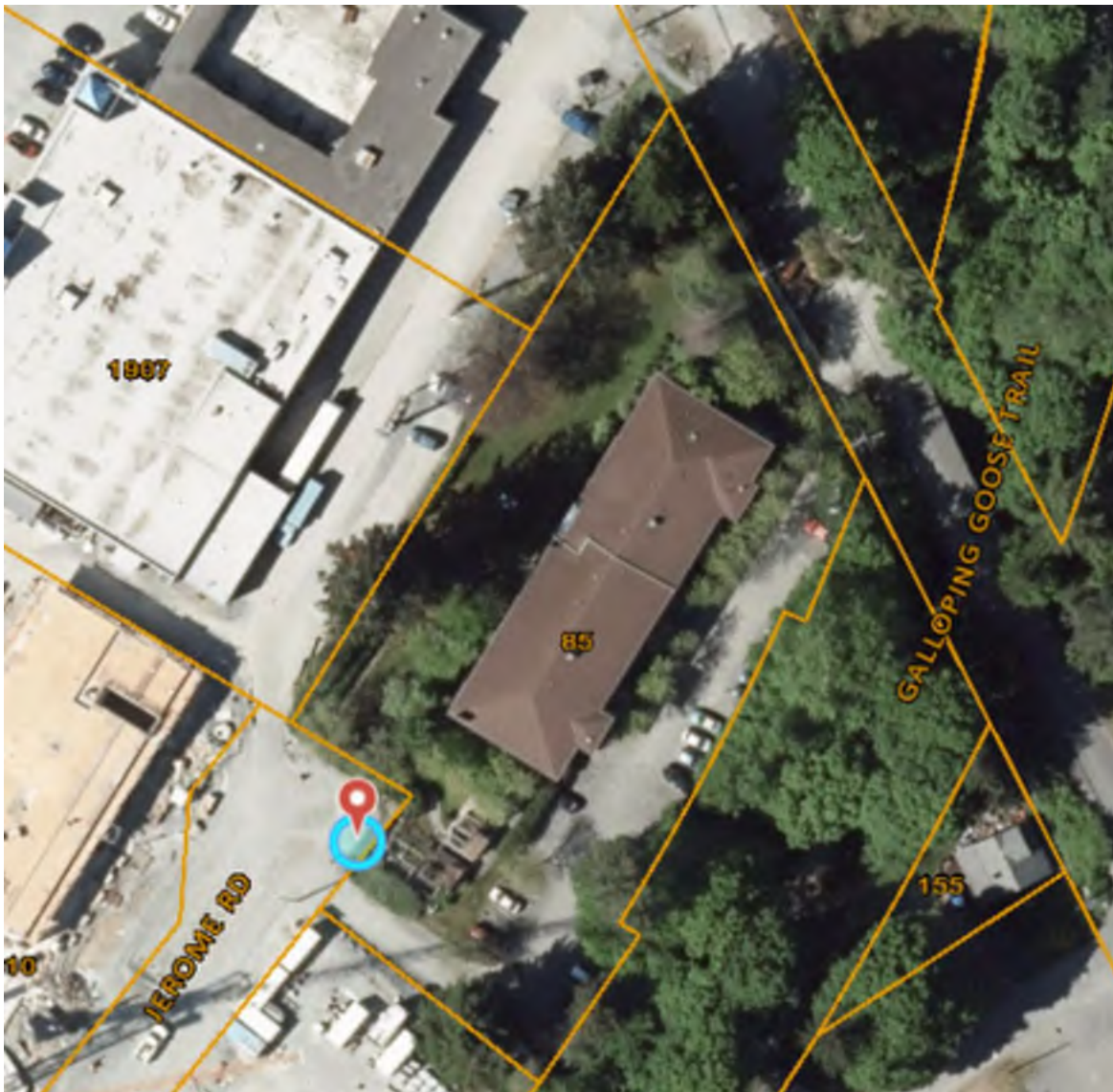
## 5. SITE INFORMATION & PROJECT UNDERSTANDING

The development site consists of one lot (85 Belmont Road) in Colwood, B.C., which has an existing residential complex. It is our understanding that the proposal is to demolish the existing structure and parking area, followed by construction of a new multi-unit residential complex. At this time, we have not reviewed a site servicing plan.

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

## 6. FIELD OBSERVATIONS

The on-site protected tree resource consists of primarily native species growing in open landscape conditions (see **Figure 1**). Note off-site construction ongoing at 1889-1911 Sooke Road and 1911 Jerome Road.



**Figure 1:** Site context air photo: The approximate boundary of the subject site is outlined in yellow.



## 7. TREE RISK ASSESSMENT

During our October 19, 2022 site visit and in conjunction with the tree inventory, on-site trees were assessed for risk on a limited visual basis (level 1), 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 this report). 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 residences on-site and neighbours' businesses (constant use), occupants of vehicles travelling or parked on Belmont Road or neighbouring driveways (frequent use), occupants of front, rear, and side yards on-site (occasional use), off-site construction workers/equipment (frequent use), hydro lines (constant use).

### Douglas-firs #83-86

Based on limited visual assessment (from the subject property), these trees may have incurred root impacts from the ongoing construction at 1889-1911 Sooke Road, which may increase their risk of failure. They are recommended for removal due to impacts from the proposed on-site construction. If permits for removal cannot be secured with a 1-year timeframe, they should be re-assessed for changes to their health and structural condition.

## 8. CONSTRUCTION IMPACT ASSESSMENT

### 8.1. RETENTION AND REMOVAL OF MUNICIPAL TREES

---

The following municipal trees (indicated by ID#) are located where they are possible for retention providing that the critical root zones are adequately protected during construction. The project arborist must be on site to supervise any excavation or fill placement required within the critical root zones—shown on the tree management plan (T1) in *appendix A*:

#### Retain and protect 3 municipal trees

- NT1, NT2, and NT4

The following municipal trees (indicated by ID#) are located where they are likely to be significantly or severely impacted by construction and are proposed for removal:

#### Remove 1 municipal tree

- NT3

### 8.1.1 ADDITIONAL MITIGATION MEASURES FOR NT1 & 2

---

We anticipate over-excavation required for construction of the underground parking foundation to extend at least to the north property line (and possibly beyond), which encroaches within approximately 3m of Douglas-fir



(*Pseudotsuga menziesii*) NT1, where large roots may be encountered. If a cut-slope is prescribed by a geotechnical engineer, the tree may have to be removed. The project arborist shall supervise all excavations within the CRZ and determine the final retention status based on the size and quantity of roots encountered (at the time of construction).

If NT1 is removed, NT2 may also require removal. To minimize root impacts to NT2, we recommend the stump of NT3 (and NT1, if necessary) be left in place, ground to grade, or removed under the direction of the project arborist.

## 8.2. RETENTION AND REMOVAL OF CRD-OWNED TREES

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The following CRD-owned trees (indicated by ID#) are located where they are possible for retention providing that the critical root zones are adequately protected during construction. The project arborist must be on site to supervise any excavation or fill placement required within the critical root zones—shown on the tree management plan (T1) in *appendix A*:

### Retain and protect 16 CRD-owned trees

- NT5-15, NT17-20, NT27

The following CRD-owned trees (indicated by tag# or ID#) are located where they are likely to be significantly or severely impacted by construction and are proposed for removal:

### Remove 2 CRD-owned trees

- #81 & NT16. *It should be noted that #81 is under shared ownership with the subject property, which may alter compensation values to be determined by the CRD.*

### 8.2.1. ADDITIONAL MITIGATION MEASURES FOR NT5, NT8, NT13-15, NT17 & 18, AND NT27

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We anticipate over-excavation required to construct the underground parking foundation to extend as far as the east property line (and possibly beyond in some areas), where large roots are likely to be encountered. The project arborist shall supervise all excavations within the CRZs and determine the final retention status of NT13-15, 17, and 27 based on the size and quantity of roots encountered at the time of construction.

If these trees are to be retained, it may be necessary to create a shoring plan to minimize over-excavation within the CRZs.

The proposed landscape path along the east property line may have to be constructed above the root systems of trees to be retained if the surrounding grades can be compatible. See *appendix B – Hard Surfaces Above Tree Roots* detail.

## 8.3. RETENTION AND REMOVAL OF ON-SITE TREES

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The following non-protected on-site trees (indicated by tag#) are located where they may be possible to retain provided that the critical root zones can be adequately protected during construction. The project arborist must be



on site to supervise any excavation or fill placement required within their critical root zones—shown on the tree management plan (T1) in [appendix A](#):

#### Retain and protect 1 non-protected on-site trees

- #82. *It should be noted that English Holly is considered an invasive species and is not protected by size—its retention status has been listed as “to be determined (TBD),” should retention not be desired.*

The following [bylaw-protected](#) on-site or shared trees (indicated by tag# and ID#) are located where they are likely to be significantly or severely impacted by construction and are proposed for removal:

#### Remove 11 bylaw-protected on-site trees

- #83-92 and NT22 (shared with 1911 Jerome Rd.) *It is our understanding that NT22 is planned for removal as part of an approved development permit at 1911 Jerome Road, in which case the responsibility for removal and replacement may be undertaken therein. For the purposes of this report, replacement tree values have been calculated in Section 8.5.*

**\*Prior written consent from the tree owner(s) is required prior to the removal of any trees located on neighbouring properties.**

## 8.4. RETENTION AND REMOVAL OF OFF-SITE TREES

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The following [non-protected](#) off-site trees (indicated by ID#) are located where they may be possible to retain provided that the critical root zones can be adequately protected during construction:

#### Retain and protect 1 non-protected off-site tree

- NT21. *It is our understanding that this tree is planned for removal as part of an approved development permit at 1911 Jerome Road, in which case the responsibility for removal and replacement may be undertaken therein.*

The following [bylaw-protected](#) off-site trees (indicated by ID#) are located where they are likely to be significantly or severely impacted by construction and are proposed for removal:

#### Remove 4 bylaw-protected off-site trees

- NT23-26. *It is our understanding that these trees are planned for removal as part of an approved development permit at 1889-1911 Sooke Road, in which case the responsibility for removal and replacement may be undertaken therein. For the purposes of this report, replacement tree values have been calculated in Section 8.5.*

**\*Prior written consent from the tree owner(s) is required prior to the removal of any trees located on neighbouring properties.**

## 8.5. TREE IMPACT SUMMARY TABLE

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Pursuant to City of Colwood bylaw No. 1735, the tree replacement calculations are as follows:



Quantity of Existing trees	# of Trees Retained	# of Trees Removed	Relevant Bylaw section (if applicable)	Replacement Tree Ratio	Replacement Trees Required
<b>On-site (Bylaw-protected)</b>					
11	0	11 (bldng env.)	Part 6—Section 9 (2)	2:1	22
<b>On-site (Non-protected)</b>					
1	1	0	N/A	N/A	0
<b>CRD Trees (live)</b>					
18	16	2	N/A	N/A	TBD by CRD
<b>Municipal Trees (live)</b>					
4	3	1	N/A	N/A	TBD Colwood
<b>Off-site Trees (Bylaw-protected)</b>					
4	0	4	Part 6—Section 9 (2)	2:1	8
<b>Off-site trees (non-bylaw-protected size)</b>					
1	1	0	N/A	N/A	0
39	21	16	<b>Total:</b>		30

Based on bylaw criteria, twenty-two (22) replacement trees are required on-site as compensation for the removal of eleven (11) protected trees. Eight (8) replacement trees will also be required as compensation for the removal of two (2) off-site protected trees. Permission will have to be sought from the owners of 1889-1911 Sooke Road if replacement tree planting is to be done at this address. Once a grading plan has been established, the project arborist should be contacted to review replacement tree locations. Any replacement tree shortfall shall be compensated cash-in-lieu.

## 9. IMPACT MITIGATION

**Tree Protection Barrier:** The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing (see [Appendix A](#) for municipal barrier specifications). Where possible, fencing should be erected at the perimeter of the critical root zone. The barrier fencing to be erected 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 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.

**Arborist Supervision:** All excavation occurring within the critical root zones of protected trees should be completed under supervision by the project arborist. Any severed or severely damaged roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. In particular, the following activities should be completed under the direction of the project arborist:

- Any excavations within the CRZs of municipal or CRD trees to be retained, including removal of the existing parking area.



**Methods to Avoid 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 of the following methods:

- 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 medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15-20 cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

**Demolition of the Existing Buildings:** The demolition of the existing houses, driveways, 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 CRZ of tree to be retained require excavation down to bearing soil and roots are encountered in this area, this could impact their health and structural stability. If tree retention is desired, a raised and permeable paved surface should be constructed in the areas within the critical root zone of the trees. The “paved surfaces above root systems” diagram and specifications is attached.

The objective is to avoid root loss and to instead raise the paved surface and its base layer above the roots. This may result in the grade of the paved surface being raised above the 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. This may also result in soils which are high in organic content being left intact below the paved area.

To allow water to drain into the root systems below, we also 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.

**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 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.



**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).

**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.

## 10. DISCLOSURE STATEMENT

This arboricultural field review report was prepared by Talmack Urban Forestry Consultants Ltd. 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 Talmack Urban Forestry Consultants Ltd.. 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. Talmack Urban Forestry Consultants Ltd. 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 Talmack Urban Forestry Consultants Ltd. 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, Talmack Urban Forestry Consultants Ltd. 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.

## 11. 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,

Talmack Urban Forestry Consultants Ltd.

Prepared by:



Robert McRae  
ISA Certified Arborist PN – 7125A  
Tree Risk Assessment Qualification  
Tree Appraisal Qualified Technician  
Email: Robbie@Talmack.ca



## **12. 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 Colwood Tree Preservation Bylaw No. 1735

## **13. COMPANY INFORMATION**

General Liability: Intact Insurance, Policy No. 5V2147122 : \$5,000,000



**APPENDIX A - TREE MANAGEMENT PLAN (T1)**



# IMPACT MITIGATION

**Tree Protection Barrier:** The areas, surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing (see Appendix A for municipal barrier specifications). Where possible, the fencing should be erected at the perimeter of the critical root zone. The barrier fencing to be erected 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 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.

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-Any excavations within the CRZs of municipal or CRD trees to be retained.

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- 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 medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15-20 cm over top.
- Placing two layers of 19mm plywood.
- Placing steel plates.

**Demolition of the Existing Buildings:** The demolition of the existing houses, driveways, 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 CRZ of tree to be retained require excavation down to bearing soil and roots are encountered in this area, this could impact their health and structural stability. If tree retention is desired, a raised and permeable paved surface should be constructed in the areas within the critical root zone of the trees. The "paved surfaces above root systems" diagram and specifications is attached. The objective is to avoid root loss and to instead raise the paved surface and its base layer above the roots. This may result in the grade of the paved surface being raised above the 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. This may also result in soils which are high in organic content being left intact below the paved area.

To allow water to drain into the root systems below, we also 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.

**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 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.

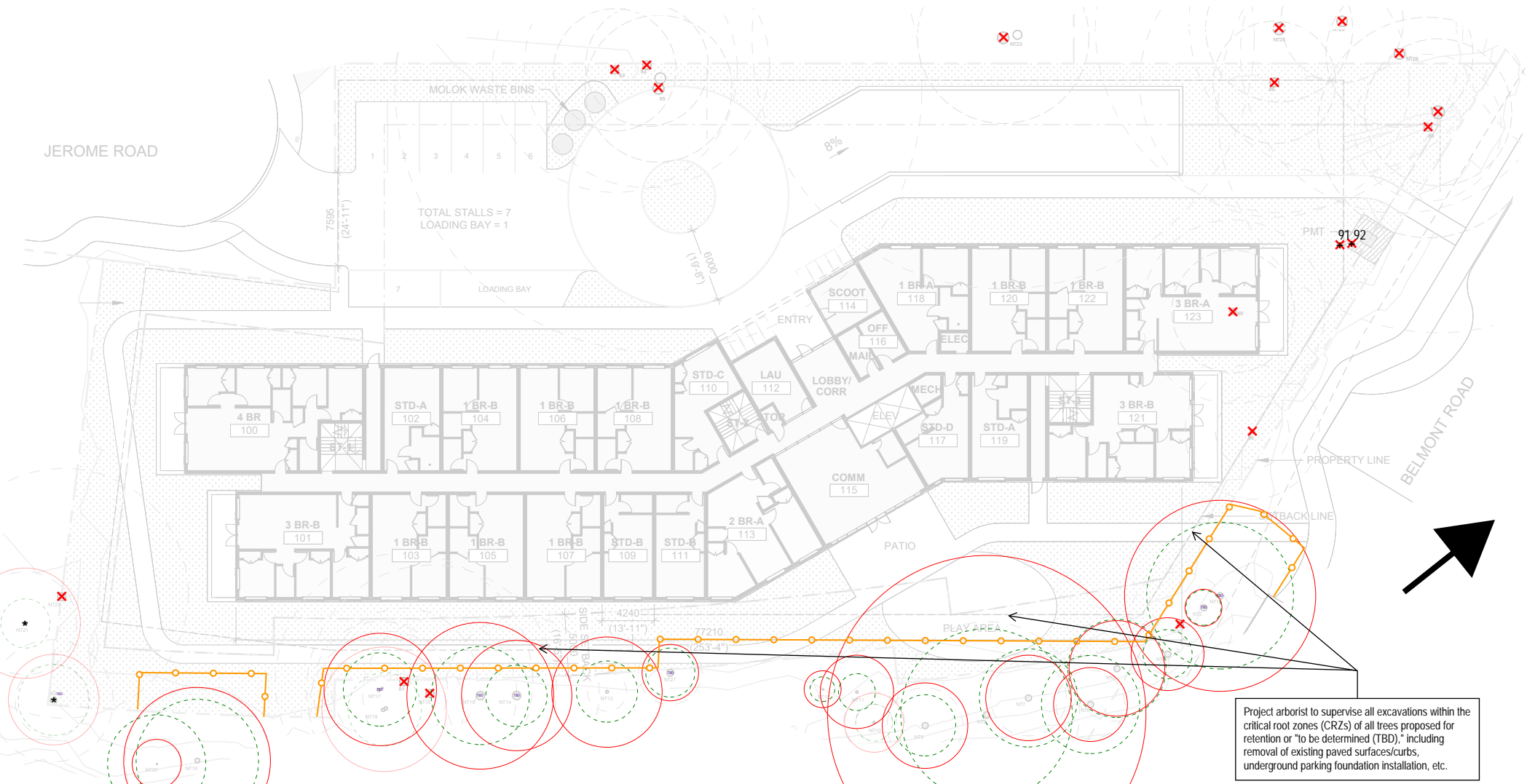
**Scaffolding:** This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, 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).

**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:

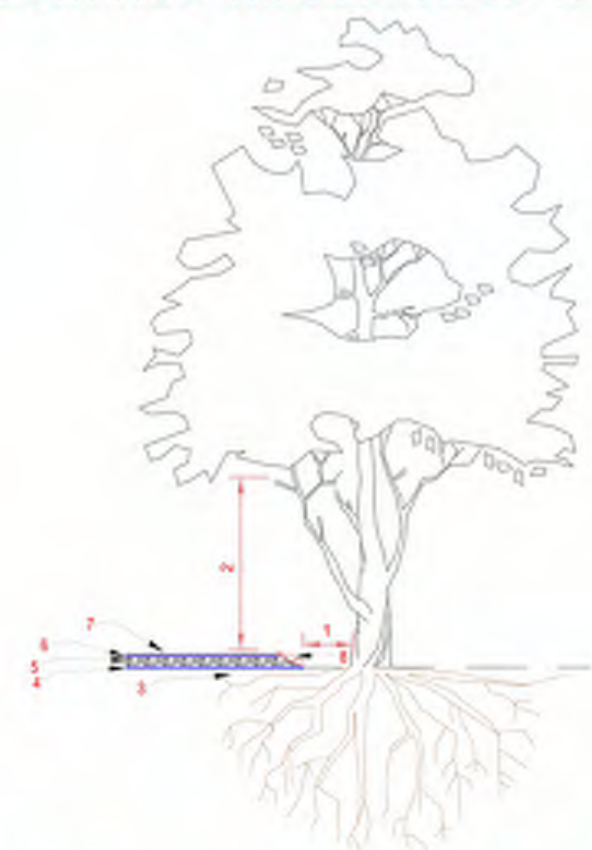
- Locating the barrier fencing
- Reviewing the report with the project foreman or site supervisor
- Locating work zones, where required
- Supervising any excavation within the critical root zones of trees to be retained
- Reviewing and advising of any pruning requirements for machine clearances

**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.



Project arborist to supervise all excavations within the critical root zones (CRZs) of all trees proposed for retention or "to be determined (TBD)," including removal of existing paved surfaces/curbs, underground parking foundation installation, etc.

## HARD SURFACE ABOVE TREE ROOTS DETAIL

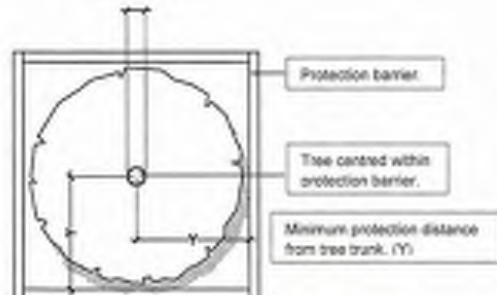
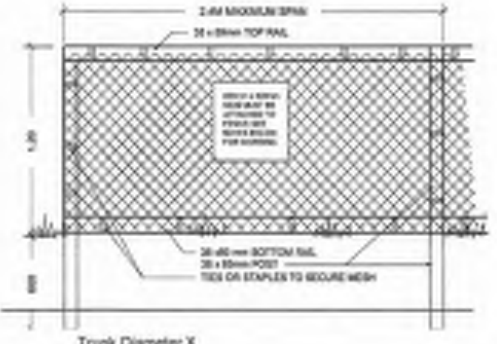


## HARD SURFACE ABOVE TREE ROOTS NOTES

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 top layer. Excavation around root structures must be performed by hand, airpick, or hydroexcavation.
4. Install a two-dimensional (such as Dimpletite) or three-dimensional geogrid reinforcement.
5. Install a 150mm depth layer of clear crushed gravel (see notes) using 30mm and/or 75mm diameter material or approved equivalent. \*Note: the depth may be less than 150mm in some situations (dependent on grading conditions).
6. Install medium weight geotextile fabric (such as Nix 453) 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 fabric 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.

## BARRIER FENCING DETAIL/NOTES

Trunk diameter (cm)	Minimum protection distance (Y) (m from trunk)
X	6X
20	1.2
25	1.5
30	1.8
35	2.1
40	2.4
45	2.7
50	3.0
55	3.3
60	3.6
75	4.5
90	5.0
100	6.0

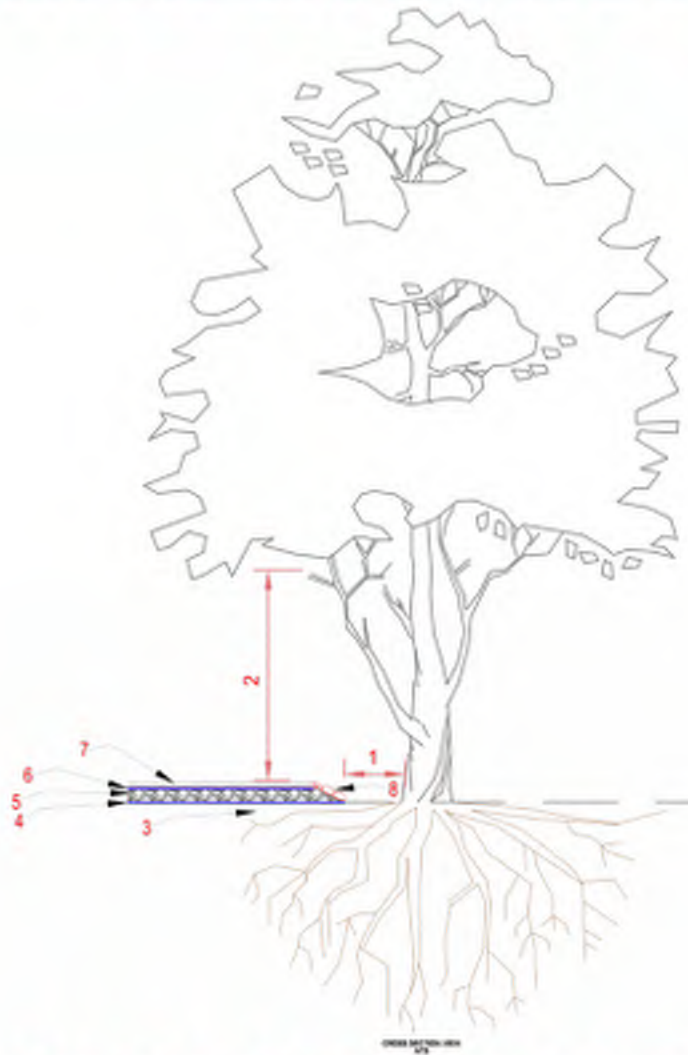


- Notes**
- Tree diameter at breast height (DBH) to be measured at 1.4m from grade.
  - Install the tree protection barrier before construction begins and keep in place until landscape construction is complete.
  - Attach a 500 mm x 500 mm sign with the following wording: **WARNING - TREE PROTECTION AREA.** This sign must be affixed on every fence face or at least every 15 linear metres.
  - Storage of building materials and litter within, or against the tree protection barrier is prohibited. The developer/owner are responsible for the maintenance within the tree protection barrier.
  - Maintain existing grades at protection barrier for all protected and retained trees.
  - Re-grading outside of the protection barrier should not adversely compromise protected, retained and existing trees.





## HARD SURFACE ABOVE TREE ROOTS DETAIL



## 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 Combrigrid ) 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 (dependent on grading constraints).
6. Install medium weight geotextile fabric (such as Nilox 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.