MUNICIPALITY OF NORTH Cowichan
7030 Trans-Canada Highway
T 250.746.3100
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Development Permit with Variance

Permit No: DP000339 / 23.13

Registered Owner: Gibbins Road Holdings Inc., Inc. No. BC1405893

Subject Property: 3096 Gibbins Road **Folio:** 00850-000

Description of Land:
Parcel Identifier: 006-410-723
Legal Description: Lot 4, Section 18, Range 5, Quamichan District, Plan 2251, Except Part Marked "35" on Plan 438 BL

Proposal: **Development Permit with Variance (DPA-1 Multi-Unit and Intensive Residential Development, DPA-3 Environmental Protection and DPA-6 Greenhouse Gas Reduction, Energy and Water Conservation) for the construction of a 100-Unit Mixed-Use Building**

Conditions of Permit:

1. This permit is issued subject to compliance with all relevant District of North Cowichan bylaws, except as specifically varied or supplemented by this Permit.

2. This permit applies to the lands described above, and any buildings, structures, and other development thereon (hereinafter called 'the Lands').

Authorized Works

3. Authorization for works within Development Permit Areas 1, 3, 6 (Multi-Unit and Intensive Residential Development, Environmental Protection and Greenhouse Gas Reduction, Energy and Water Conservation) is limited to the construction of a 100-unit mixed-use building and associated off-street parking, transit shelter, stormwater management and landscaping improvements.

4. The Lands and building which are subject to this Permit shall be developed strictly in accordance with the terms and conditions of this Permit and in accordance with the following schedules:

   Schedule 1 – Architectural Drawings and Site Plan 24-05-03
   Schedule 2 – Civil Drawings 2023-09-26
   Schedule 3 – Landscape Plan 2024-05-06
   Schedule 4 – Landscape Comprehensive Budget Estimate 2024-05-06
   Schedule 5 – Stormwater Management Plan 2023-08-27
   Schedule 6 – Aquifer Vulnerability Study 2024-01-29
   Schedule 7 – Energy Compliance Letter 2023-12-11
   Schedule 8 – BC Transit Shelter Program May 2024

5. Pursuant to Section 490 (1) of the Local Government Act this permit varies Section 21 (1) of Zoning Bylaw 1997, No. 2950 by reducing the minimum number of residential off-street parking spaces for an apartment building from 150 to 108 and to Section 69 (6) of Zoning Bylaw 1997, No. 2950 by increasing the maximum permitted building height from 12.0 metres to 15.5 metres as per Schedule 1.

6. Written authorization from municipal staff is required prior to any deviations to the requirements of this permit.

7. Pursuant to Section 504(1) of the *Local Government Act*, this permit will lapse two years from the date of the Development Permit approval unless construction, in accordance with the terms and conditions of this permit, has substantially started.

8. This permit is not a building permit.

9. Further to Condition 7, construction is substantially started when a valid building permit for the development has been issued and shall not have lapsed; and excavation or construction works associated with the development hereby approved must have commenced to the satisfaction of the Director of Planning and Building.

10. Further to Condition 9, the development may be split-up into two building permits to the discretion of the Chief Building Inspector, one for the foundation and one for the building itself.

11. Geotechnical and structural supervision and assurances (Schedule B and C-B) are required by a Professional Engineer for site preparation, soil baring capacity and foundation design as a condition of building permit issuance.

12. The two adaptable (A3) units identified in Schedule 1 must be constructed to be fully accessible, to be demonstrated prior to Building Permit issuance.

13. Security as authorized by Section 502 of the *Local Government Act* is required to ensure that any conditions with respect to landscaping are satisfied or to ensure that no conditions of the Permit are being breached resulting in an unsafe condition of the Land.

14. Security provided by the Permit holder in the amount of $297,873.19 is required prior to foundation building permit issuance to ensure the landscaping and site features is installed and maintained, with 25% of the security to be held for 12 months upon written confirmation from the professional responsible of substantial completion as per the Municipality's Landscaping Policy.

15. As identified in Schedule 1 and 3 and prior to foundation building permit issuance, security payment for 125% of the transit shelter cost ($21,345.00) is required to secure a BC Transit bus shelter to be installed on the Lands. Subsequent funding for the transit shelter may be pursued at the discretion of the Cowichan Valley Regional District (CVRD) by applying on the permit holder's behalf to the BC Transit Bus Shelter Program.

ATTACHMENT 5

16. Further to Condition 15, the final siting of the transit shelter is at the discretion of the CVRD Facilities and Transit Manager and the Director of Engineering. For clarity, the developer must provide the following prior to the release of the security:
    a) *A BC transit standard transit shelter and associated ground improvements and infrastructure,*
    b) *All electrical services to- and within- the transit shelter for the purposes of lighting within the shelter, and*
    c) *Further to Schedule 8, the transit shelter shall be a T2 Shelter series, or equivalent.*

17. Further to Condition 15 and 16 and prior to issuance of the second building permit, a Statutory Right-of-Way in favour of the CVRD is required over the Lands occupied by the transit shelter.

18. Further to Condition 15, 16, and 17 and prior to issuance of the second building permit, an Encroachment Agreement and associated Third-Party Liability Insurance in favour of the District of North Cowichan is required for the transit shelter roof overhang.

19. Where the District of North Cowichan considers that:

    a) *A condition in the Permit with respect to landscaping has not been satisfied, or*
    b) *where, as a result of the contravention of a condition in a Permit, an unsafe condition has resulted.*

    The District of North Cowichan may undertake and complete the works required to satisfy the landscaping condition or carry out any construction required to correct the unsafe condition, at the cost of the Permit holder, and may apply the security in payment of the cost of the works with any excess to be returned to the Permit holder.

20. Where the development authorized by this Permit has lapsed prior to commencement of any work pursuant to this Permit, the security shall be returned to the Permit holder.

21. An inspection of the site by Planning and Building Department staff will take place prior to the issuance of an Occupancy Permit to ensure that the development is complete in accordance with the approved Development Permit plans. The applicant is responsible for contacting the Planning and Building Department to arrange the inspection at least three weeks prior to applying for an Occupancy Permit. Additional site inspections by Planning and Building Department staff may occur during the construction phase of the project.

22. Section 13 of the *Heritage Conservation Act* protects heritage sites and heritage objects (which may also be referred to as archaeological sites or objects). This permit does not authorize the alteration of any such site or object. The permit holder is responsible for ensuring compliance with the *Heritage Conservation Act*, including taking any steps required to determine whether or not a heritage site or object is present on the subject property. Under section 36 of the *Heritage Conservation Act*, it is an offence to alter heritage site or heritage object without first obtaining a permit to do so from the Province of British Columbia

Date of Development Permit with Variance Approval/ Issue by Council or its Delegate:

This permit was approved by Council **May 15, 2024** and issued **May XX, 2024.**

This permit expires on **May XX, 2026**.

The Corporation of the District of North Cowichan

Amanda J. Young
Director, Planning and Building

GIBBINS ROAD MIXED-USE, 3096 GIBBINS ROAD, NORTH COWICHAN BC

SHEET SCHEDULE

GIBBINS ROAD HOLDINGS

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KELOWNA, BC V1X 7R1

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2024-05-03

24-05-03 ISSUED FOR DEVELOPMENT PERMIT

NO.	ISSUE/REVISION	DATE
1	RE-ISSUED FOR DEVELOPMENT PERMIT	24-04-24
2	RE-ISSUED FOR DEVELOPMENT PERMIT	24-05-03

GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

COVER PAGE

SCALE

SD0.01

SITE DESCRIPTION

THE PROJECT SITE IS LOCATED NORTHWEST OF DOWNTOWN DUNCAN IN THE DISTRICT OF NORTH COWICHAN ON GIBBINS ROAD. THE PROJECT SITE IS A SINGLE LOT WITH NO CURRENT DEVELOPMENT. THE LOT IS CURRENTLY ZONED AS C2, WHICH IS A MIXED-USE ZONING. THE SITE IS WELL CONNECTED TO THE DOWNTOWN AREA AND IS WITHIN CLOSE PROXIMITY TO NORTH COWICHAN DISTRICT HOSPITAL, QUEEN MARGARET SCHOOL, AND VICTORIA ISLAND UNIVERSITY'S COWICHAN CAMPUS. THE PROJECT SITE IS IN CLOSE PROXIMITY TO GREEN SPACES INCLUDING THE COWICHAN VALLEY TRAIL AND THE COWICHAN RIVER.

1 NORTH COWICHAN DISTRICT HOSPITAL

2 QUEEN MARGARET SCHOOL

2 QUEEN MARGARET SCHOOL

3 VIU COWICHAN CAMPUS

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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SITE CONTEXT

SCALE 1 1/2" = 1'-0"

SD1.01

A GIBBINS ROAD LOOKING NORTHEAST

B GIBBINS ROAD LOOKING INTO PROJECT SITE

ZONING LEGEND

PU - PUBLIC USE

PI - PUBLIC INSTITUTIONAL

R3 - RESIDENTIAL ONE AND TWO-FAMILY ZONE

R6 - RESIDENTIAL TOWNHOUSE

C1 - COMMERCIAL LOCAL

C2 - COMMERCIAL GENERAL

C6 - COMMERCIAL PROFESSIONAL

THE PROJECT SITE IS CURRENTLY ZONED AS C2 - COMMERCIAL GENERAL.
THE IMMEDIATE AREA IS LARGELY ZONED AS RESIDENTIAL ZONING

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2024-05-03

24-05-03 ISSUED FOR DEVELOPMENT PERMIT

NO.	ISSUE/REVISION	DATE
1	RE-ISSUED FOR DEVELOPMENT PERMIT	24-04-24
2	RE-ISSUED FOR DEVELOPMENT PERMIT	24-05-03

GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SITE CONTEXT

SCALE 1 1/2" = 1'-0"

SD1.02

1.0.0 PROJECT DATA

PROJECT:	GIBBINS ROAD (MIXED USE)
ZONING:	C2
CIVIC ADDRESS:	3096 GIBBINS ROAD,NORTH COWICHAN, BRITISH COLUMBIA
LEGAL DESCRIPTION:	LOT 4, SECTION 18, RANGE 5, QUAMICHAN DISTRICT, PLAN 2251
VARIANCES APPLIED FOR:	1) OFF-STREET PARKING FACTOR FOR MULTI-FAMILY REQUIRED: 1.5 STALL PER UNIT; PROPOSED 1.0 STALL PER UNIT 2) MAXIMUM BUILDING HEIGHT OF PRINCIPAL BUILDING REQUIRED: 12.0m; PROPOSED 15.50m 3) CLASS II BICYCLE PARKING FACTOR FOR MULTI-FAMILY REQUIRED: 1 SPACE PER 2.5 DWELLING; PROPOSED 1 SPACE PER 6.25 DWELLING UNITS (REFER TO RESPONSE LETTER FOR RATIONALE) 4) RETAIL BICYCLE STALLS REQUIRED: CLASS I AND CLASS II; PROPOSED CLASS II ONLY
BYLAW EXEMPTIONS:	33 (1) ALL REQUIRED SETBACK AREAS MUST BE KEPT FREE OF BUILDINGS AND STRUCTURES, EXCLUDING PERMITTED PROJECTS. ; 35 (1) THE FOLLOWING MAY PROJECT NOT MORE THAN 0.6 m INTO A REQUIRED YARD: (A) A STEP; (B) AN EAVE; (C) AN AWNING; (D) A CANOPY; (E) AN OPEN, CANTILEVERED BALCONY WITHOUT ROOF; (F) A PORCH; (G) A CHIMNEY; (H) A CORNICE; (I) A GUTTER; (J) A PILASTER; (K) A SILL, AND (L) A BAY WINDOW WITHOUT ANY HABITABLE FLOOR AREA. (2) DESPITE THE PREVIOUS SUBSECTION, A STEP, CANOPY, OR CANTILEVERED BALCONY MAY PROJECT NOT MORE THAN 1.2m INTO A REQUIRED FRONT OR REAR YARD OF AN APARTMENT OR TOWNHOUSE
COORDINATING REGISTERED PROFESSIONAL:	STEVE BARTOK, AIBC KEYSTONE ARCHITECTURE
CERTIFIED PROFESSIONAL:	N/A
ZONING GROSS FLOOR AREA DEFINITION(S):	EQUALS THE SUM OF THE FLOOR AREA OF EACH STOREY IN ALL BUILDINGS ON A LOT, INCLUDING EXTERIOR WALLS, BUT EXCLUDING THE FOLLOWING: (A) ATTACHED GARAGES OR COVERED PARKING AREAS TO A MAXIMUM OF 42 M2 (452 SQ. FT.) IN AREA IN RESIDENTIALLY-ZONED (R) LOTS FOR SINGLE-FAMILY DWELLINGS, TWO-FAMILY DWELLINGS OR MODULAR HOMES; (B) UNENCLOSED AND ROOFLESS DECKS, PATIOS, BALCONIES AND PORCHES; (C) AREAS BELOW GRADE WITH A MAXIMUM CEILING HEIGHT LESS THAN 1.8 M (5.91'); (D) ELEVATOR SHAFTS AND MECHANICAL ROOMS; (E) COVERED ENTRANCES TO A MAXIMUM OF 10 M2 (107 SQ. FT.) IN AREA
ZONING GRADE DEFINITION(S):	"GRADE: MEANS THE AVERAGE FINISHED GROUND LEVEL AT THE PERIMETER OF A BUILDING OR STRUCTURE"...
ZONING AVERAGE GRADE:	47.94 m (48.65+47.75+47.41+47.95/4) AVG EXISTING GRADE WEST ELEVATION: (48.28+49.01/2) = 48.65 m AVG EXISTING GRADE NORTH ELEVATION: (47.50+48.00/2) = 47.75 m AVG EXISTING GRADE EAST ELEVATION: (46.95+47.87/2) = 47.41 m AVG EXISTING GRADE SOUTH ELEVATION: (49.39+46.50/2) = 47.95 m
ZONING BUILDING HEIGHT:	15.50 m (REFER TO ELEVATIONS) (THE VERTICAL DISTANCE MEASURED FROM THE AVERAGE EXISTING GRADE LEVEL, DETERMINED BY AVERAGING THE EXISTING GRADES AT ALL BUILDING FACES SURROUNDING THE PERIMETER OF A BUILDING, TO THE I. HIGHEST POINT ON A FLAT ROOF) "HEIGHT: MEANS THE VERTICAL DISTANCE FROM FINISH GRADE TO THE HIGHEST POINT OF A BUILDING, EXCLUDING CHURCH STEEPLES, TOWERS ON SAFETY BUILDINGS, AND SILOS, AS AVERAGED FROM EACH OF THE OUTERMOST CORNERS OF THE BUILDING TO THE HIGHEST POINT OF A BUILDING
ZONING MAXIMUM BUILDING HEIGHT:	"(6) THE MAXIMUM PERMITTED BUILDING HEIGHTS FOR THE C2 ZONE ARE AS FOLLOWS: (a) PRINCIPAL BUILDING, 12.0 m (39'.37")"
MINIMUM BUILDING ELEVATION:	REQUIRED-GEO:44.88 m PROVIDED-GEO:44.88 m
SITE AREA:	41969 SF 3,899 m²
GROSS FLOOR AREA (FSR):	62965 SF 5,850 m²
GROSS BUILDABLE AREA:	68823 SF 6,393.90 m²
LOT COVERAGE:	21,529.19 SF / 41,969.15 SF = 51.3%
FSR:	62965 SF 41969 SF **1.50**
ZONING SETBACKS:	FRONT: 4.50 m WHERE LOT ABUTS AN ARTERIAL HIGHWAY REAR: 0.00 m; 3.00 m WHERE LOT ABUTS RESIDENTIALLY ZONED LAND SIDE (NORTHEAST): 0.00 m; 3.00 m WHERE LOT ABUTS RESIDENTIALLY ZONED LAND SIDE (SOUTHWEST): 0.00 m; 3.00 m WHERE LOT ABUTS RESIDENTIALLY ZONED LAND
PROVIDED SETBACKS:	FRONT: 4.50 m REAR: 3.00 m SIDE (NORTHEAST): 0.00 m SIDE (SOUTHWEST): 1.50 m
GARBAGE & RECYCLING REQUIREMENTS:	"ALL SITES DEVELOPED FOR MULTIPLE-FAMILY RESIDENTIAL, COMMERCIAL, INSTITUTIONAL, OR INDUSTRIAL USES SHALL PROVIDE AN AREA FOR A GARBAGE CONTAINER, WHICH IS IN A CONVENIENT LOCATION AND AT A CONVENIENT ELEVATION, ON THE SAME LOT AS THE USE FOR WHICH IT IS REQUIRED."

NOTES:
1. REFER TO FSR PLANS SHEET FOR GROSS FLOOR AREA (FSR) PLANS, SCHEDULE, METHOD OF MEASUREMENT & EXCLUSIONS.
2. REFER TO GROSS BUILDABLE AREA SUMMARY SCHEDULE FOR A BREAKDOWN OF AREAS, METHOD OF MEASUREMENT & EXCLUSIONS.

1.3.1 GROSS BUILDABLE AREA SUMMARY

LEVEL/AREA TYPE	AREA SF	AREA m²	AREA %	COMMENTS
P1 LEVEL				
CIRCULATION	1237 SF	114.95 m²	1.8%	
SERVICE	499 SF	46.37 m²	0.7%	
STORAGE	285 SF	26.45 m²	0.4%	
	2021 SF	**187.78 m²**	**2.9%**	
1ST LEVEL				
CIRCULATION	1529 SF	142.04 m²	2.2%	
COMMERCIAL	2910 SF	270.32 m²	4.2%	
MAIL ROOM	193 SF	17.98 m²	0.3%	
OFFICE	1929 SF	178.28 m²	2.8%	
SERVICE ROOMS/SHAFTS	302 SF	28.05 m²	0.4%	
STORAGE	1269 SF	117.86 m²	1.8%	
	8122 SF	**754.53 m²**	**11.8%**	
2ND LEVEL				
CIRCULATION	2122 SF	197.10 m²	3.1%	
INDOOR AMENITY	329 SF	30.56 m²	0.5%	
RESIDENTIAL	17139 SF	1,592.31 m²	24.9%	
SERVICE ROOMS/SHAFTS	95 SF	8.80 m²	0.1%	
STORAGE	51 SF	4.69 m²	0.1%	
	19735 SF	**1,833.47 m²**	**28.7%**	
3RD LEVEL				
CIRCULATION	2122 SF	197.10 m²	3.1%	
INDOOR AMENITY	329 SF	30.56 m²	0.5%	
RESIDENTIAL	17139 SF	1,592.31 m²	24.9%	
SERVICE ROOMS/SHAFTS	95 SF	8.80 m²	0.1%	
STORAGE	51 SF	4.70 m²	0.1%	
	19735 SF	**1,833.47 m²**	**28.7%**	
4TH LEVEL				
CIRCULATION	2703 SF	251.16 m²	3.9%	
INDOOR AMENITY	329 SF	30.56 m²	0.5%	
OUTDOOR AMENITY	5176 SF	480.84 m²	7.5%	
RESIDENTIAL	10907 SF	1,013.29 m²	15.8%	
SERVICE ROOMS/SHAFTS	95 SF	8.80 m²	0.1%	
	19210 SF	**1,784.65 m²**	**27.9%**	
AREA GRAND TOTAL	**68823 SF**	**6,393.90 m²**	**100.0%**	

1.3.0 GROSS BUILDABLE AREA SUMMARY NOTES

1.	MEASURED TO OUTSIDE FACE OF SHEATHING OR CONCRETE, CENTERLINE OF PARTY WALL & INSIDE FACE OF CORRIDOR/STAIR WALL.
2.	EXCLUSIONS: EXTERIOR PARKADE EXHAUST SHAFTS, EXTERIOR PARKADE EXIT STAIRS, EXTERIOR PARKADE VEHICLE RAMP, EXTERIOR ROOFTOP AMENITY.

1.2.0 CODE DATA

APPLICABLE BUILDING CODES: 2024 BCBC/ 2018 BC FIRE CODE/ ASHRAE 90.1-2016

BUILDING CODE COMPLIANCE/ALTERNATE SOLUTIONS REPORT:

1. PART 3 BUILDING		DIV. A - PART 1 COMPLIANCE 1.3.3.2.
2. MAJOR OCCUPANCY(IES):		3.1.2., & APPENDIX A - 3.1.2.1.(1)
2.1. STORAGE GARAGE F3 LOW HAZARD INDUSTRIAL		
2.2. RESIDENTIAL GROUP C		
2.3 MERCANTILE GROUP E		
2.4 BUSINESS AND PERSONAL SERVICES GROUP D		
2.5 ASSEMBLY GROUP A2		
3. BUILDING AREAS: GROUP F3 - BASEMENT GROUP C - LEVEL 2 & 3 GROUP E - LEVEL 1 GROUP D - LEVEL 1 GROUP F3 - LEVEL 1	 37660 SF 3,499 m² 19735 SF 1,833 m² 3212 SF 298 m² 1919 SF 178 m² 15117 SF 1,404 m²	1.4.1.2. DEFINED TERMS -BUILDING AREA
4. BUILDING CLASSIFICATION(S):		3.2.2.19.-3.2.2.92
4.1. BASEMENT AND OPEN STORAGE GARAGE:		3.2.2.82
GROUP F, DIVISION 3, ANY HEIGHT, ANY AREA, FULLY SPRINKLERED		3.2.2.82
NON-COMBUSTIBLE CONSTRUCTION		3.2.2.82.(2)
FLOOR ASSEMBLIES: FIRE SEPARATIONS WITH A FIRE RESISTANCE RATING NOT LESS THAN 2 HR		3.2.2.82.(2)(B)
MEZZANINES: N/A		
LOAD BEARING WALLS, COLUMNS & ARCHES NOT LESS THAN 2 HR FIRE RESISTANCE RATING		3.2.2.82.(2)(D)
4.2 STORAGE GARAGE CONSIDERED AS SEPARATE BUILDING:		3.2.1.2.
FULLY SPRINKLERED		3.2.1.2(2)(A)
NON-COMBUSTIBLE CONSTRUCTION		3.2.1.2.(1)
2 HR FIRE SEPARATION, EXTERIOR WALL OPENINGS EXEMPT		3.2.1.2.(1), 3.2.1.2.(2)&(2)(A)
2 HR FIRE RESISTANCE RATING		3.2.1.2.(1)
F.T. RATED FIRESTOP 3.1.9.1(2)		3.1.9.1(2)
4.3. RESIDENTIAL:		3.2.2.51
BELOW THIRD FLOOR MAJOR OCCUPANCY GROUP A2 AND GROUP E PERMITTED		3.2.2.51.(5)
BELOW FOURTH FLOOR MAJOR OCCUPANCY F3 STORAGE GARAGE PERMITTED		3.2.2.51.(5)
GROUP C, UP TO 6 STOREYS, SPRINKLERED		3.2.2.51.(1), 3.2.2.50.(1)(D)
MAX. ALLOWABLE BUILDING AREA: < 2 250 m² (REFER TO 3. BUILDING AREAS ABOVE)		3.2.2.51.(1)(D)(iv)
2 HR FIREWALL (MASONRY CONSTRUCTION)		N/A
COMBUSTIBLE CONSTRUCTION		3.2.2.51.(2) EXCEPT (2)(C)
FLOOR ASSEMBLIES: 1 HR FIRE SEPARATION WITH 1 HR FIRE RESISTANCE RATING		3.2.2.51.(2)(A)
ROOF ASSEMBLIES: 1 HR FIRE RESISTANCE RATING		3.2.2.51.(2)(B)&(C)
MEZZANINES: 1 HR FIRE RESISTANCE RATING		N/A
LOAD BEARING WALLS, COLUMNS & ARCHES NOT LESS THAN REQUIRED FOR THE SUPPORTED ASSEMBLY		3.2.2.51.(2)(E)
4.3.1. BUILDING HEIGHT:	3 STOREYS	1.4.1.2. DEFINED TERMS -BUILDING HEIGHT
4.3.2. GRADE ELEVATION:	47.41 m (LOWEST AVG GRADE EAST ELEVATION: 46.95m +47.87 m/2)	1.4.1.2. DEFINED TERMS -GRADE
4.3.3. FIRST STOREY ELEVATION:	48.23 m	1.4.1.2. DEFINED TERMS -FIRST STOREY (2 m MAX ABOVE LOWEST AVERAGE GRADE)
4.3.4. 1ST STOREY TO UPPERMOST FLOOR LEVEL:	9.89 m (REFER TO ELEVATIONS)	3.2.2.51 (1)(c) (MAXIMUM -18 m)
4.3.5. 1ST STOREY TO UPPERMOST ROOF:	12.90 m (REFER TO ELEVATIONS)	GROUP C 3.2.2.51 (2)(c), (MAXIMUM - 25 m) NON-COMBUSTIBLE ROOF CONSTRUCTION IF > 25 m
4.4. BUSINESS AND PERSONAL SERVICES		3.2.2.58
GROUP D, UP TO 6 STOREYS, SPRINKLERED		3.2.2.58. (1)(A), 3.2.2.58.(1)(B)
MAX. ALLOWABLE BUILDING AREA: < 4800 m² (REFER TO 3. BUILDING AREAS ABOVE)		3.2.2.58.(1)
COMBUSTIBLE CONSTRUCTION		3.2.2.58.(2) EXCEPT (2)(C)
FLOOR ASSEMBLIES: 1 HR FIRE SEPARATION WITH 1 HR FIRE RESISTANCE RATING		3.2.2.58.(2)(A)
ROOF ASSEMBLIES: 1 HR FIRE RESISTANCE RATING		3.2.2.58.(2)(C)
LOAD BEARING WALLS, COLUMNS & ARCHES NOT LESS THAN REQUIRED FOR THE SUPPORTED ASSEMBLY		3.2.2.58.(2)(D)
5. BUILDINGS WITH MULTIPLE MAJOR OCCUPANCIES:	YES	3.2.2.4.-3.2.2.8., 3.2.2.51.(5)
6. NON-COMBUSTIBLE CLADDING:	YES	3.1.4.8.(1)(A)
7. HIGH BUILDING:	NA	3.2.6., 3.1.13.7., 3.2.2.51.(1)(C), 3.2.4.22, 6.9.2.3.(1)
8. FIREWALL:	NA	3.1.10.
9. MEZZANINE(S):	NA	3.2.1.1. (3) - (8)
10. MEZZANINE EXITING:	NA	3.4.2.2.
11. INTERCONNECTED FLOOR SPACE:	NA, STORAGE GARAGE EXEMPT	3.2.3.2.(3), 3.2.8., 3.1.3.1.(3), 3.2.8.2.(2)
12. STORAGE GARAGE-HORIZONTAL FIRE SEPARATION:	YES 2HR AS A SEPARATE BLDG UNDER 3.2.1.2. 1.5HR...	3.2.1.2., 3.3.5.6
13 SPRINKLER SYSTEM:	YES	3.2.2.18., 3.2.5.13.
13.1. STORAGE GARAGE:	YES - NFPA 13 - 2013	3.2.5.12.(1)
13.2. RESIDENTIAL:	YES - NFPA 13 - 2013	3.2.5.12.(1)
13.3 FIRE EXTINGUISHERS:	YES - NFPA 10 - 2013	BC FIRE CODE 2024, 3.2.5.16
14. STANDPIPE SYSTEM:	YES - NFPA 14- 2013	3.2.5.8., 3.2.5.9., 3.2.5.16.
15. FIRE ALARM SYSTEM:	YES - SINGLE STAGE - CAN/ULC-S524-14	3.2.4.1. (2)&(4)
16. SMOKE CONTROL MEASURES:	YES	3.1.8.12
17. ANNUNCIATOR AND ZONE INDICATION:	YES	3.2.4.9., 3.2.4.8.
18. FIRE ACCESS ROUTE TO UPPERMOST FLOOR LEVEL:	10.18 m (REFER TO ELEVATIONS)	3.2.5.6(2) (MAXIMUM - 20 m)
19. NUMBER OF STREETS:	1	3.2.2.10.

NOTES:
1. *UNLESS OTHERWISE NOTED, REFERENCE NUMBERS LISTED REFER TO THE BRITISH COLUMBIA BUILDING CODE 2024

KEYSTONE ARCHITECTURE
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2024-05-03

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1	RE-ISSUED FOR DEVELOPMENT PERMIT	24-04-24
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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

PROJECT DATA

SCALE

SD1.10

1.4.0 UNIT COUNT SUMMARY

UNIT TYPE	UNIT COUNT	UNIT TYPE %	COMMENTS
1 BED	30	30.0%	
1 BED (ADAPTABLE DWELLING UNIT)	2	2.0%	
2 BED	8	8.0%	
STUDIO	60	60.0%	
TOTAL UNITS: 100		**100.0%**	

1.4.1 UNIT FLOOR AREA SUMMARY NOTES

1.	ALL UNIT AREAS ARE MEASURED TO THE FOLLOWING: A) EXTERIOR WALL: EXTERIOR SIDE OF SHEATHING, B) PARTY WALL: CENTER OF WALL C) CORRIDOR/STAIR/ELEVATOR WALL: FULL THICKNESS OF WALL
2.	AREAS GIVEN ON DRAWINGS AND IN SCHEDULES ARE NOT TO BE CONSIDERED LEGAL STRATA AREAS. CONFIRM STRATA AREAS BY SURVEY ON SITE

1.4.2 UNIT FLOOR AREA SUMMARY

UNIT	UNIT TYPE	COUNT	UNIT AREA SF (1 SF)	UNIT AREA m^2 (1 m^2)	TOTAL UNIT AREA SF	TOTAL UNIT AREA m^2
UNIT A1	STUDIO	46	393 SF	37 m^2	18098 SF	1681.32 m^2
UNIT A1.1	STUDIO	3	417 SF	39 m^2	1250 SF	116.17 m^2
UNIT A1.2	STUDIO	4	393 SF	37 m^2	1571 SF	145.97 m^2
UNIT A1.3	STUDIO	6	404 SF	38 m^2	2422 SF	225.02 m^2
UNIT A1.4	STUDIO	1	393 SF	37 m^2	393 SF	36.49 m^2
UNIT A2	1 BED	24	447 SF	42 m^2	10732 SF	997.05 m^2
UNIT A2.1	1 BED	5	458 SF	43 m^2	2291 SF	212.82 m^2
UNIT A2.2	1 BED	1	453 SF	42 m^2	453 SF	42.10 m^2
UNIT A3	1 BED (ADAPTABLE DWELLING UNIT)	2	447 SF	42 m^2	894 SF	83.09 m^2
UNIT B1	2 BED	2	904 SF	84 m^2	1809 SF	168.06 m^2
UNIT B1	2 BED	2	915 SF	85 m^2	1830 SF	170.02 m^2
UNIT B1.1	2 BED	1	874 SF	81 m^2	874 SF	81.19 m^2
UNIT B1.1	2 BED	1	885 SF	82 m^2	885 SF	82.19 m^2
UNIT B1.2	2 BED	1	836 SF	78 m^2	836 SF	77.68 m^2
UNIT B1.2	2 BED	1	847 SF	79 m^2	847 SF	78.67 m^2
UNIT TOTALS: 100					**45185 SF**	**4197.83 m^2**

1.5.0 OFF-STREET VEHICLE/BICYCLE/STORAGE PARKING DATA-REQUIRED

	UNITS / AREA	REQUIRED FACTOR	REQUIRED STALLS
VEHICLE PARKING STALL DATA			
RESIDENTS:			
1 BED	92 UNITS	1.0	92 STALLS
2 BED	8 UNITS	2	16 STALLS
SMALL CAR	N/A	25% OF TOTAL STALLS	0.25(100) = 25 STALLS
ACCESSIBLE	N/A	101-1000 STALLS = 2 SPACES PER 100 SPACES OR PART THEREOF	2 STALLS
TOTAL RESIDENT STALLS:			**108 STALLS**
VISITORS:			
STANDARD	100 UNITS	0.15	15 STALLS
SMALL CAR	N/A	25% OF TOTAL STALLS	0.25(15) = 4 STALLS
ACCESSIBLE	N/A	5-20 STALLS = 1 STALL	1 STALL
TOTAL VISITOR STALLS:			**15 STALLS**
COMMERCIAL:			
STANDARD	276.10 m^2 (2,971.87 SF)	1.0 STALL FOR EVERY 19.0 m^2 (204.50 SF)	276.10 / 19.0 = 14.5 = 15 STALLS
SMALL CAR	N/A	25% OF TOTAL STALLS	0.25(15) = 3.75 = 4 STALLS
ACCESSIBLE	N/A	5-20 STALLS = 1 STALL	1 STALL
TOTAL COMMERCIAL STALLS:			**15 STALLS**
OFFICE:			
STANDARD	181.40 m^2 (1,952.49 SF)	1.0 STALLS FOR EVERY 37.0 m^2 (398.26 SF)	181.40 / 37.0 = 4.9 = 5 STALLS
SMALL CAR	N/A	25% OF TOTAL STALLS	0.25(7) = 1.75 = 2 STALLS
ACCESSIBLE	N/A	5-20 STALLS = 1 STALL	1 STALL
TOTAL OFFICE STALLS:			**5 STALLS**
SPECIALTY PARKING:			
LOADING	N/A	1 STALL	1 STALLS
TOTAL VEHICLE STALLS:			**144 STALLS**
BICYCLE STALL DATA			
MULTI-FAMILY CLASS 1	100 UNITS	0.25	25
MULTI-FAMILY CLASS 2	100 UNITS	0.4	40
RETAIL CLASS 1	4,814 SF	4,814SF / 4,305.56SF PER STALL	1
RETAIL CLASS 2	4,814 SF	4,814 SF / 1,076.39SF PER STALL	5
TOTAL BICYCLE STALLS:			**71**
NOTES:			

1.5.2 OFF-STREET VEHICLE PARKING DATA-PROVIDED

PARKING STALL USER/TYPE	PARKING STALL COUNT	% BY STALL USER	% OF OVERALL	COMMENTS
LOADING	1	100.0%	1%	
: 1		**100.0%**	**1%**	
COMM.				
ACCESSIBLE	1	6.7%	1%	
STANDARD	14	93.3%	10%	
COMM.: 15		**100.0%**	**10%**	
OFFICE				
ACCESSIBLE	1	20.0%	1%	
STANDARD	4	80.0%	3%	
OFFICE: 5		**100.0%**	**3%**	
TENANT				
ACCESSIBLE	2	1.8%	1%	
SMALL CAR	7	6.4%	5%	
STANDARD	100	91.7%	69%	
TENANT: 109		**100.0%**	**75%**	
VISITOR				
ACCESSIBLE	1	6.7%	1%	
STANDARD	14	93.3%	10%	
VISITOR: 15		**100.0%**	**10%**	
TOTAL PARKING STALLS: 145			**100%**	

1.5.3 BIKE PARKING STALL DATA-PROVIDED

PARKING STALL USER/TYPE	PARKING STALL COUNT	PARKING STALL %	COMMENTS
COMM.			
BIKE CLASS 2	6	4.8%	NOTE EACH CLASS II BICYCLE RACK HAS A (2) BICYCLE CAPACITY
COMM.: 6		**4.8%**	
TENANT			
BIKE - DBL SIDED FLOOR RACK	44	35.2%	
BIKE - SGL WALL MOUNTED RACK	13	10.4%	
TENANT: 57		**45.6%**	
VISITOR			
BIKE CLASS 2	16	12.8%	NOTE EACH CLASS II BICYCLE RACK HAS A (2) BICYCLE CAPACITY
VISITOR: 16		**12.8%**	
TENANT			
BIKE - SGL WALL MOUNTED RACK	46	36.8%	
TENANT: 46		**36.8%**	
TOTAL BIKE PARKING STALLS: 125		**100.0%**	

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PROJECT # 23124.1
CITY FILE # --

PROJECT DATA

SCALE

SD1.11

1.6.0 GROSS FLOOR AREA (FSR) SUMMARY NOTES

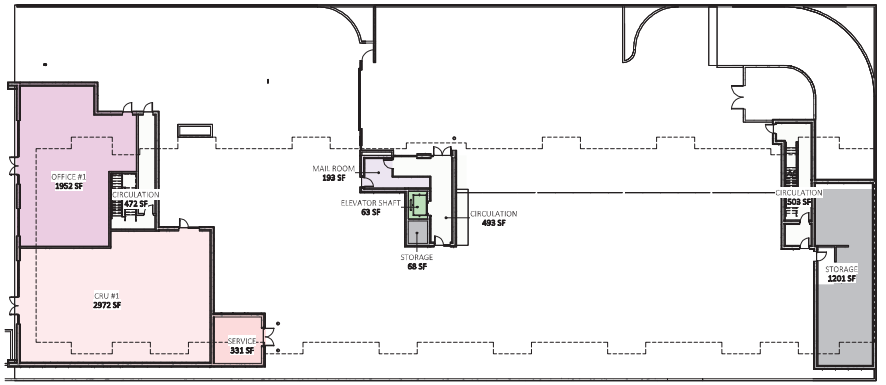
1. GROSS FLOOR AREA EQUALS THE SUM OF THE FLOOR AREA OF EACH STOREY IN ALL BUILDINGS ON A LOT, INCLUDING EXTERIOR WALLS, BUT EXCLUDING THE FOLLOWING:
A) ATTACHED GARAGES OR COVERED PARKING AREAS TO A MAXIMUM OF 42.00 SM (452.00 SF) IN AREA IN RESIDENTIALLY-ZONED (R) LOTS FOR SINGLE-FAMILY DWELLINGS, TWO-FAMILY DWELLINGS OR MODULAR HOMES;
B) UNENCLOSED AND ROOFLESS DECKS, PATIOS, BALCONIES AND PORCHES;
C) AREAS BELOW GRADE WITH A MAXIMUM CEILING HEIGHT LESS THAN 1.8 m;
D) ELEVATOR SHAFTS AND MECHANICAL ROOMS;
E) COVERED ENTRANCES TO A MAXIMUM OF 10 SM IN AREA

1.6.2 FSR CALCULATION

GROSS FLOOR AREA (FSR) SF	SITE AREA SF	FSR
62965 SF	41969 SF	1.50

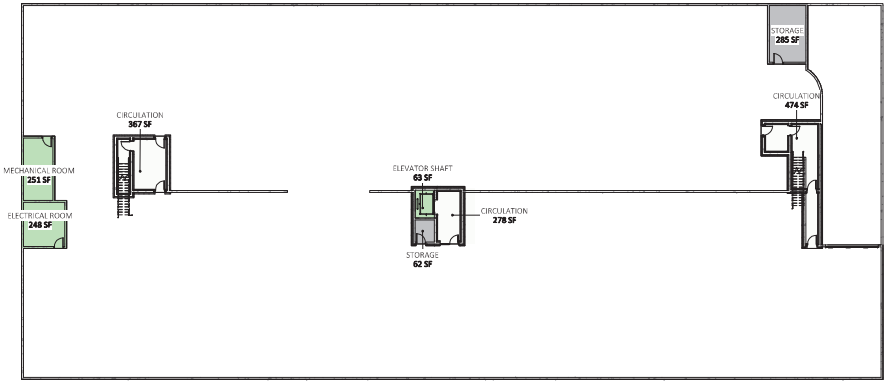
1.6.1 GROSS FLOOR AREA (FSR) SUMMARY

LEVEL / AREA TYPE	AREA SF	AREA m²	AREA %	COMMENTS
STORAGE				
P1 LEVEL	347 SF	32.23 m²	0.5%	
1ST LEVEL	1269 SF	117.93 m²	2.0%	
2ND LEVEL	51 SF	4.69 m²	0.1%	
3RD LEVEL	51 SF	4.69 m²	0.1%	
	1717 SF	**159.56 m²**	**2.7%**	
SERVICE ROOMS/SHAFTS				
1ST LEVEL	331 SF	30.73 m²	0.5%	
2ND LEVEL	95 SF	8.80 m²	0.1%	
3RD LEVEL	95 SF	8.80 m²	0.1%	
4TH LEVEL	95 SF	8.80 m²	0.1%	
	615 SF	**57.13 m²**	**1.0%**	
RESIDENTIAL				
2ND LEVEL	17134 SF	1591.85 m²	26.9%	
3RD LEVEL	17140 SF	1592.38 m²	26.9%	
4TH LEVEL	10907 SF	1013.29 m²	17.1%	
	45182 SF	**4197.51 m²**	**70.8%**	
OFFICE				
1ST LEVEL	1952 SF	181.39 m²	3.1%	
	1952 SF	**181.39 m²**	**3.1%**	
MAIL ROOM				
1ST LEVEL	193 SF	17.98 m²	0.3%	
	193 SF	**17.98 m²**	**0.3%**	
INDOOR AMENITY				
2ND LEVEL	329 SF	30.56 m²	0.5%	
3RD LEVEL	329 SF	30.56 m²	0.5%	
4TH LEVEL	329 SF	30.56 m²	0.5%	
	987 SF	**91.69 m²**	**1.5%**	
COMMERCIAL				
1ST LEVEL	2972 SF	276.10 m²	4.7%	
	2972 SF	**276.10 m²**	**4.7%**	
CIRCULATION				
P1 LEVEL	1119 SF	103.95 m²	1.8%	
1ST LEVEL	1468 SF	136.36 m²	2.3%	
2ND LEVEL	2059 SF	191.29 m²	3.2%	
3RD LEVEL	2059 SF	191.29 m²	3.2%	
4TH LEVEL	2641 SF	245.35 m²	4.1%	
	9346 SF	**868.25 m²**	**14.7%**	
AREA EXCLUSION				
P1 LEVEL	562 SF	52.18 m²	0.9%	
1ST LEVEL	63 SF	5.81 m²	0.1%	
2ND LEVEL	63 SF	5.81 m²	0.1%	
3RD LEVEL	63 SF	5.81 m²	0.1%	
4TH LEVEL	63 SF	5.81 m²	0.1%	
	812 SF	**75.43 m²**	**1.3%**	
AREA GRAND TOTAL	**63776 SF**	**5925.02 m²**	**100.0%**	



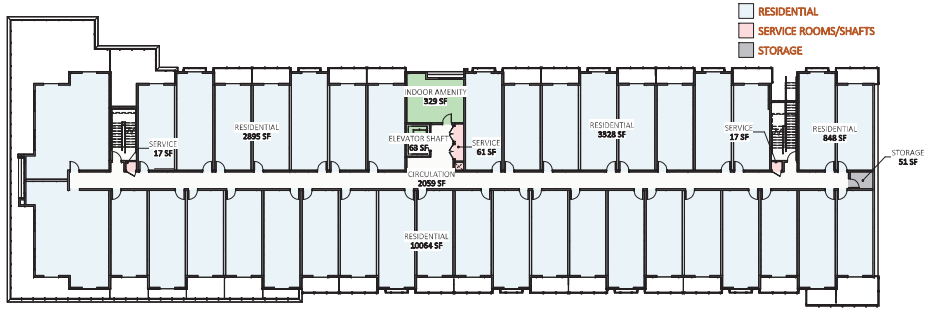
1ST LEVEL
1" = 20'-0"

- AREA EXCLUSION
- CIRCULATION
- COMMERCIAL
- MAIL ROOM
- OFFICE
- SERVICE ROOMS/SHAFTS
- STORAGE



P1 LEVEL
1" = 20'-0"

- AREA EXCLUSION
- CIRCULATION
- STORAGE



2ND & 3RD LEVEL
1" = 20'-0"

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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

FSR PLANS

SCALE 1" = 20'-0"

SD1.12

DESIGN RATIONALE

PROJECT DESCRIPTION

THIS PROPOSED DEVELOPMENT IS COMPRISED OF THREE STOREYS - TOTALING 100 UNITS - OF RESIDENTIAL CONSTRUCTION SITTING ATOP OF A ONE STOREY COMMERCIAL AND OFFICE SPACE PODIUM. THE ONE LEVEL OF OPEN PARKING CONTAINS BOTH VISITOR AND RESIDENTIAL PARKING STALLS THAT ARE SEPARATED BY A CONTROLLED GATE ACCESS. BICYCLE STORAGE HAS BEEN STRATEGICALLY LOCATED BEHIND THE CRU'S AND BENEATH THE BUILDING ABOVE TO OFFER WEATHER AND THEFT PROTECTION. BELOW GRADE IS ONE STOREY OF RESIDENTIAL PARKING WITH ELEVATOR AND STAIR ACCESS TO THE RESIDENTIAL CONSTRUCTION ABOVE. THE TOP FLOOR OF THE RESIDENTIAL CONSTRUCTION IS SETBACK FROM THE PROPERTY LINE ALONG GIBBINS ROAD TO REDUCE THE OVERALL SCALE OF THE BUILDING AT THE STREET LEVEL. THE TOP FLOOR ALSO HAS A ROOF TOP AMENITY AREA THAT HAS BEEN DESIGNED TO HELP REDUCE THE BUILDING HEIGHT AGAINST THE NEIGHBOURING PROPERTY TO THE SOUTH. AT THE GROUND LEVEL ALONG GIBBINS, CONCRETE BENCHES AND PLANTING HAS BEEN DESIGNED TO CREATE PUBLIC ENGAGEMENT IN FRONT OF THE COMMERCIAL PORTION OF THE DEVELOPMENT.

ENVIRONMENTAL SUSTAINABILITY

ADDRESSED WITHIN THE DEVELOPMENT BY THE PROVISION OF BIKE RACKS AND BIKE STORAGE, LARGE OPEN GREEN SPACES, LIGHT POLLUTION REDUCTION BY MEANS OF DARK SKY COMPLIANT EXTERIOR LIGHTING SYSTEMS, WATER EFFICIENT LANDSCAPING AND PLUMBING SYSTEMS, NATURAL VENTILATION THROUGH OPERABLE WINDOWS AND ENERGY EFFICIENT HVAC SYSTEMS, STORAGE AND COLLECTION OF RECYCLABLES, RENEWABLE BASED WOOD BUILDING MATERIALS AND HEAT ISLAND EFFECT REDUCTION BY MINIMIZING EXTERIOR PARKING AND MAXIMIZING DENSITY.

MASSING, FORM & CHARACTER

THE SITING AND FORM OF THE BUILDING FOLLOWS THE SITE GEOMETRY, WITH A STRONG STREET PRESENCE WITH A WIDE GROUND FLOOR VOLUME DESIGNATED FOR COMMERCIAL USE, AND A NARROW 3-STOREY RESIDENTIAL VOLUME - A TRIBUTE TO THE FLOATING HOUSES BY THE BAY. THE PROPOSAL OF CRU'S IS IN LINE WITH THE DESIGN GUIDE GOALS FOR COWICHAN, VALUING PEDESTRIAN SAFETY AND CONVENIENCE, BESIDES PROMOTING ECONOMICAL DEVELOPMENT TO THE NEIGHBORHOOD. THE COMMERCIAL FRONTAGE SERVES AS THE PUBLIC FACE OF THE BUILDING AND ACTS AS A DRIVING FORCE BEHIND COMMUNITY ENGAGEMENT.
THE CHARACTER OF THE BUILDING ANSWERS TO HISTORICAL PATTERNS, FOLLOWING AN INDUSTRIAL WEST COAST AESTHETIC TO RELATE TO THE EXISTING CHARACTER OF THE VILLAGE, WHILE THE CONTEMPORARY DESIGN PROPOSED NODS TO THE FUTURE OF THE COMMUNITY. EXTROVERTED ARCHITECTURE IS PROPOSED THROUGH RESIDENTIAL BALCONIES IN ALL UNITS, AND FACADE COMPOSITION AND TRANSPARENCY ARE ACHIEVED THROUGH THE PROPOSED SIZE AND PLACEMENT OF THE WINDOWS.
THE COMMERCIAL GROUND FLOOR IS ENFOLDED IN WOOD-LOOKING CEMENT BOARD LAP SIDING WRAPPED ON A CONTEMPORARY BLACK CEMENT BOARD FRAMING THE VOLUME. THE RESIDENTIAL LEVELS ALSO EMPHASIZE THE WOOD-LOOKING LAP SIDING, WITH THE BUILDING CORE IN NEUTRAL GRAY TONES. BLACK CORRUGATED METAL FEATURES ARE STRATEGICALLY LOCATED ON THE STREET ELEVATION AND ABOVE THE RESIDENTIAL BUILDING ENTRANCE.

CRIME PREVENTION

ENVIRONMENTAL DESIGN PRINCIPLES (CPTED) HAVE BEEN INCORPORATED INTO THE DESIGN BY MEANS OF NATURAL SURVEILLANCE THROUGHOUT THE PERIMETER AND PARKADE LEVELS BY MEANS OF CLEAR VIEWING LINES FROM THE RESIDENTIAL UNITS AND BALCONIES, ELIMINATION OF ALL POTENTIAL DARK AREAS AND ACCESSES/EXITS, CLEARLY DEFINED MAIN ENTRANCES AND SECURE AND FULLY ACCESSIBLE PARKING.

REFER ALSO TO THE ATTACHED CONCEPT STATEMENT BY PROSPECT & REFUGE LANDSCAPE ARCHITECTS FOR FURTHER DETAIL ON THE LANDSCAPE DESIGN.

PERSPECTIVE RENDERING

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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

DESIGN RATIONALE

SCALE

SD1.20

COMMERCIAL & OFFICE ALONG GIBBINS ROAD

OUTDOOR BALCONIES AND PATIO SPACES

SECURE RESIDENTIAL ENTRANCE

KEYSTONE
ARCHITECTURE
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GIBBINS ROAD MIXED-USE

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PROJECT # 23124.1
CITY FILE # --

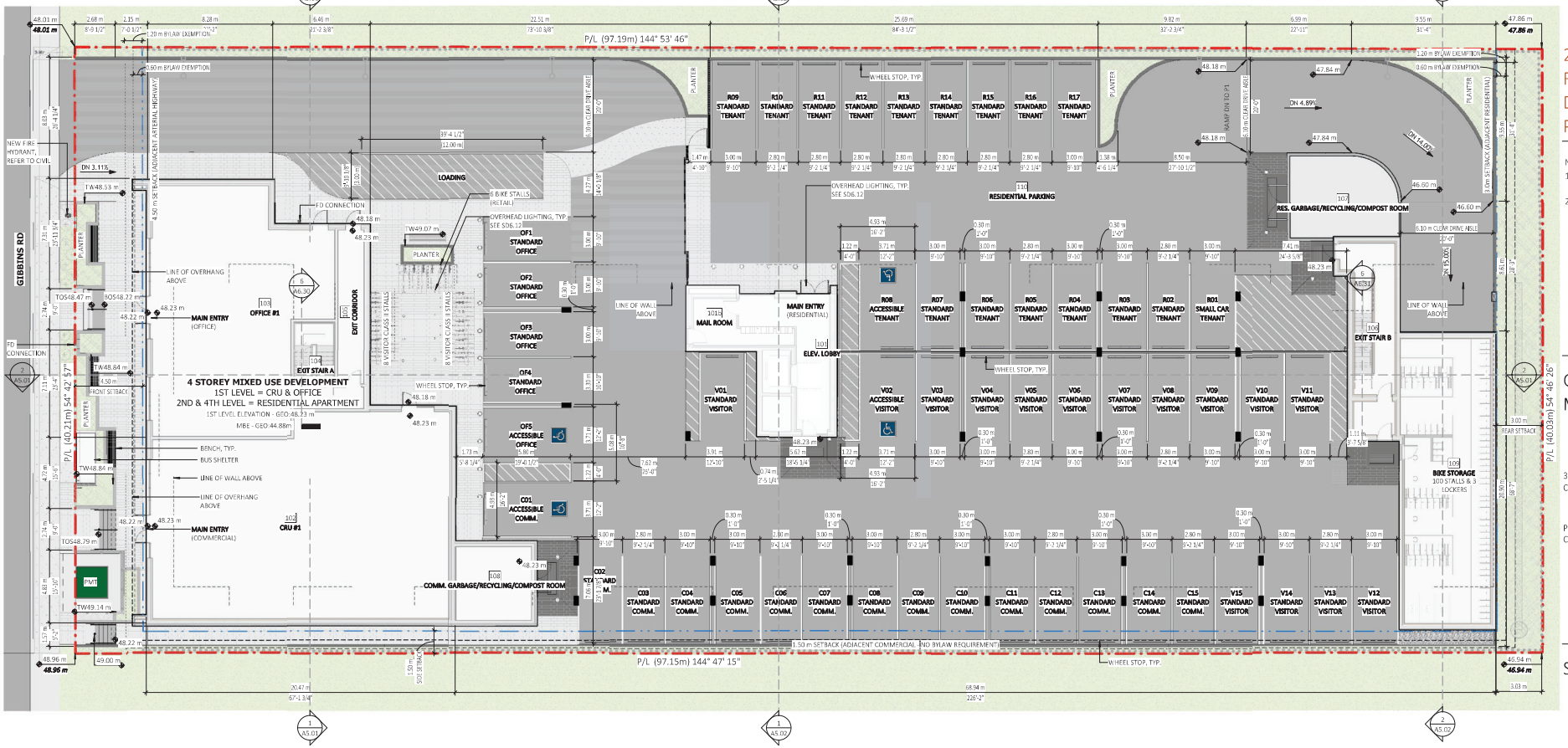
RENDERINGS

SCALE

SD1.21

1.9.0 GENERAL SITE NOTES

1. REFER TO SITE CODE PLAN & SITE LAYOUT PLAN FOR MORE INFORMATION.
2. REFER TO CIVIL ENGINEER'S DRAWINGS FOR PAVED AREA DRAINAGE, SITE ELEVATIONS, SANITARY AND SEWER LINES, EXTENT OF DEMO, NEW AND REPAIRED PAVING, OTHER SERVICES, ETC.
3. VERIFY ALL SITE INFORMATION, BUILDING AREA, DIMENSIONS AND BEARINGS WITH LEGAL SURVEY PLAN.
4. REFER TO LANDSCAPE DRAWINGS FOR ALL HARD & SOFT LANDSCAPING.
5. TW=TOP OF WALL TOC=TOP OF CURB
   BW=BOTTOM OF WALL BOC=BOTTOM OF CURB
6. NEW ELEVATION 00.00 m
   EXISTING ELEVATION 00.00m



SITE PLAN

3/32" = 1'-0"

KEYSTONE ARCHITECTURE
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SITE PLAN

SCALE 3/32" = 1'-0"

SD2.01

KEYSTONE
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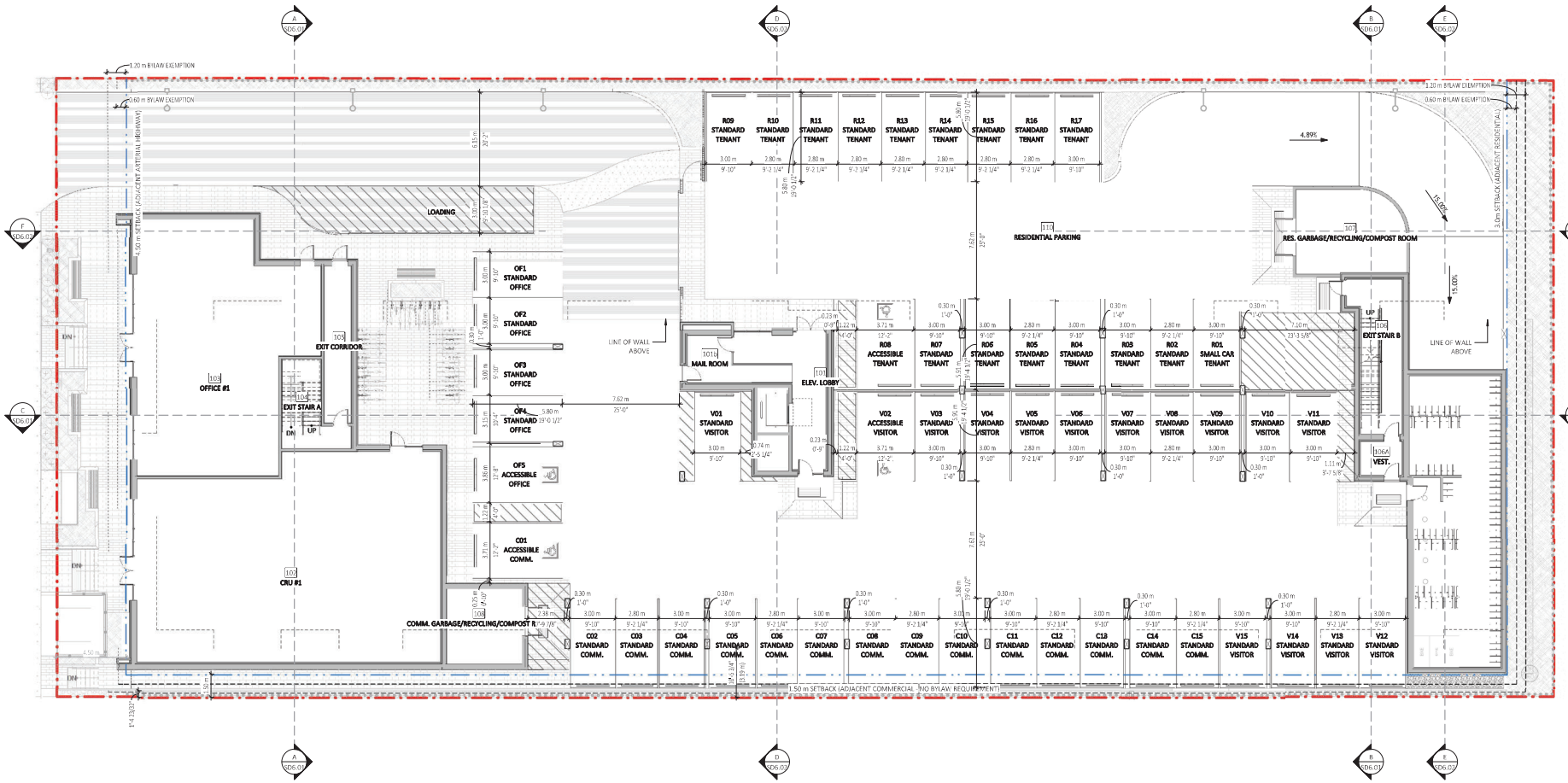
1ST LEVEL PLAN



1ST LEVEL
3/32" = 1'-0"

SCALE 3/32" = 1'-0"

SD2.02

KEYSTONE
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2ND LEVEL PLAN

2ND LEVEL
3/32" = 1'-0"

SCALE 3/32" = 1'-0"

SD2.10

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3RD LEVEL PLAN

SCALE 3/32" = 1'-0"

SD2.11

3RD LEVEL
3/32" = 1'-0"

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ARCHITECTURE
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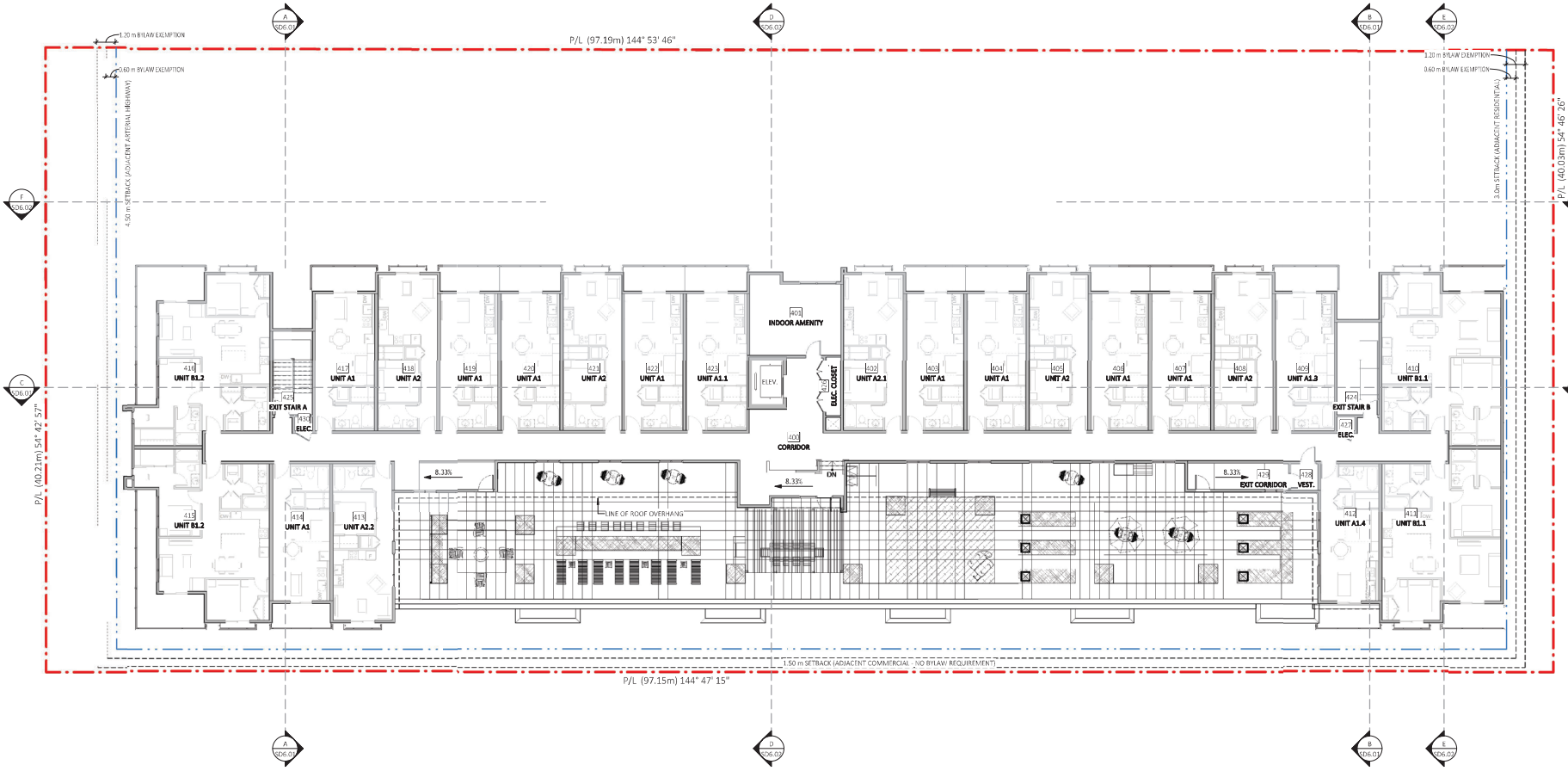


GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

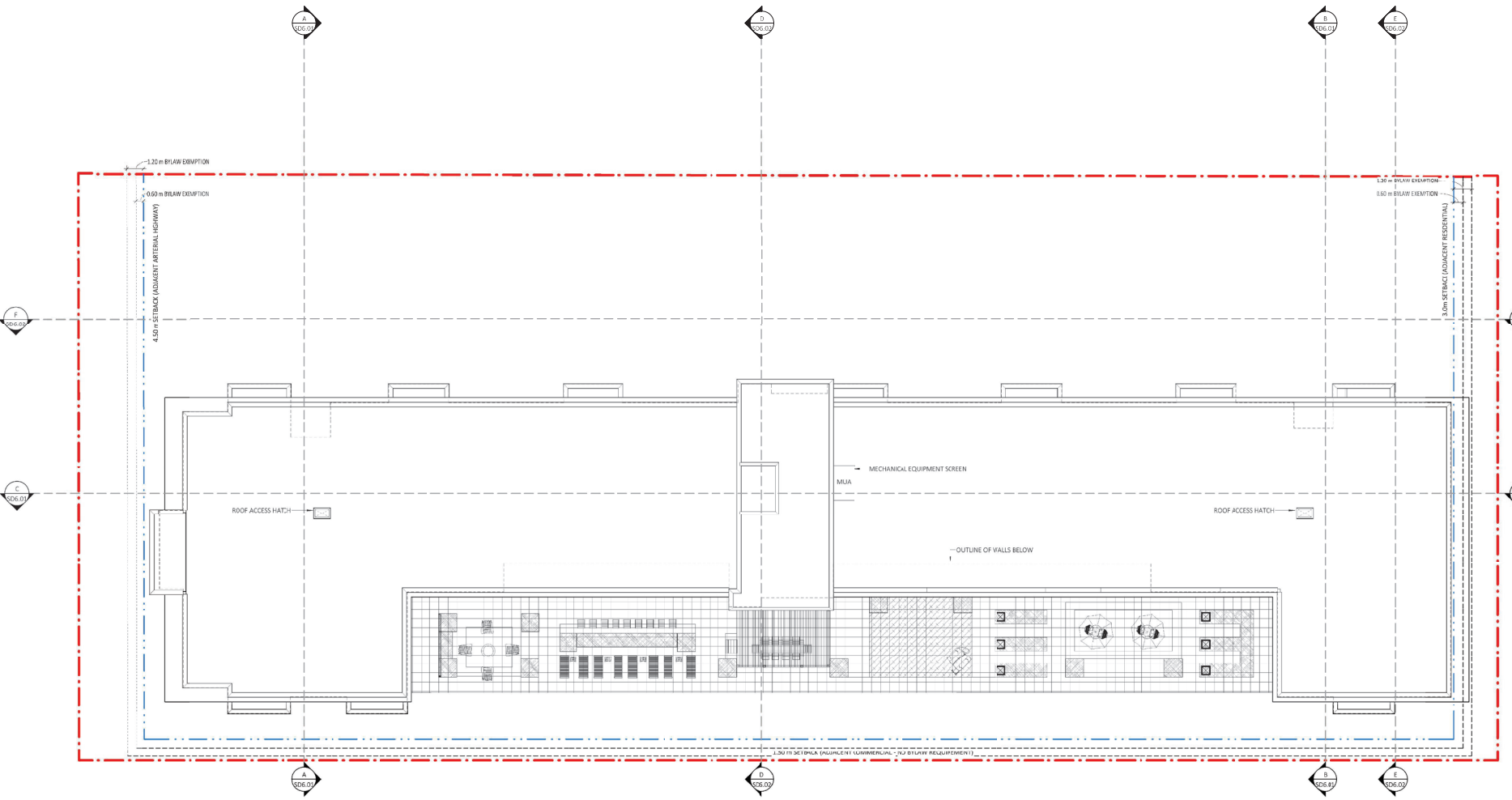
PROJECT # 23124.1
CITY FILE # --

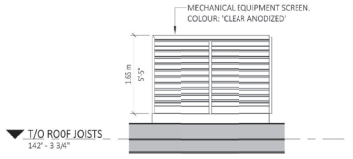
4TH LEVEL PLAN

4TH LEVEL
3/32" = 1'-0"

SCALE 3/32" = 1'-0"

SD2.12





ROOF LEVEL
3/32" = 1'-0"

MECHANICAL EQUIPMENT SCREEN
1/4" = 1'-0"

KEYSTONE
ARCHITECTURE
300 - 3131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

2024-05-03

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GIBBINS ROAD MIXED-USE

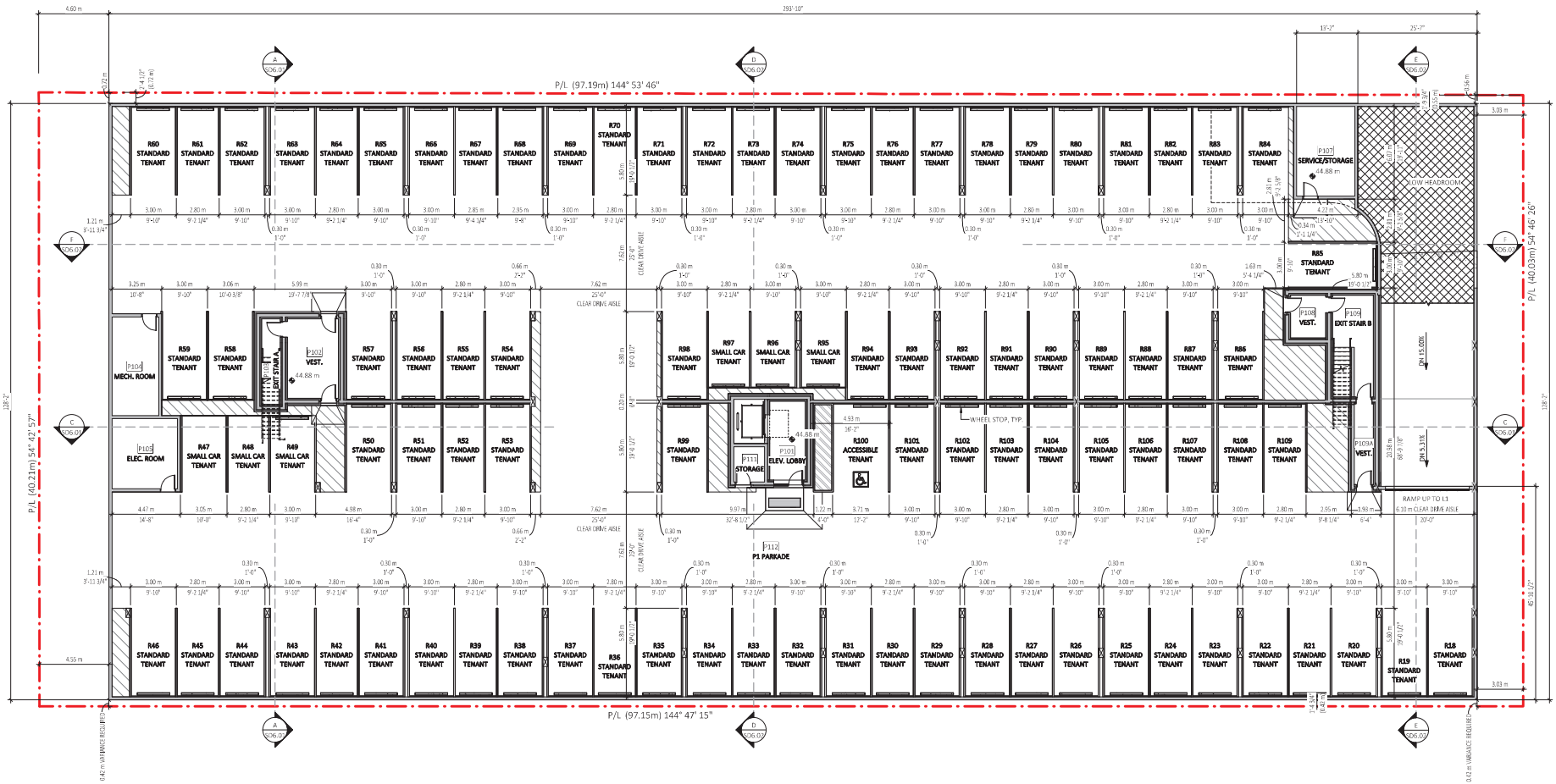
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

ROOF LEVEL PLAN

SCALE As indicated

SD2.13



P1 LEVEL

3/32" = 1'-0"

KEYSTONE ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB T2R 1L9 | 587.391.4768
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3096 GIBBINS ROAD, NORTH COWICHAN BC

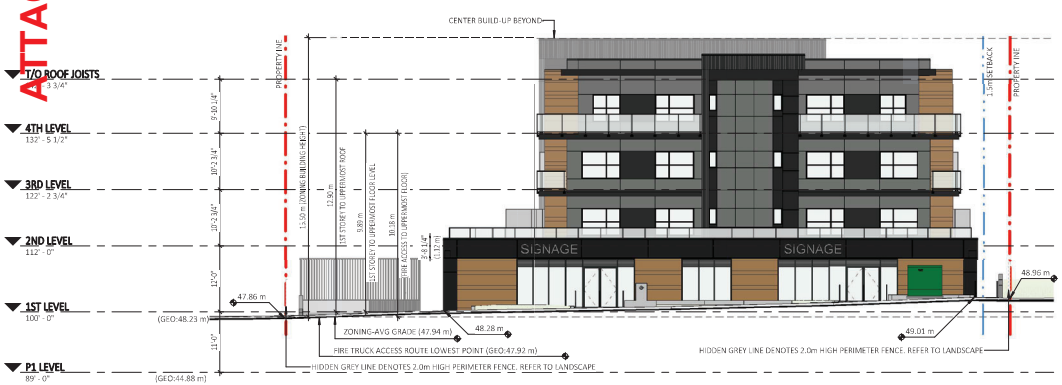
PROJECT # 23124.1
CITY FILE # --

P1 LEVEL PLAN

SCALE 3/32" = 1'-0"

SD2.20

ATTACHMENT 5



WEST ELEVATION

3/32" = 1'-0"

NORTH ELEVATION

3/32" = 1'-0"

KEYSTONE ARCHITECTURE

300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

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GIBBINS ROAD MIXED-USE

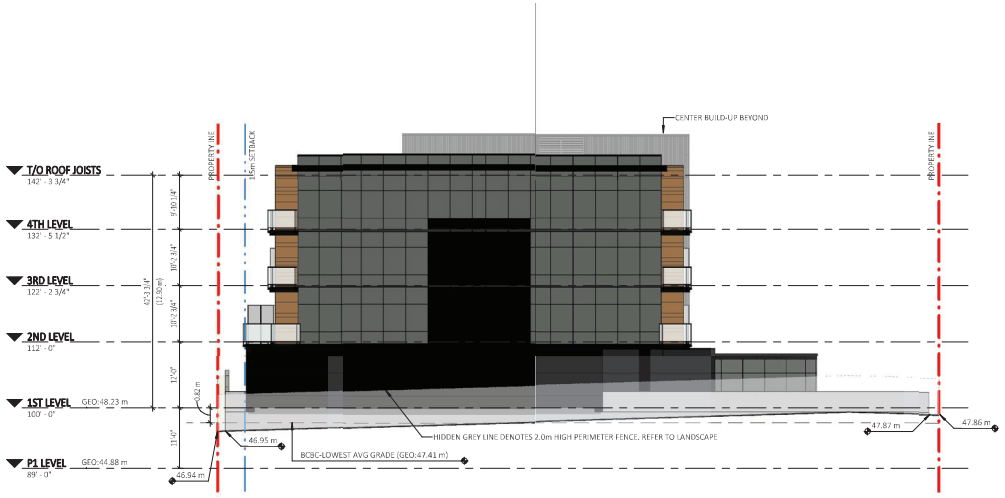
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

BUILDING ELEVATIONS

SCALE 3/32" = 1'-0"

SD3.01



EAST ELEVATION

3/32" = 1'-0"

SOUTH ELEVATION

3/32" = 1'-0"

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

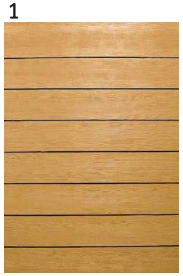
PROJECT # 23124.1
CITY FILE # --

BUILDING ELEVATIONS

SCALE 3/32" = 1'-0"

SD3.02

1



WOODTONE CEMENT BOARD LAP SIDING
COLOUR: 'SUMMER WHEAT'

2

CEMENT BOARD PANEL SIDING
COLOUR: 'MIDNIGHT BLACK'

3

CONCRETE WALL
COLOUR: 'CLEAR SEALER'

4

CEMENT BOARD LAP SIDING
COLOUR: 'NIGHT GRAY'

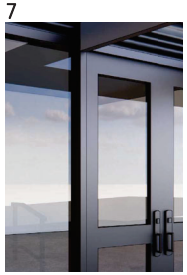
6

ALUMINUM SOFFIT
COLOUR: 'DARK GRAY'

5

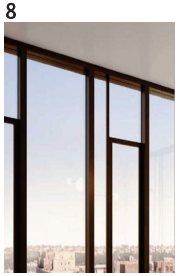
CORRUGATED METAL SIDING
COLOUR: 'BLACK'

7



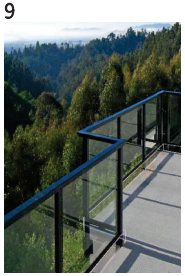
STOREFRONT/CURTAIN WALL
COLOUR: BLACK EXT / BLACK INT

8



WINDOW
COLOUR: BLACK EXT / WHITE INT

9



ALUMINUM/GLASS GUARD/RAILING
COLOUR: BLACK

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

MATERIAL BOARD

SCALE 6" = 1'-0"

SD4.01

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0579
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
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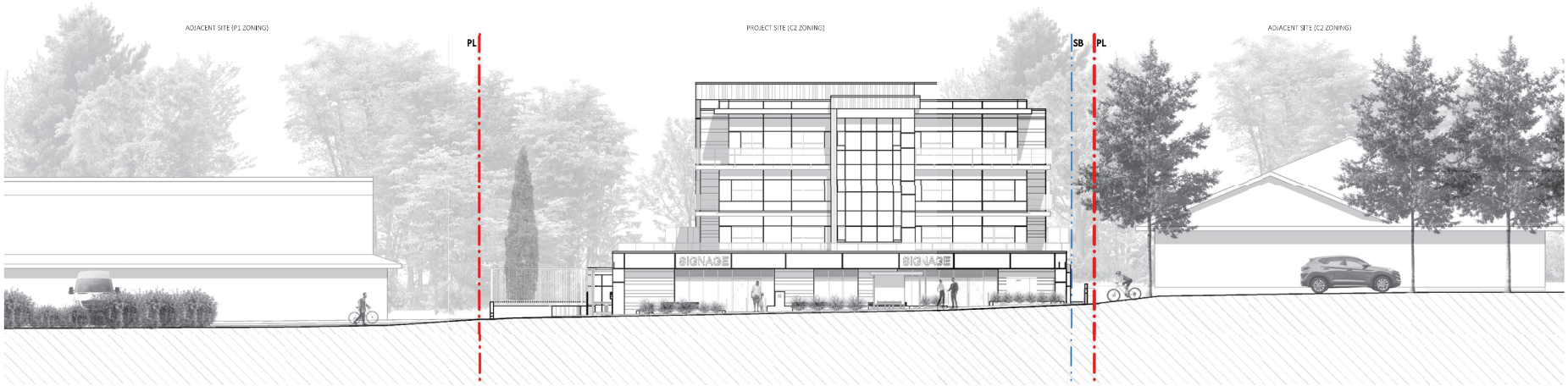


GIBBINS ROAD STREETSCAPE
3/32" = 1'-0"

GIBBINS ROAD MIXED-USE

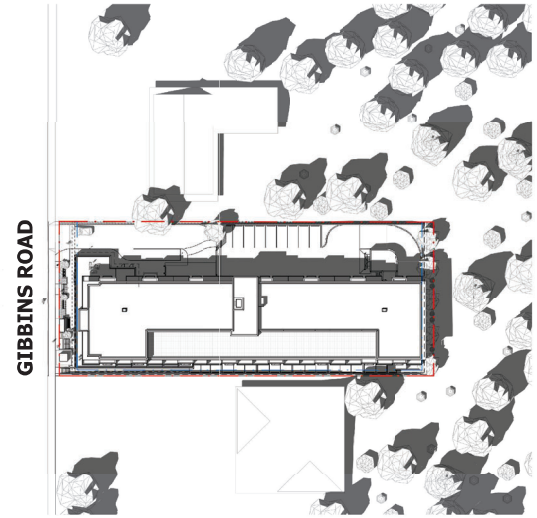
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

STREETSCAPES

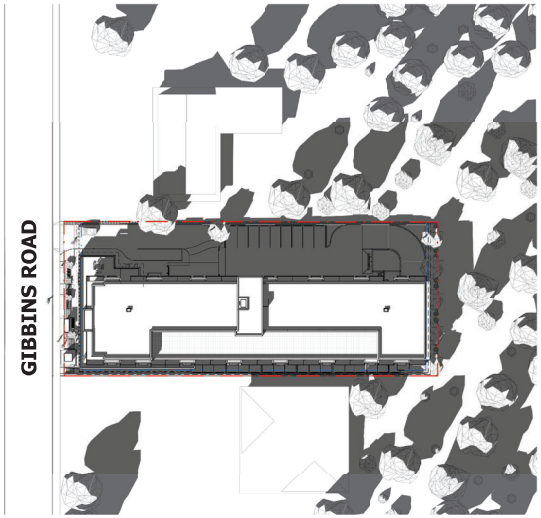
SCALE 3/32" = 1'-0"

SD5.01



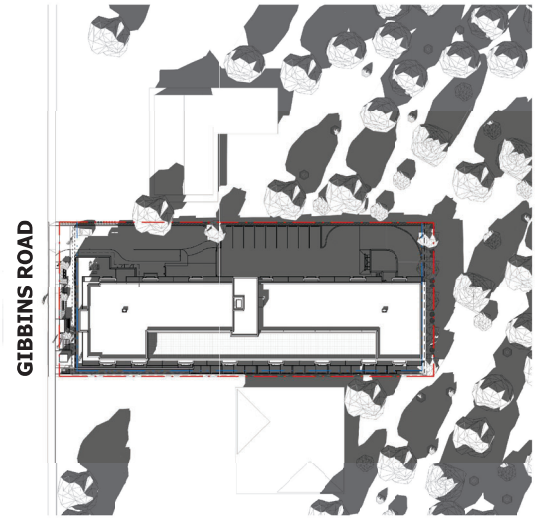
JUNE 21 - 3PM

1" = 50'-0"



SEPTEMBER 21 - 3PM

1" = 50'-0"



MARCH 21 - 3PM

1" = 50'-0"

DECEMBER 21 - 3PM

1" = 50'-0"

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0579
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
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GIBBINS ROAD MIXED-USE

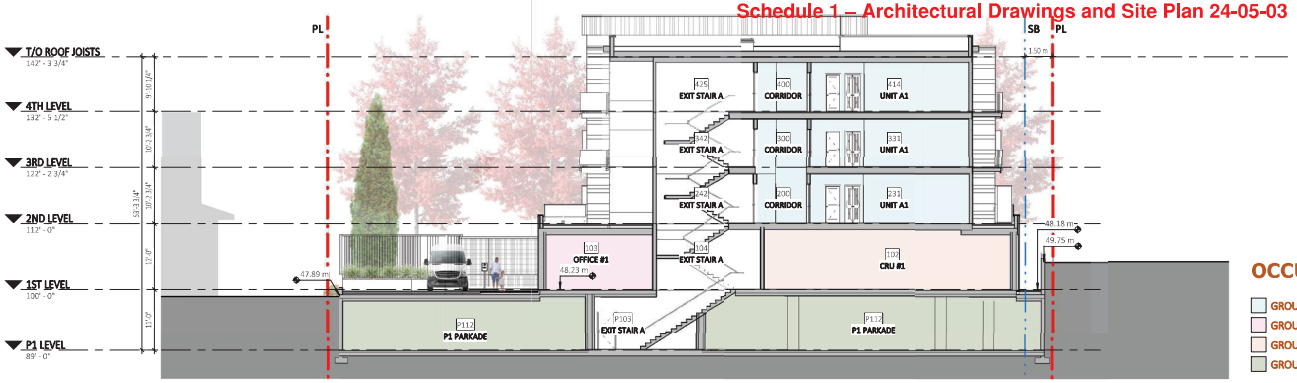
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SHADOW STUDY

SCALE 1" = 50'-0"

SD5.10

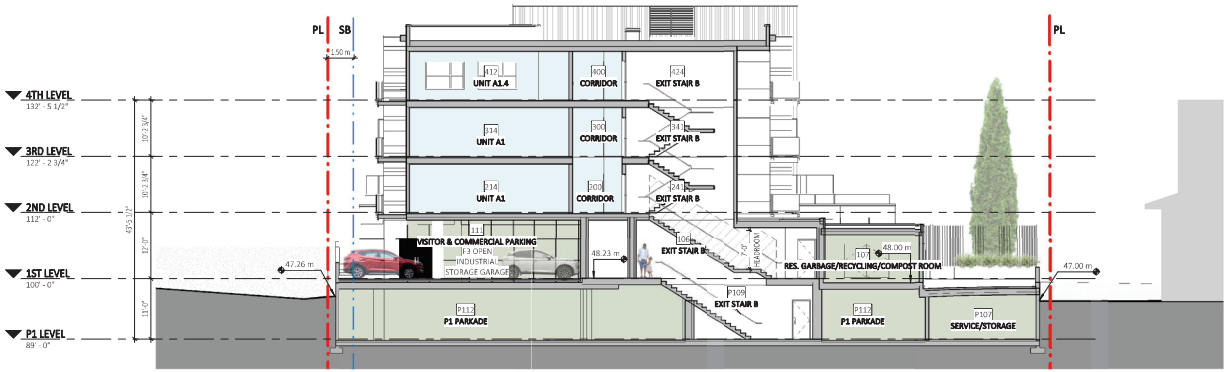


E/W SITE SECTION A

3/32" = 1'-0"

OCCUPANCY USE

- GROUP C - RESIDENTIAL DWELLING UNIT
- GROUP D - BUSINESS & PERSONAL SERVICES
- GROUP E - MERCANTILE
- GROUP F3 - INDUSTRIAL STORAGE GARAGES



E/W STAIR SECTION B

3/32" = 1'-0"

OCCUPANCY USE

- GROUP C - RESIDENTIAL DWELLING UNIT
- GROUP F3 - INDUSTRIAL STORAGE GARAGES

OCCUPANCY USE

- GROUP C - RESIDENTIAL DWELLING UNIT
- GROUP D - BUSINESS & PERSONAL SERVICES
- GROUP F3 - INDUSTRIAL STORAGE GARAGES

N/S SITE SECTION C

3/32" = 1'-0"

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

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GIBBINS ROAD MIXED-USE

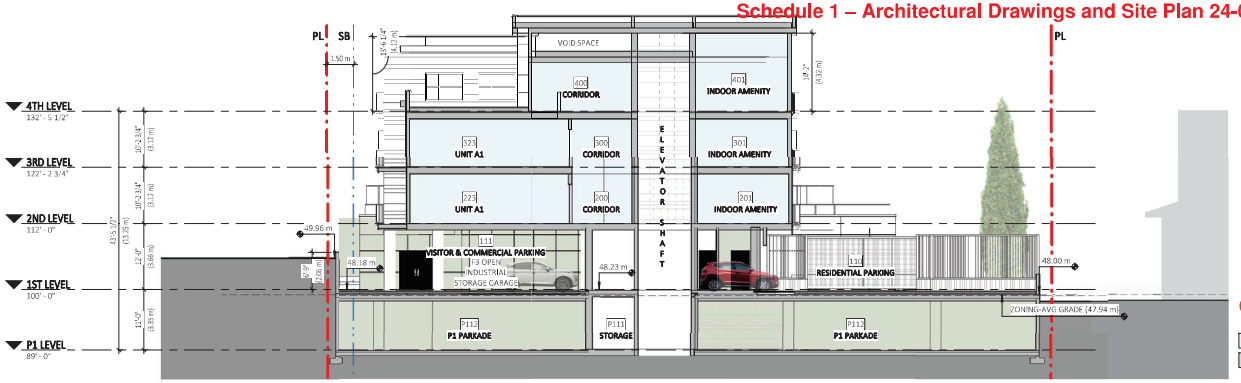
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SITE SECTIONS

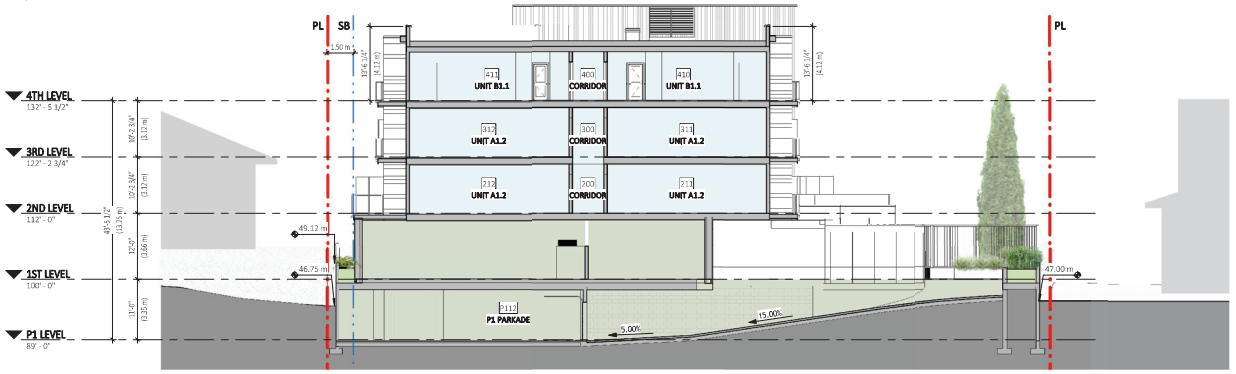
SCALE 3/32" = 1'-0"

SD6.01



E/W SITE SECTION D

3/32" = 1'-0"



E/W SITE SECTION E

3/32" = 1'-0"

OCCUPANCY USE

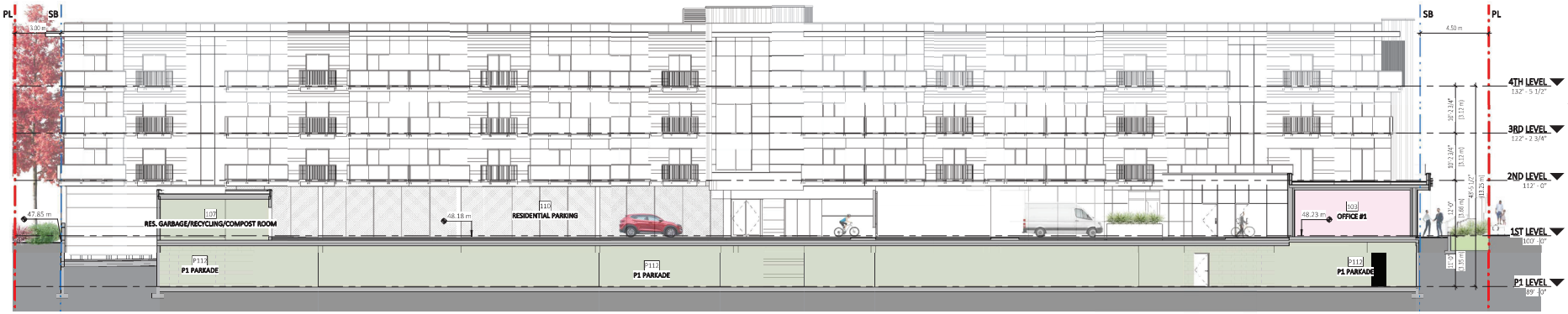
- GROUP C - RESIDENTIAL DWELLING UNIT
- GROUP F3 - INDUSTRIAL STORAGE GARAGES

OCCUPANCY USE

- GROUP C - RESIDENTIAL DWELLING UNIT
- GROUP F3 - INDUSTRIAL STORAGE GARAGES

OCCUPANCY USE

- GROUP D - BUSINESS & PERSONAL SERVICES
- GROUP F3 - INDUSTRIAL STORAGE GARAGES



N/S SECTION F

3/32" = 1'-0"

KEYSTONE ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

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GIBBINS ROAD MIXED-USE

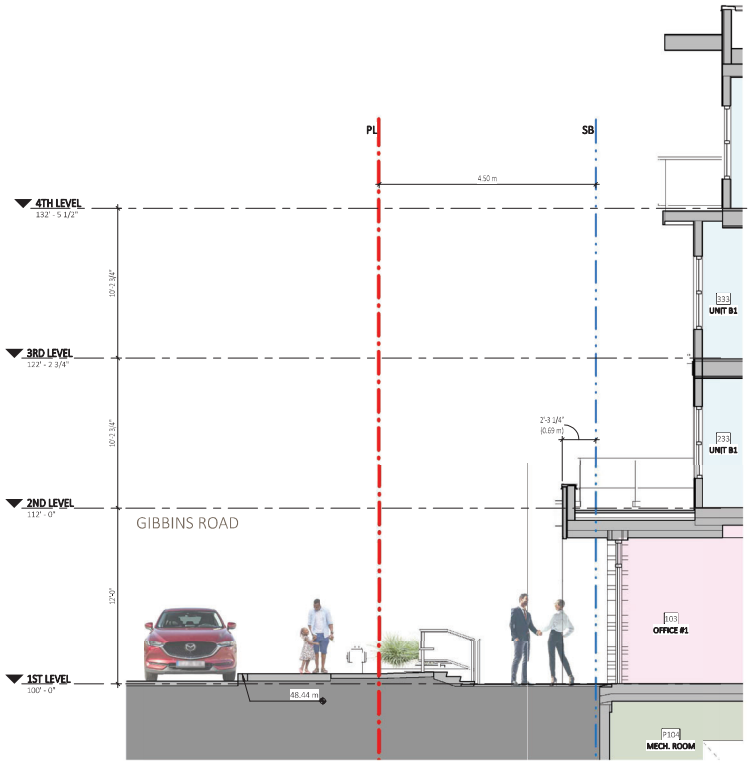
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SITE SECTIONS

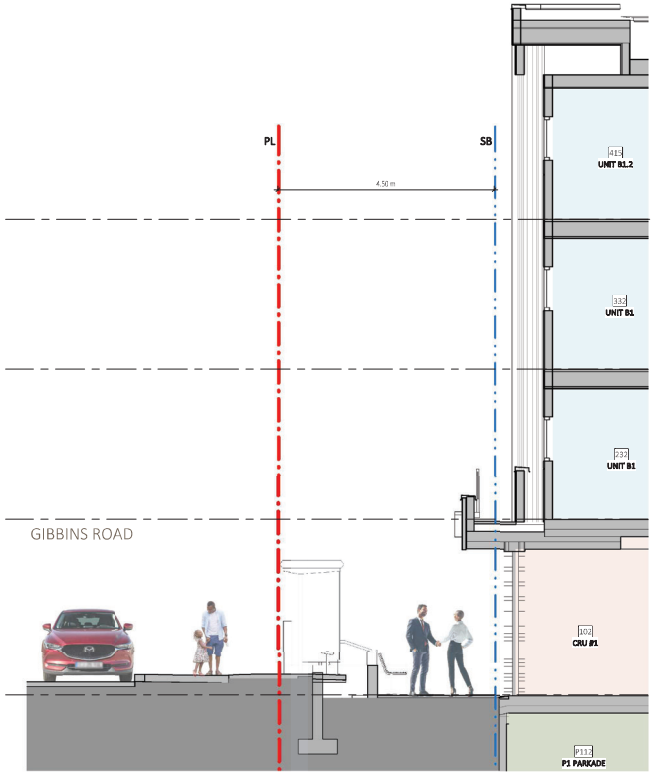
SCALE 3/32" = 1'-0"

SD6.02



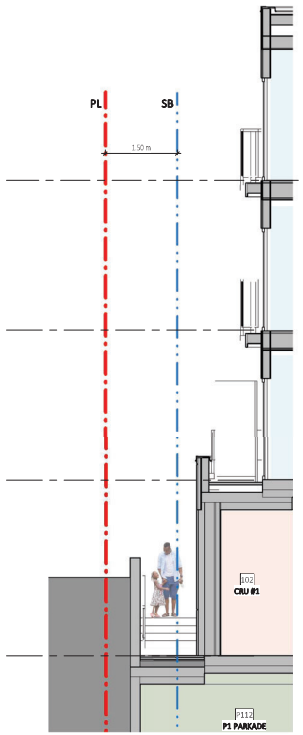
ENLARGED SECTION #1

1/4" = 1'-0"



ENLARGED SECTION #2

1/4" = 1'-0"



ENLARGED SECTION #3

1/4" = 1'-0"

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

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GIBBINS ROAD MIXED-USE

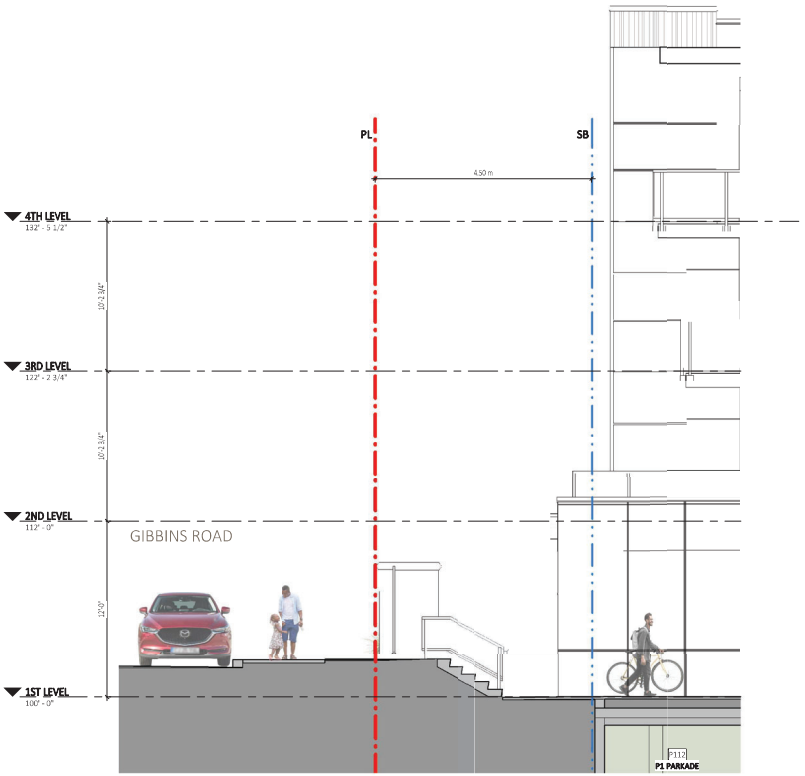
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

ENLARGED SECTIONS

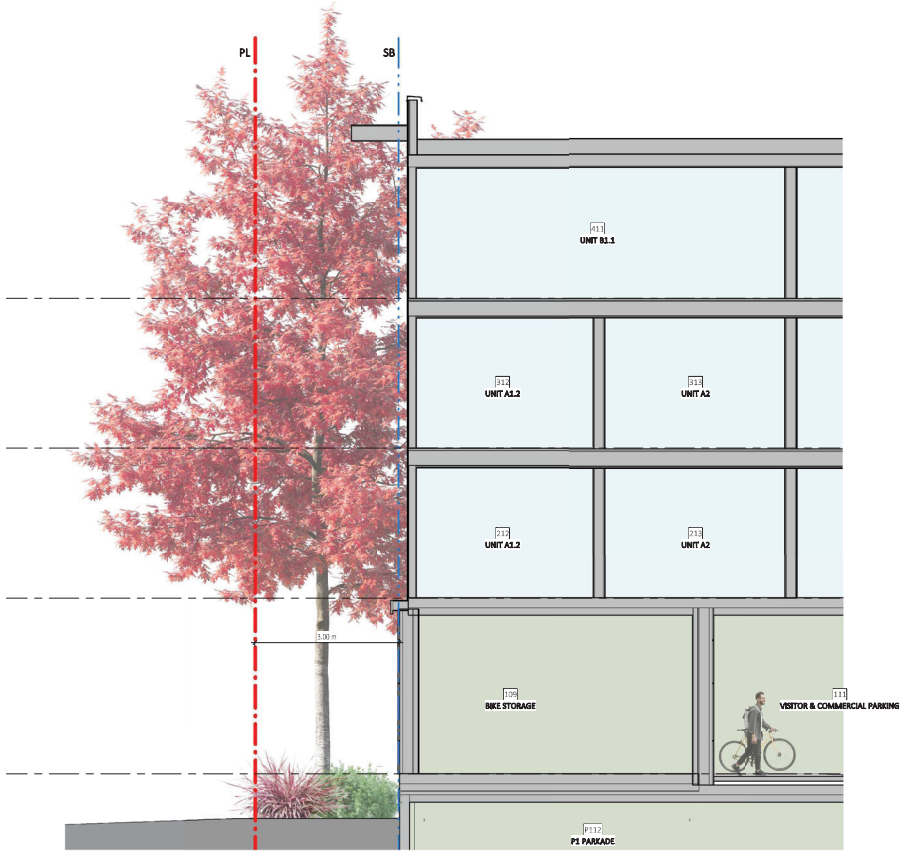
SCALE 1/4" = 1'-0"

SD6.10



ENLARGED SECTION #4

1/4" = 1'-0"



ENLARGED SECTION #5

1/4" = 1'-0"

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

ENLARGED SECTIONS

SCALE 1/4" = 1'-0"

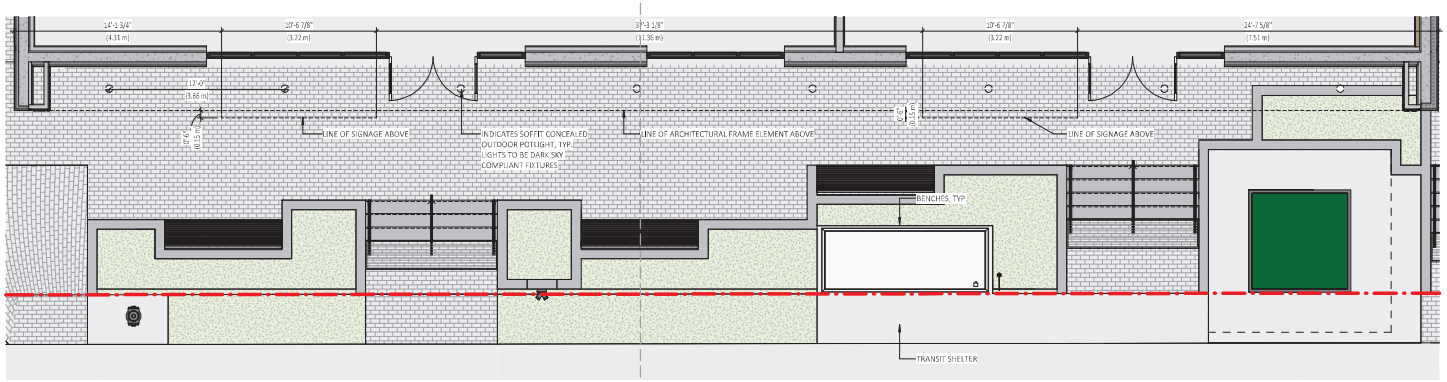
SD6.11

MAX SIGNAGE AREA
0.3 SM PER LINEAR METER OF BUILDING FRONTAGE
0.3 SM X 29.62M
= 8.89 SM MAX.

PROPOSED SIGNAGE AREA
1.64 SM + 1.64 SM
= 3.28 SM TOTAL

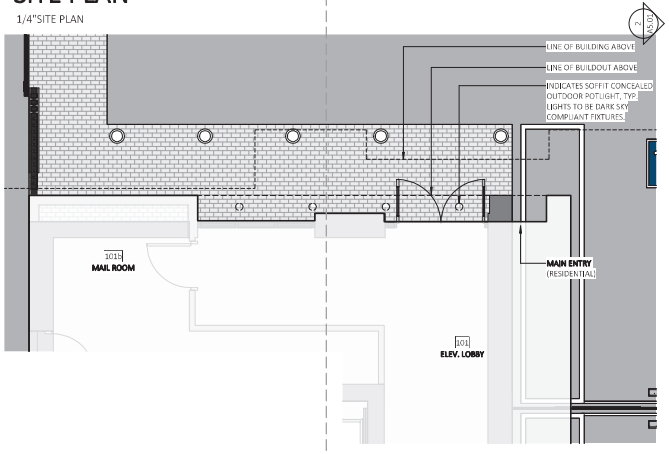
WEST STOREFRONT SIGNAGE ELEVATION

1/4" = 1'-0"



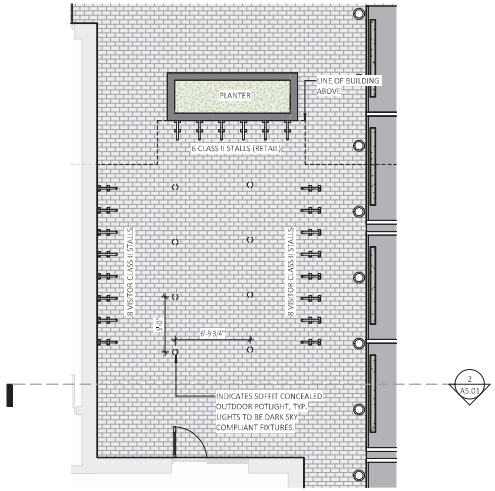
SITE PLAN

1/4"SITE PLAN



APARTMENT ENTRY LIGHTING (PLN)

1/4" = 1'-0"



OUTDOOR BIKE AREA LIGHTING (PLN)

3/16" = 1'-0"

KEYSTONE ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

2024-05-03

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GIBBINS ROAD MIXED-USE

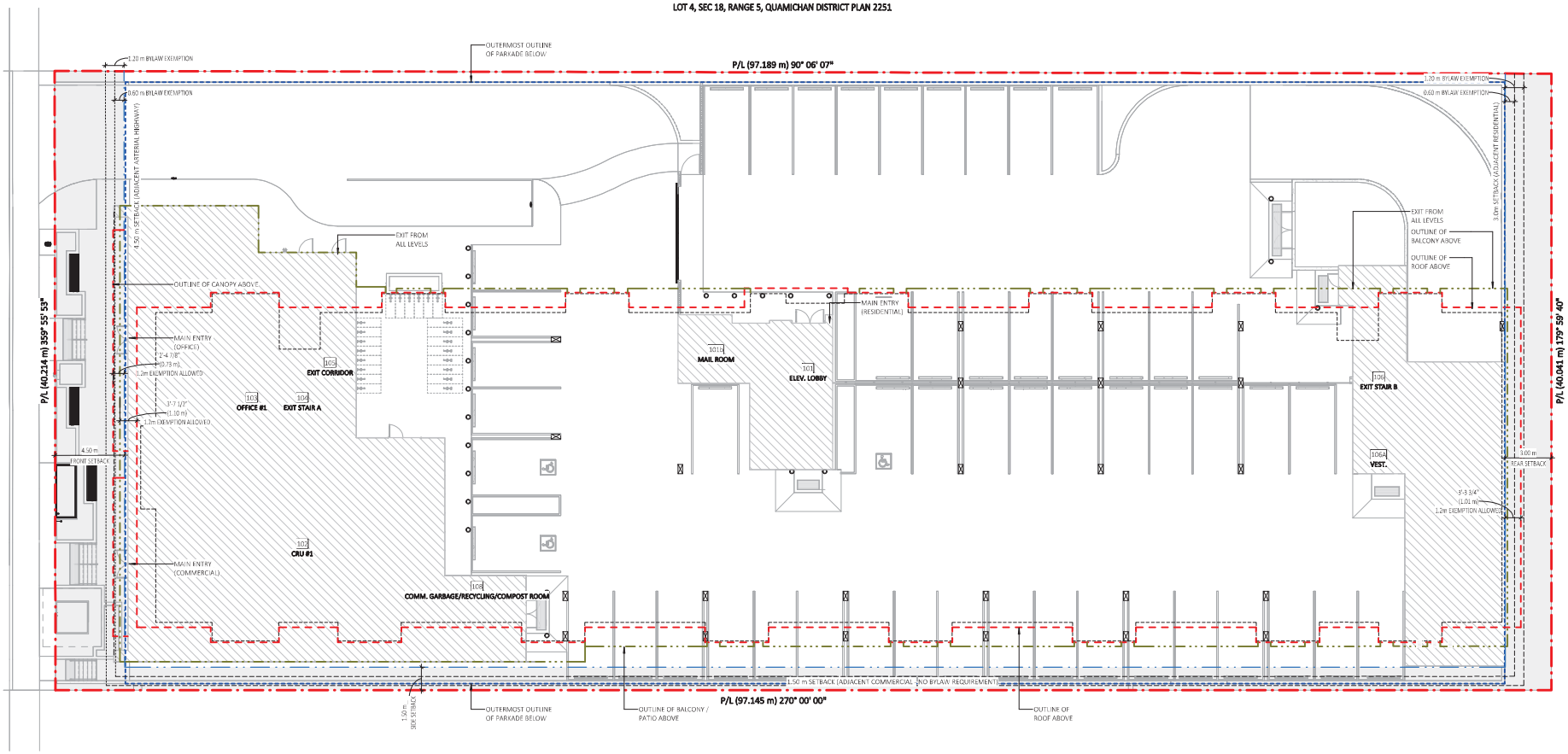
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SIGNAGE/ EXTERIOR LIGHTHING

SCALE As indicated

SD6.12



SITE LAYOUT PLAN

3/32" = 1'-0"

KEYSTONE ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB T2R 1L9 | 587.391.4768
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GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

SITE LAYOUT PLAN

SCALE 3/32" = 1'-0"

SD7.01

1.9.3 BLDG FLOOR ELEVATIONS

LEVEL	GEODETIC	RELATIVE
T/O ROOF JOISTS	57.35 m	142' - 3 3/4"
3RD LEVEL	51.22 m	122' - 2 3/4"
1ST LEVEL	44.45 m	100' - 0"
P1 LEVEL	41.10 m	89' - 0"
MRE	37.75 m	78' - 0 1/4"

1.9.4 BLDG AREAS/PERIMETER

BUILDING AREA:	AREA SF	AREA m²	PERIMETER m	10% OF PERIMETER m
GROUP F3 - BASEMENT	37660 SF	3,499 m²	257 m	25.7 m
GROUP C - LEVEL 2 & 3	19735 SF	1,833 m²	263 m	26.3 m
GROUP E - LEVEL 1	3212 SF	298 m²	82 m	8.2 m
GROUP D - LEVEL 1	1919 SF	178 m²	59 m	5.9 m
GROUP F3 - LEVEL 1	15117 SF	1,404 m²	240 m	24.0 m

1.9.5 SIGNAGE LEGEND

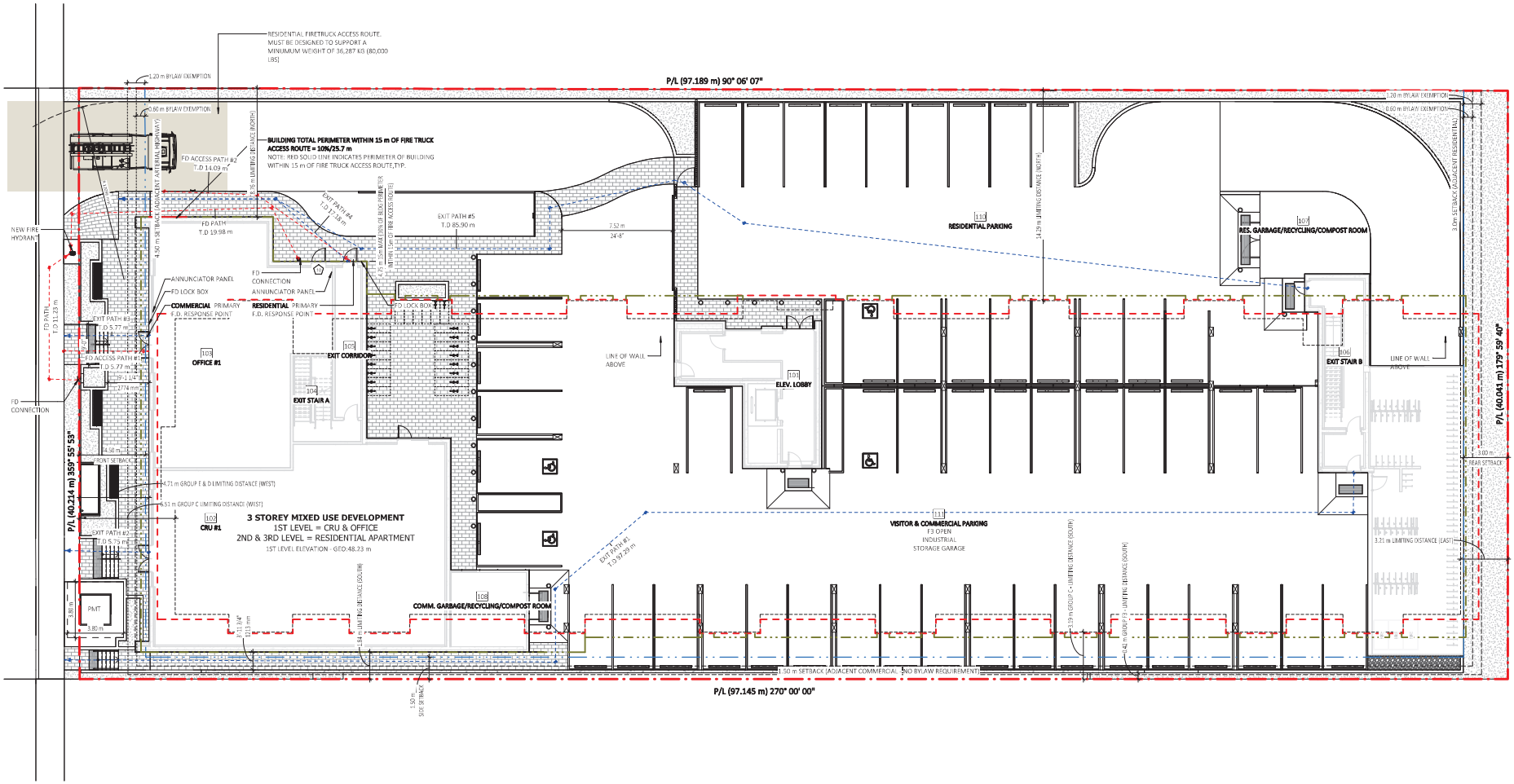
S1	STOP
S2	ACCESSIBLE PARKING STALL
S3	ACCESSIBLE ENTRANCE
S4	FIRE LANE-NO PARKING
S5	GARBAGE LOADING ZONE-NO PARKING
S6	DROP OFF/PICK UP ONLY
S7	MAXIMUM 10 KPH
S8	PARKADE CLEARANCE 7'-0"

KEYSTONE ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

2024-05-03

24-05-03 ISSUED FOR DEVELOPMENT PERMIT

NO.	ISSUE/REVISION	DATE
1	RE-ISSUED FOR DEVELOPMENT PERMIT	24-04-24
2	RE-ISSUED FOR DEVELOPMENT PERMIT	24-05-03



GIBBINS ROAD MIXED-USE

3096 GIBBINS ROAD, NORTH COWICHAN BC

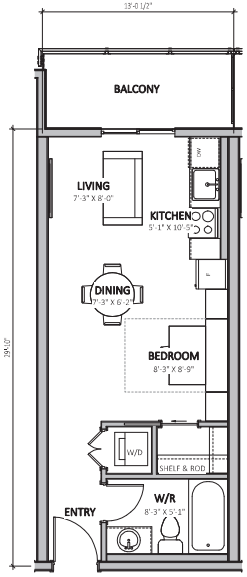
PROJECT # 23124.1
CITY FILE # --

SITE CODE PLAN

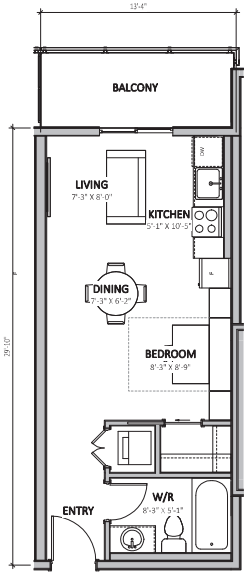
SITE CODE PLAN
3/32" = 1'-0"

SCALE 3/32" = 1'-0"

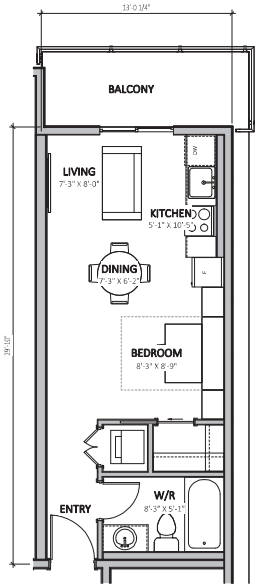
SD7.02



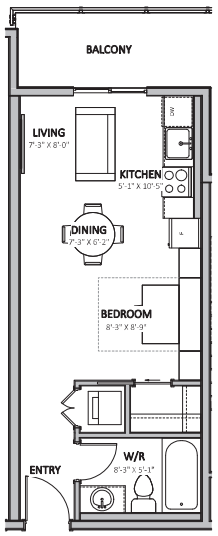
UNIT A1 393 SF STUDIO
UNIT COUNT: 46
LEVEL: 2-3



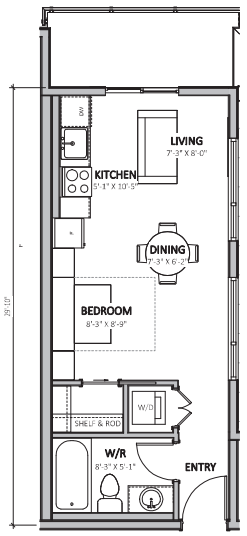
UNIT A1.1 417 SF STUDIO
UNIT COUNT: 3
LEVEL: 2-3



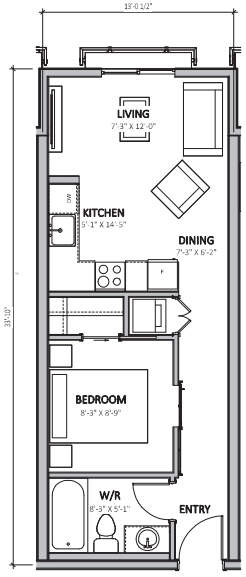
UNIT A1.2 393 SF STUDIO
UNIT COUNT: 4
LEVEL: 2-3



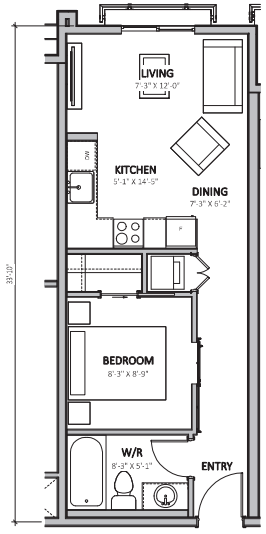
UNIT A1.3 404 SF STUDIO
UNIT COUNT: 6
LEVEL: 2-4



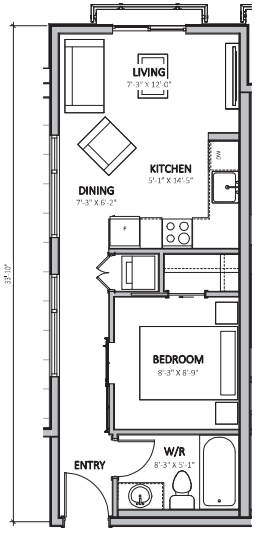
UNIT A1.4 393 SF STUDIO
UNIT COUNT: 1
LEVEL: 4



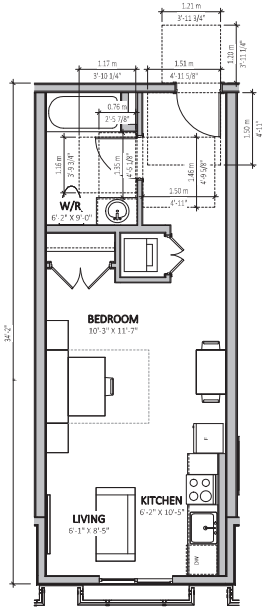
UNIT A2 447 SF 1 BED
UNIT COUNT: 24
LEVEL: 2-3



UNIT A2.1 458 SF 1 BED
UNIT COUNT: 5
LEVEL: 2-4



UNIT A2.2 453 SF 1 BED
UNIT COUNT: 1
LEVEL: 4



UNIT A3 447 SF 1 BED (ADAPTABLE DWELLING UNIT)
UNIT COUNT: 2
LEVELS: 2-3

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

2024-05-03

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GIBBINS ROAD MIXED-USE

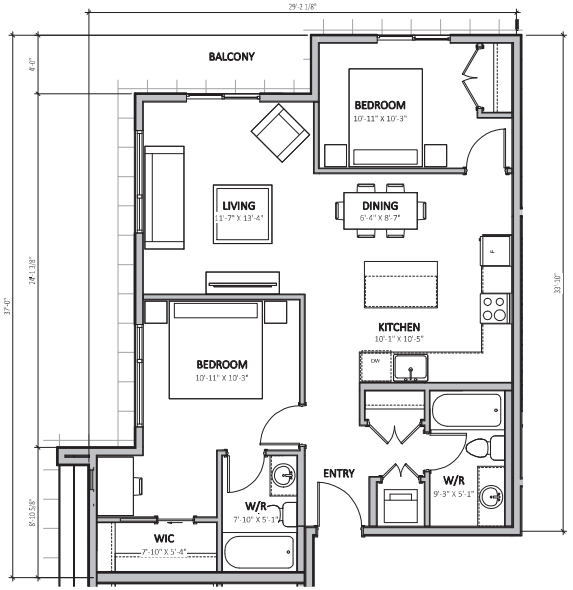
3096 GIBBINS ROAD, NORTH COWICHAN BC

PROJECT # 23124.1
CITY FILE # --

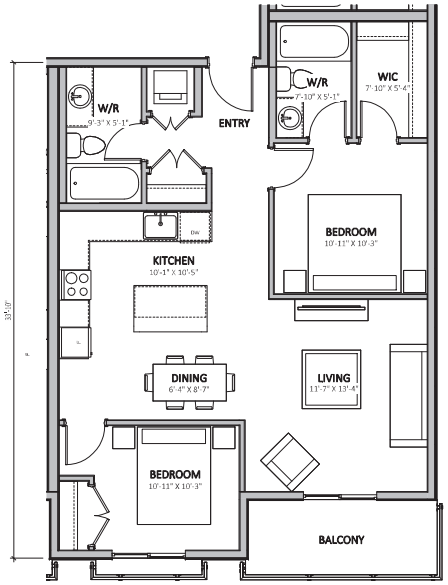
UNIT PLANS

SCALE 1/4" = 1'-0"

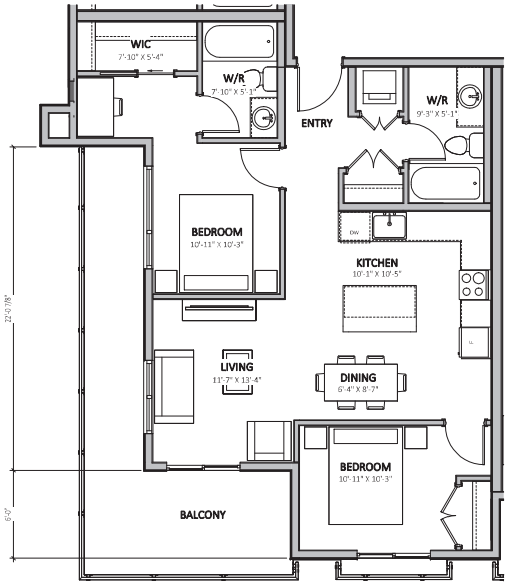
SD9.01



UNIT B1 915 SF 2 BED
UNIT COUNT: 4
LEVEL: 2-3



UNIT B1.1 874 SF 2 BED
UNIT COUNT: 2
LEVEL: 4



UNIT B1.2 836 SF 2 BED
UNIT COUNT: 2
LEVEL: 4

KEYSTONE
ARCHITECTURE
300 - 33131 | SOUTH FRASER WAY, ABBOTSFORD BC
V2S 2B1 | 604.850.0577
410 - 333 | 11TH AVENUE SW, CALGARY AB
T2R 1L9 | 587.391.4768
INFO@KEYSTONEARCH.CA

2024-05-03

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GIBBINS ROAD MIXED-USE

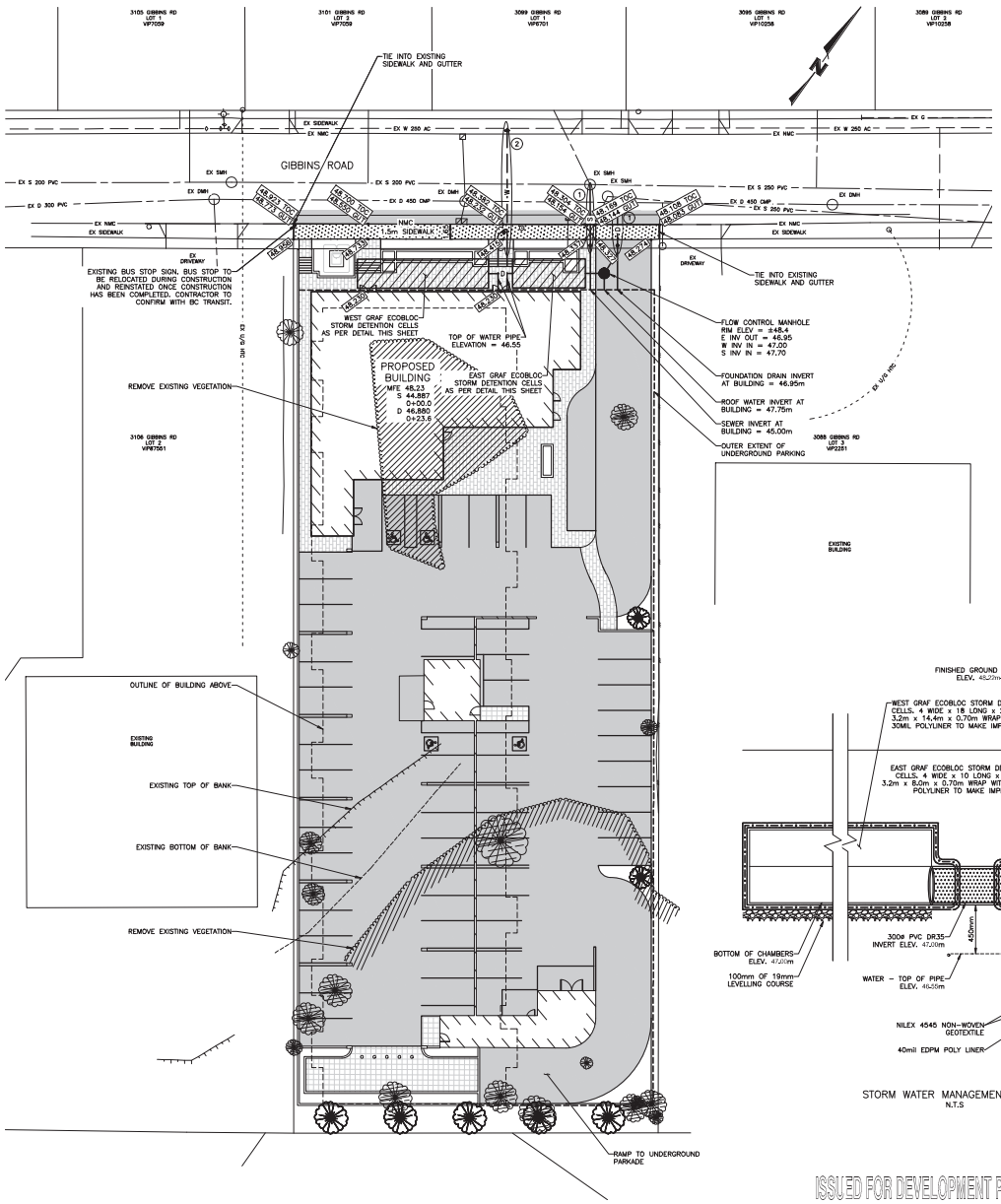
3096 GIBBINS ROAD, NORTH COWICHAN BC

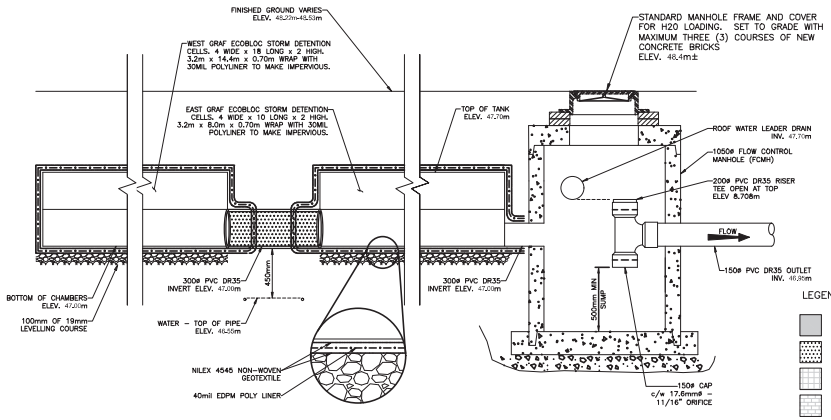
PROJECT # 23124.1
CITY FILE # --

UNIT PLANS

SCALE 1/4" = 1'-0"

SD9.02





STORM WATER MANAGEMENT DETAIL
N.T.S

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS TO BE IN ACCORDANCE WITH MMCD, LATEST EDITION, AND THE MUNICIPALITY OF NORTH COWICHAN STANDARD SPECIFICATIONS AND DRAWINGS UNLESS OTHERWISE NOTED.
- WHEN A CONFLICT BETWEEN THE SPECIFICATIONS ARISES, THE MOST STRINGENT SHALL APPLY.
- OBTAIN A PERMIT TO CONSTRUCT WORKS ON A MUNICIPAL RIGHT OF WAY FROM THE MUNICIPALITY OF NORTH COWICHAN ENGINEERING DEPARTMENT TWO WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION.
- OBTAIN A DEMO PERMIT PRIOR TO REMOVAL OF ANY NON-CONFORMING STRUCTURES.
- EXPOSE ALL EXISTING SERVICES AT CONNECTION AND CROSSING POINTS TWO WORKING DAYS PRIOR STARTING CONSTRUCTION ON ANY SUCH SERVICES. ENSURE ENGINEER HAS CONFIRMED THE HORIZONTAL AND VERTICAL LOCATION.
- BED ALL PIPE USING CLASS 'B' BEDDING.
- WHERE A TRENCH IS UNDER OR WITHIN 1.0m OF THE EDGE OF A ROAD OR DRIVEWAY, USE PIT RUN GRAVEL BACKFILL FROM THE TOP OF THE PIPE BEDDING TO THE TOP OF THE ROAD, PARKING OR DRIVEWAY SUBGRADE.
- DO NOT START ANY BACKFILL OPERATION UNTIL THE WORKS HAVE BEEN REVIEWED BY THE ENGINEER.
- AFTER CONSTRUCTION, RESTORE WORK AREAS AND ALL EXISTING FEATURES TO THEIR ORIGINAL CONDITION OR BETTER.
- MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS ALONG GIBBINS ROAD DURING CONSTRUCTION.
- COMPACT TRENCH BACKFILL, ROAD BASE AND DRIVEWAY BASE TO 95% MODIFIED PROCTOR DENSITY.
- ADJUST ALL PROPOSED AND EXISTING APPURTENANCES TO MEET THE FINAL DESIGN GRADES.
- ENSURE THAT ALL SERVICES TO THE EXISTING HOUSE REMAIN USABLE DURING CONSTRUCTION AND ARE CONNECTED TO ALL NEW SERVICES. ENSURE THESE SERVICES ARE INSPECTED BY THE MUNICIPALITY OF NORTH COWICHAN WORKS INSPECTOR.
- CONSTRUCT SEWER, DRAIN, WATER AND ROADS WITHIN PRIVATE PROPERTY IN ACCORDANCE WITH THE BC PLUMBING CODE AND BC BUILDING CODE. CONSTRUCTION SHALL BE INSPECTED AND APPROVED BY THE MUNICIPALITY OF NORTH COWICHAN INSPECTORS.
- IF CONSTRUCTION AFFECTS EXISTING BUS STOPS, BC TRANSIT (250 385 2551) SHALL BE CONTACTED PRIOR TO CONSTRUCTION. A TEMPORARY BUS STOP SHALL BE PROVIDED BY THE CONTRACTOR AS DIRECTED BY THE BC TRANSIT SERVICE DELIVERY MANAGER. PEDESTRIAN AND BUS ACCESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION

SEWER AND DRAIN

- SEWER AND DRAIN SERVICE CONNECTIONS TO BE 150ø PVC DR28 AT A MINIMUM GRADE OF 2.0% COMPLETE WITH INSPECTION CHAMBERS. CATCH BASIN LEADS TO BE 150ø PVC DR35 UNLESS OTHERWISE NOTED. IF COVER IS LESS THAN 750mm, USE DUCTILE IRON PIPE.
- SEWER AND DRAIN PIPE UP TO AND INCLUDING 150mm DIAMETER TO BE PVC DR28 AND DR35 FOR 200mm DIAMETER AND OVER. PIPE TO BE C.S.A. APPROVED PVC.
- SEWER AND DRAIN MANHOLES SHALL BE 1050ø BARRELS UNLESS OTHERWISE SPECIFIED.
- (1) THE MUNICIPALITY OF NORTH COWICHAN SHALL INSTALL THE SEWER AND DRAIN CONNECTIONS TO THE PROPERTY LINE AT THE DEVELOPER'S EXPENSE.
- CONNECT ALL ENCOUNTERED DRAINS TO THE PROPOSED SERVICE CONNECTION. CONTRACTOR TO RECORD THE LOCATION, ELEVATION, PIPE MATERIAL AND SIZE FOR THE AS CONSTRUCTED DRAWINGS.
- VIDEO INSPECT ALL INSTALLED SANITARY SEWER AND STORM DRAIN MAINS ON PUBLIC AND PRIVATE PROPERTY
- SEWER AND DRAIN SERVICES SHALL BE EXTENDED UP TO 1.0m FROM THE FACE OF THE PROPOSED BUILDING.

WATER

- WATER MAIN PIPE TO BE PVC DR18 AWWA STANDARD C900 FOR ALL WATER MAINS 100mm TO 350mm DIAMETER AND PVC SERIES 200 FOR ALL WATER MAINS LESS THAN 100mm DIAMETER. PROVIDE 1.0m MINIMUM COVER.
- ALL PIPE FITTINGS 250mm OR GREATER SHALL BE MECHANICAL JOINTS COMPLETE WITH RESTRAINTS, RATED FOR 235 PSI FOR 250mm DIAMETER AND SMALLER PIPE, AND 350 PSI FOR 300mm DIAMETER AND LARGER PIPE. RESTRAIN PIPE AT FIRST JOINT.
- (2) THE MUNICIPALITY OF NORTH COWICHAN SHALL INSTALL THE COMBINED 150ø WATER SERVICE COMPLETE WITH 150ø FINE SERVICE AND 50ø DOMESTIC SERVICE TO THE PROPERTY LINE AT THE DEVELOPER'S EXPENSE.
- CONTRACTOR TO TEST, CHLORINATE, FLUSH AND CONNECT THE WATER MAINS UNDER THE DIRECTION OF THE ENGINEER. CHLORINATION AND DISINFECTION TO AWWA C651.
- CONTRACTOR TO ENSURE CHLORINE SOLUTIONS ARE NEUTRALIZED IN ACCORDANCE WITH THE MINISTRY OF ENVIRONMENT AND DEPARTMENT OF FISHERIES AND OCEANS CANADA REGULATIONS PRIOR TO DISCHARGING TO ANY DRAINAGE COURSE.

ROAD

- CONSTRUCT ALL ROADWAYS AND CUL DE SACS IN ACCORDANCE WITH THE MUNICIPALITY OF NORTH COWICHAN STANDARD SPECIFICATIONS AND AS SHOWN ON THE TYPICAL SECTION AND DETAIL DRAWINGS.
- CONTRACTOR TO ENSURE EXISTING MONUMENTS ARE NOT DISTURBED DURING CONSTRUCTION. ANY MONUMENTS IN DANGER OF DISTURBANCE ARE TO BE REFERENCED BY AND, IF DISTURBED, BE REPLACED BY A B.C.L.S. AT THE CONTRACTOR'S EXPENSE.

PARKS

- OBTAIN A PARKS PERMIT FROM THE MUNICIPALITY OF NORTH COWICHAN PARKS DEPARTMENT PRIOR TO THE START OF ANY CONSTRUCTION.
- PROTECT ALL TREES EXCEPT THOSE TO BE REMOVED FROM DAMAGE DURING CONSTRUCTION.
- HAND DIG WHERE ROOTS OVER 50mm ARE ENCOUNTERED.
- OBTAIN PERMISSION FROM THE ENGINEER, DEVELOPER AND THE MUNICIPALITY OF NORTH COWICHAN PRIOR TO REMOVAL OF ANY TREES ON PRIVATE OR PUBLIC PROPERTY. A COPY OF THE TREE PERMIT SHALL BE PRESENTED TO THE MUNICIPALITY OF NORTH COWICHAN WORKS INSPECTOR PRIOR TO THE START OF ANY CONSTRUCTION.
- THE PROJECT ARBORIST TO BE RESPONSIBLE FOR SUPERVISING THE INSTALLATION OF BARRIER FENCING AT APPROPRIATE LOCATIONS.
- THE ARBORIST TO DIRECT THE REMOVAL OF TREES WITHIN THE SEWER AND DRAIN EASEMENTS AND RIGHT OF WAYS AND TO PRUNE ROOTS ENCOUNTERED DURING TRENCHING TO ENSURE THE PRESERVATION OF THE OAK TREES.
- THE ARBORIST TO DETERMINE THE SENSITIVE ROOT ZONES AREAS AND BE ONSITE TO SUPERVISE TRENCHING AND ROAD CONSTRUCTION.
- ENVIRONMENTAL PROTECTION AND EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED AND MAINTAINED PRIOR TO, AND THROUGHOUT CONSTRUCTION ONSITE AND OFFSITE. THESE MEASURES MAY INCLUDE, BUT NOT NECESSARILY LIMITED TO TREE AND VEGETATION PROTECTION FENCING, SILT FENCING, SEDIMENT CONTROL PONDS AND INTERCEPTOR SWALES, CATCH BASIN SOCKS AND WADDLES, ETC.
- PROVIDE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN FOR REVIEW BY THE DISTRICT PRIOR TO CONSTRUCTION.

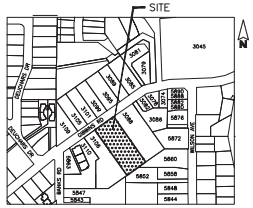
HYDRO, TELEPHONE, CABLE, STREET LIGHTING AND GAS

- CONTACT "B.C. ONE CALL" AT 1-800-474-6886 AND "DIG SHAW" AT DIGSHAW.CA A MINIMUM OF THREE WORKING DAYS PRIOR TO START OF CONSTRUCTION.
- LOT TO BE SERVICED UNDERGROUND.
- BC HYDRO, TELUS, SHAW CABLE AND FORTISBC FACILITIES ARE SHOWN SCHEMATICALLY ON THIS DRAWING. REFER TO UTILITY COMPANY DRAWINGS FOR CONSTRUCTION DETAILS.
- CONSTRUCT UNDERGROUND HYDRO, TELEPHONE AND CABLEVISION AS SPECIFIED AND IN ACCORDANCE WITH BC HYDRO, TELUS AND SHAW CABLE STANDARD SPECIFICATIONS AND DRAWINGS.
- IF GAS IS REQUIRED, THE DEVELOPER IS TO CONTACT FORTISBC AT 1-888-224-2710 A MINIMUM OF 90 DAYS PRIOR TO INSTALL. FORTISBC SHALL INSTALL GAS SERVICE TO THE

LEGEND

- APPROXIMATE EXTENT OF PROPOSED ASPHALT PAVING
- PROPOSED CONCRETE
- PROPOSED CONCRETE PAVERS. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS
- PROPOSED CONCRETE PAVERS. REFER TO LANDSCAPE DRAWINGS FOR DETAILS
- PROPOSED TREE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED

0 5 15m
1:250



LOCATION PLAN
N.T.S.

PROPOSED DEVELOPMENT OF LOT 4, SECTION 18, RANGE 5, PLAN 2251, QUAMICHAN DISTRICT.

ISSUED FOR DEVELOPMENT PERMIT

The Corporation of the District of North Cowichan

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND SERVICES ON THIS DRAWING MAY NOT BE ACCURATE OR COMPLETE. THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS MUST BE CONFIRMED BY UTILITY COMPANIES AND THE CONTRACTOR PRIOR TO THE TO THE START OF ANY EXCAVATIONS

LEGEND: ALL EXISTING WORKS SHOWN THIN / ALL PROPOSED WORKS SHOWN BOLD

WATER MAIN	WATER VALVE	MANHOLE	UTILITY POLE
SANITARY MAIN	HYDRANT ASSEMBLY	CLEANOUT	HYDRO POLE
STORM DRAIN MAIN	PERMANENT END OF LINE	CULVERT	TELEPHONE POLE
GAS MAIN	TEMPORARY END OF LINE	DITCH/SWALE	ANCHOR POLE
HYDRO/TEL/CABLE	SURVEY MONUMENT	CATCHBASIN	ANCHOR
FENCE	CONTROL POINT		POLE-MOUNT LUMINAIRE
			STREETLIGHT ON PEDESTAL

WESTBROOK Consulting Ltd.
#115 - 866 Goldstream Ave., Victoria, BC V9B 0J3
Telephone: 250-391-8592 Facsimile: 250-391-8593

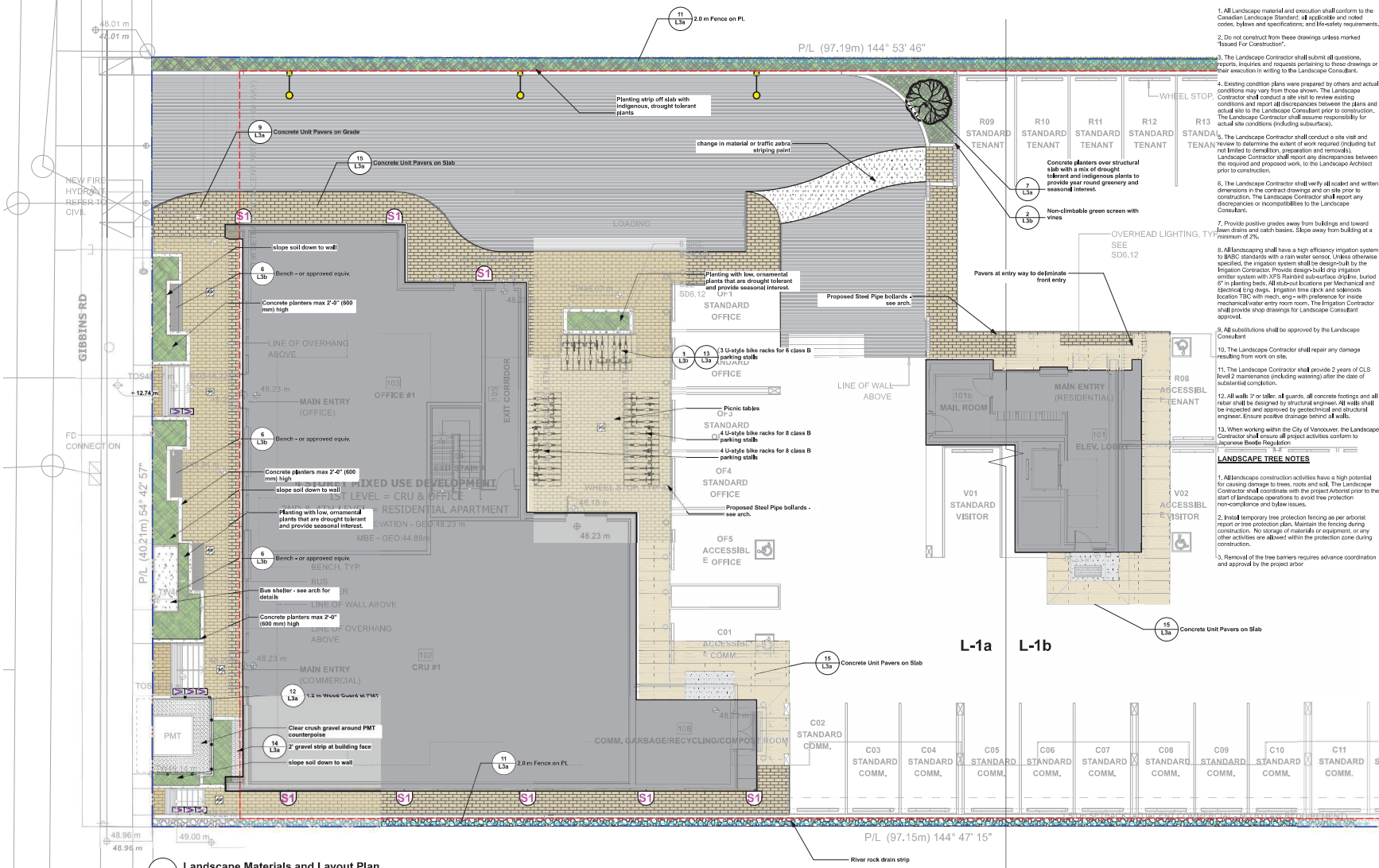
No.	REVISIONS	YYMMDD	SIGN
1	REVISED PER LANDSCAPE DRAWINGS	23.08.08	JR

DESIGN: IK/MW
DRAWN: JR
CHECKED:
DATE: JUNE 2023
B.M.:
ELEV.:
SCALE: Horz. 1:250
Vert. N/A

PROJECT: 3096 GIBBINS ROAD
TITLE: SITE PLAN GENERAL NOTES

CONSULTANTS No. 3913
SHEET No. 1 of 1
GRID No. REV. No.
N.C. No.

WESTBROOK CONSULTING LTD - 2023-09-26 04:14PM H:\PROJECTS\3913 Gibbins Rd\04C Drawings\391301.dwg



1 **Landscape Materials and Layout Plan**
Scale: 1/8" = 1'-0"

LANDSCAPE GENERAL NOTES

1. All Landscape material and execution shall conform to the Canadian Landscape Standard; all applicable and noted codes, bylaws and specifications; and life-safety requirements.
2. Do not construct from these drawings unless marked "Issued For Construction".
3. The Landscape Contractor shall submit all questions, reports, inquiries and requests pertaining to these drawings or their execution in writing to the Landscape Consultant.
4. Existing condition plans were prepared by others and actual conditions may vary from those shown. The Landscape Contractor shall conduct a site visit to review existing conditions and report all discrepancies between the plans and actual site to the Landscape Consultant prior to construction. The Landscape Contractor shall assume responsibility for actual site conditions (including subsurface).
5. The Landscape Contractor shall conduct a site visit and review to determine the extent of work required (including but not limited to demolition, preparation and removals). Landscape Contractor shall report any discrepancies between the required and proposed work, to the Landscape Architect prior to construction.
6. The Landscape Contractor shall verify all scaled and written dimensions in the contract drawings and on site prior to construction. The Landscape Contractor shall report any discrepancies or incompatibilities to the Landscape Consultant.
7. Provide positive grades away from buildings and toward lawn drains and catch basins. Slope away from building at a minimum of 2%.
8. All landscaping shall have a high efficiency irrigation system to IIABC standards with a rain water sensor. Unless otherwise specified, the irrigation system shall be design-built by the Irrigation Contractor. Provide design-build drip irrigation emitter system with XFS Rainbird sub-surface drip line, buried 6" in planting beds. All stub-out locations per Mechanical and Electrical drawings. Irrigation time clock and solenoids location TBC with mech. eng - with preference for inside mechanical/water entry room room. The Irrigation Contractor shall provide shop drawings for Landscape Consultant approval.
9. All substitutions shall be approved by the Landscape Consultant
10. The Landscape Contractor shall repair any damage resulting from work on site.
11. The Landscape Contractor shall provide 2 years of CLS level 2 maintenance (including watering) after the date of substantial completion.
12. All walls 3' or taller, all guards, all concrete footings and all rebar shall be designed by structural engineer. All walls shall be inspected and approved by geotechnical and structural engineer. Ensure positive drainage behind all walls.
13. When working within the City of Vancouver, the Landscape Contractor shall ensure all project activities conform to Japanese Beetle Regulation

LANDSCAPE TREE NOTES

1. All landscape construction activities have a high potential for causing damage to trees, roots and soil. The Landscape Contractor shall coordinate with the project Arborist prior to the start of landscape operations to avoid tree protection non-compliance and bylaw issues.
2. Install temporary tree protection fencing as per arborist report or tree protection plan. Maintain the fencing during construction. No storage of materials or equipment, or any other activities are allowed within the protection zone during construction.
3. Removal of the tree barriers requires advance coordination and approval by the project arbor

Wildlife Act and Migratory Bird Convention Act:

The Provincial (Wildlife Act) and federal (Migratory Bird Convention Act) laws protect bird nesting habitats, which include trees, shrubs, and bushes.

Under section 30 of the BC Wildlife Act, it is illegal to harm or destroy a bird or its egg, or the nest of specified birds or any nest occupied by a bird or its egg.

If a property owner wishes to modify a tree with a nest, they must obtain a written prermit form the Nimistry of Environment's Permit & Authorization Service Bureau and check with Environment Canada for a federal permit under the Migratory Birds Convention Act regulations.

Contractor to verify trees being removed are nest free prior to tree removal.

LEGEND

Property Line
Parkade Slab

HARDSCAPE MATERIALS: DETAIL 9 L3a
Belgard Standard Pavers in a running bond pattern. Colour: Harvest

SOFTSCAPE MATERIALS:
Planting Bed 1 L3a 2 L3a 3 L3a 4 L3a

FENCING AND GATES
2.0m ht. solid board fence 11 L3a
1.067m ht. solid board fence/guard 12 L3a
Greenscreen 2 L3b

LIGHTING - CONCEPTUAL
Pole Light 3 L3b
S1 Wall Sconce 4 L3b
Wall/Step Light 5 L3b

NOTE: The purpose of this lighting plan is to illustrate conceptual design intent. Further design development is required prior to tender and construction to ensure sufficient illumination. Coordination with Electrical is required.

LINES & SYMBOLS
Building envelope
Building roof overhang

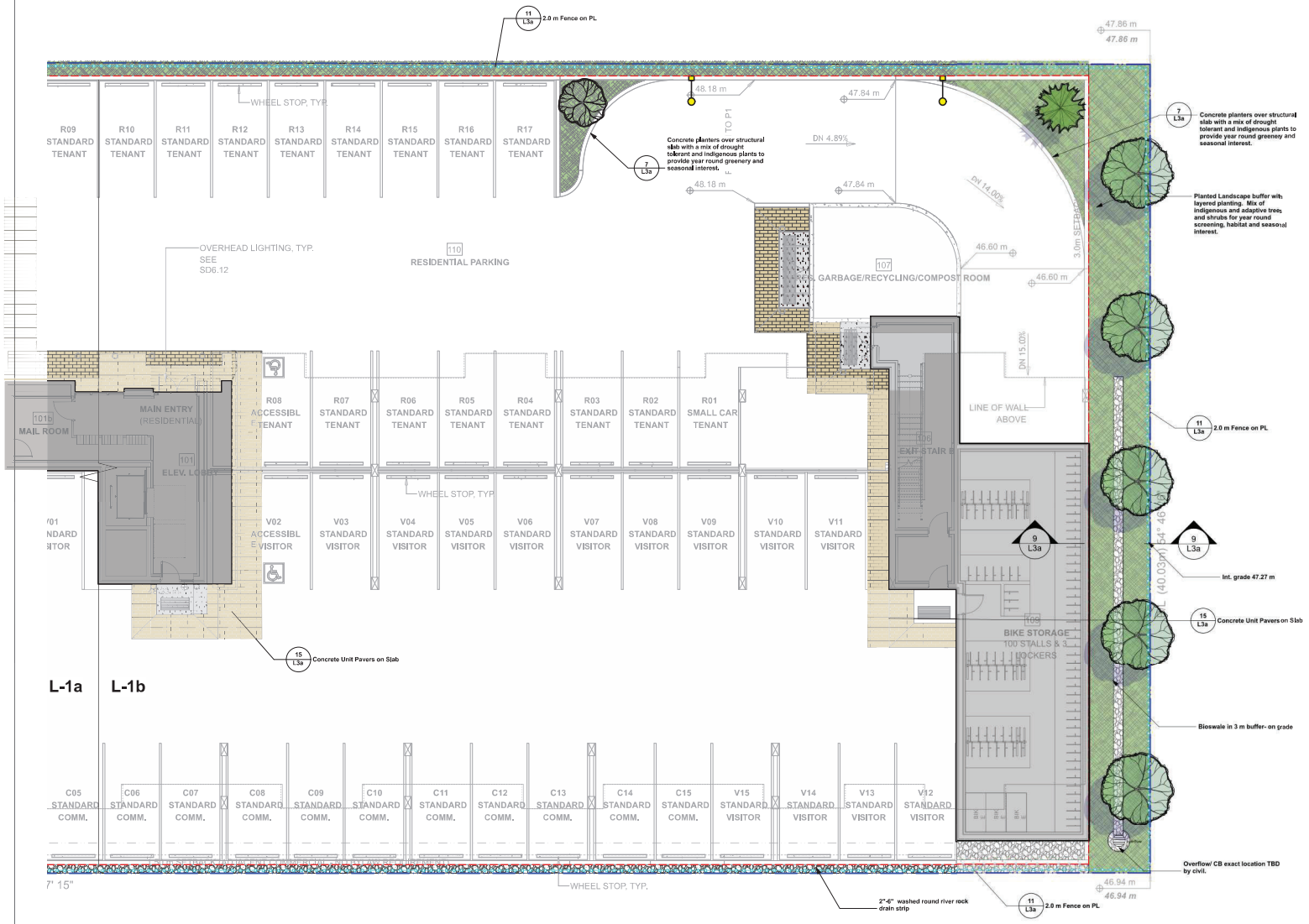
Date	Issue Notes
2024-05-06	Reissue for DP
2024-05-01	Issue for 30% BP
2024-04-24	Resubmit for DP
2023-12-13	Issue with: Bioswale Revision
2023-09-27	Issue for DP
2023-08-04	Issue for Review
2023-07-17	Review
2023-07-07	Review

Prospect & Refuge
LANDSCAPE ARCHITECTS
604-669-1003 info@prospectrefuge.ca
Building on over 25 years of history as Jonathan Losee, Ltd.

Project Title and Address
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

Sheet Title
Landscape Materials and Layout Plan -West

Project No.	Scale
2023-14	1/8"=1'-0"
Project Manager: AS	Sheet No. L1a
Reviewed By: AS	



LANDSCAPE GENERAL NOTES

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6. The Landscape Contractor shall verify all scaled and written dimensions in the contract drawings and on site prior to construction. The Landscape Contractor shall report any discrepancies or incompatibilities to the Landscape Consultant.

7. Provide positive grades away from buildings and toward lawn drains and catch basins. Slope away from building at a minimum of 2%.

8. All landscaping shall have a high efficiency irrigation system to IIABC standards with a rain water sensor. Unless otherwise specified, the irrigation system shall be design-built by the Irrigation Contractor. Provide design-build drip irrigation emitter system with XFS Rainbird sub-surface dripline; buried 6" in planting beds. All stub-out locations per Mechanical and Electrical eng dwgs. Irrigation time clock and solenoids location TBC with mech. eng - with preference for inside mechanical/water entry room room. The Irrigation Contractor shall provide shop drawings for Landscape Consultant approval.

9. All substitutions shall be approved by the Landscape Consultant

10. The Landscape Contractor shall repair any damage resulting from work on site.

11. The Landscape Contractor shall provide 2 years of CLS level 2 maintenance (including watering) after the date of substantial completion.

12. All walls 3' or taller, all guards, all concrete footings and all rebar shall be designed by structural engineer. All walls shall be inspected and approved by geotechnical and structural engineer. Ensure positive drainage behind all walls.

LANDSCAPE TREE NOTES

1. All landscape construction activities have a high potential for causing damage to trees, roots and soil. The Landscape Contractor shall coordinate with the project Arborist prior to the start of landscape operations to avoid tree protection non-compliance and bylaw issues.

2. Install temporary tree protection fencing as per arborist report or tree protection plan. Maintain the fencing during construction. No storage of materials or equipment, or any other activities are allowed within the protection zone during construction.

3. Removal of the tree barriers requires advance coordination and approval by the project arbor

LEGEND

- Property Line
- Parkade Slab

HARDSCAPE MATERIALS:

- Belgard Standard Pavers in a running bond pattern. Colour: Harvest — DETAIL 9 L3a

SOFTSCAPE MATERIALS:

- Planting Bed — 1 L3a, 2 L3a, 3 L3a, 4 L3a

FENCING AND GATES

- 2.0m ht. solid board fence — 11 L3a
- 1.067m ht. solid board fence/guard — 1 L3a
- Greenscreen — 2 L3b

LIGHTING - CONCEPTUAL

- Pole Light — 3 L3b
- Wall Sconce — S1 — 4 L3b
- Wall/Step Light — 5 L3b

NOTE: The purpose of this lighting plan is to illustrate conceptual design intent. Further design development is required prior to tender and construction to ensure sufficient illumination. Coordination with Electrical is required.

LINES & SYMBOLS

- Building envelope
- Building roof overhang

Date	Issue Notes
2024-05-06	Reissue for DP
2024-05-01	Issue for 30% BP
2024-04-24	Resubmit for DP
2023-12-13	Issue with Bioswale Revision
2023-09-27	Issue for DP
2023-08-04	Issue for Review
2023-07-07	Review

Wildlife Act and Migratory Bird Convention Act:

The Provincial (Wildlife Act) and federal (Migratory Bird Convention Act) laws protect bird nesting habitats, which include trees, shrubs, and bushes.

Under section 30 of the BC Wildlife Act, it is illegal to harm or destroy a bird or its egg, or the nest of specified birds or any nest occupied by a bird or its egg.

If a property owner wishes to modify a tree with a nest, they must obtain a written permit form the Ministry of Environment's Permit & Authorization Service Bureau and check with Environment Canada for a federal permit under the Migratory Birds Convention Act regulations.

Contractor to verify trees being removed are nest free prior to tree removal.

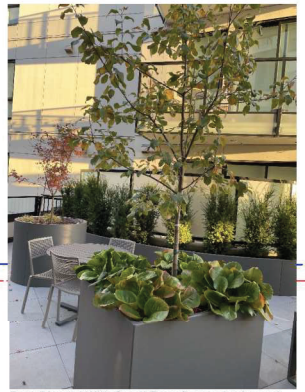
Prospect & Refuge
LANDSCAPE ARCHITECTS
604-669-1003 info@prospectrefuge.ca
Building on over 25 years of history as Jonathan Losee, Ltd.

Project Title and Address
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

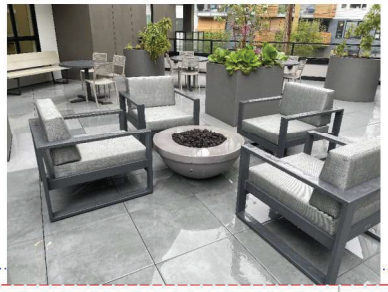
Sheet Title
Landscape Materials and Layout Plan-East

Project No.	Scale
2023-14	1/8"=1'-0"
Project Manager: AS	Sheet No.: L1b
Reviewed By: AS	

Schedule 3 – Landscape Plan 2024-05-06



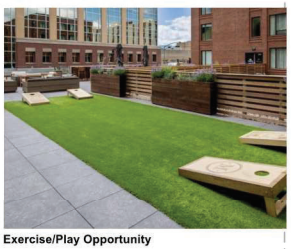
Pots Planted With Small Trees/large shrubs and under planting



Firebowl and casual seating area concept

Moveable site furnishings

Childrens Play Area



Exercise/Play Opportunity

Communal Cutting/Picking Area

Lounge and Bar Seating

LANDSCAPE GENERAL NOTES

1. All Landscape material and execution shall conform to the Canadian Landscape Standard; all applicable and noted codes, bylaws and specifications; and life-safety requirements.

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11. The Landscape Contractor shall provide 2 years of CLS level 2 maintenance (including watering) after the date of substantial completion.

12. All walls 3' or taller, all guards, all concrete footings and all rebar shall be designed by structural engineer. All walls shall be inspected and approved by geotechnical and structural engineer. Ensure positive drainage behind all walls.

13. When working within the City of Vancouver, the Landscape Contractor shall ensure all project activities conform to Japanese Beetle Regulation

LEGEND - ROOF

Property Line

Parkade Slab

HARDSCAPE MATERIALS: DETAIL

Concrete Paving Slabs on Pedestal or approved equiv. Colour: TBD — 10 L3a

Rubber play surfacing Colour: TBD

SOFTSCAPE MATERIALS:

Planting Bed — 4 L3a, 5 L3a, 6 L3a

LIGHTING CONCEPT:

S1 Wall Sconce — 4 L3b

W Wall/Step Light — 5 L3b

NOTE: The purpose of this lighting plan is to illustrate conceptual design intent. Further design development is required prior to tender and construction to ensure sufficient illumination. Coordination with Electrical is required.

LINES & SYMBOLS

Building envelope

Building roof overhang

Wildlife Act and Migratory Bird Convention Act:

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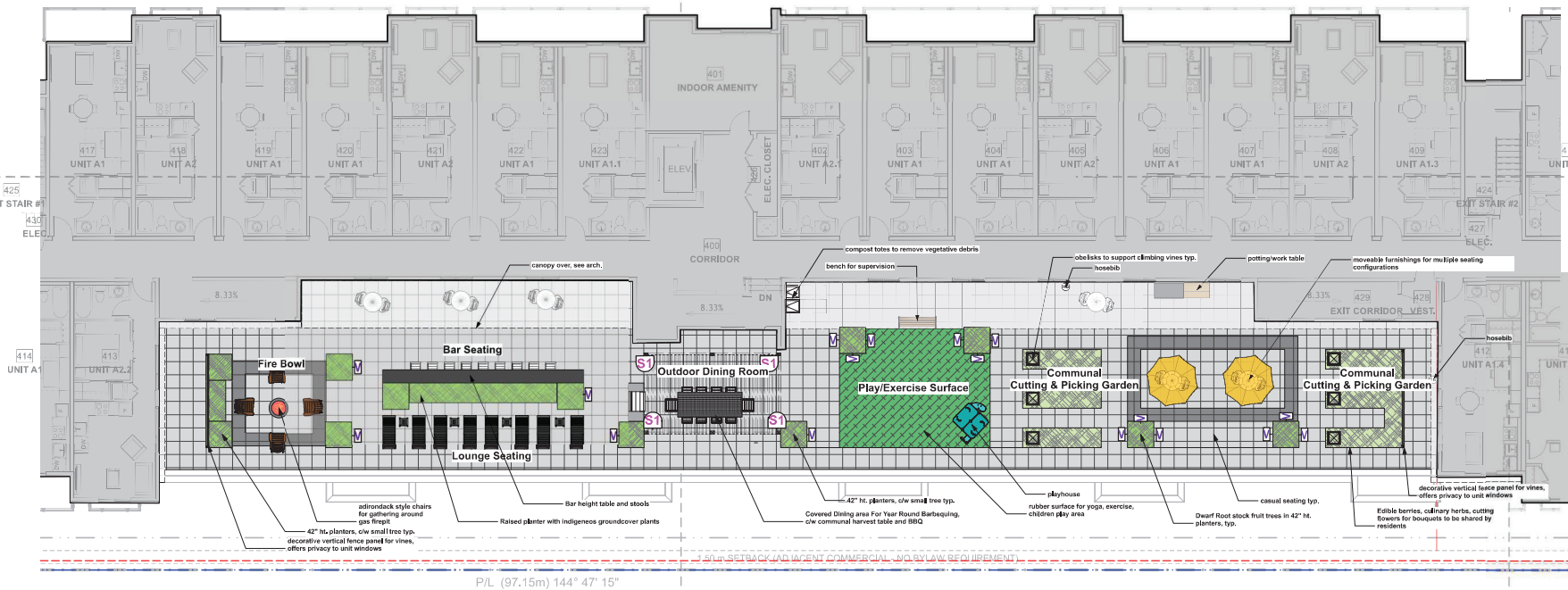

1 **Landscape Materials and Layout Plan**
Scale: 1/8" = 1'-0"

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2024-05-01	Issue for 30% BP
2024-04-24	Resubmit for DP
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2023-08-04	Issue for Review
2023-07-17	Review
2023-07-07	Review

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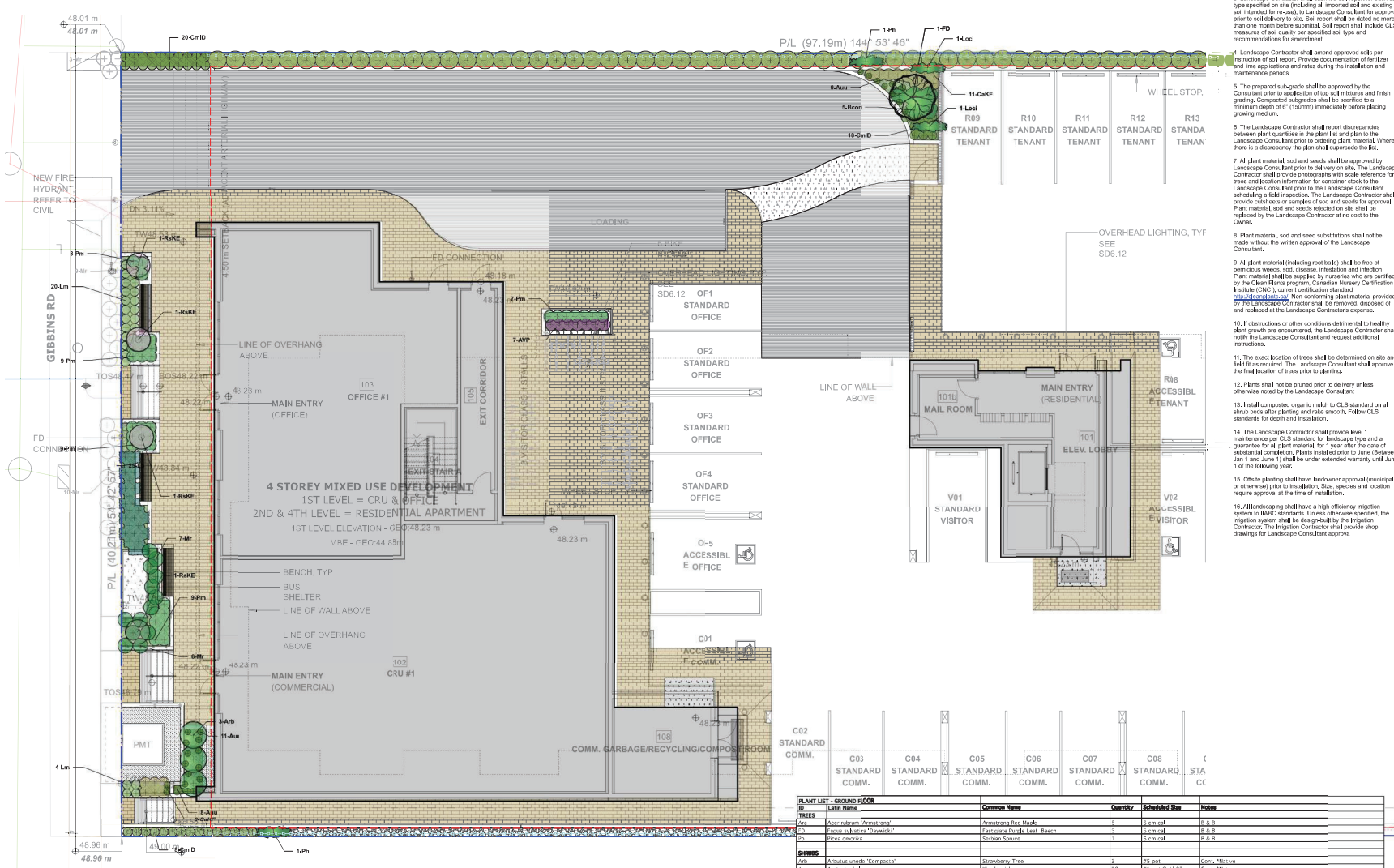
Project Title and Address
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

Sheet Title
Landscape Materials and Layout-Roof

Project No.	Scale
2023-14	1/8"=1'-0"
Project Manager: AS	Sheet No. L1c
Reviewed By: AS	



3 **Landscape Planting Plan**
Scale: 1/8" = 1'-0"

LANDSCAPE PLANTING NOTES

1. All planting materials and execution shall conform to the current edition of the Canadian Landscape Standard (CLS) as a minimum acceptable standard.

2. Plant material shall be sourced from Washington State and BC.

3. Landscape Contractor shall submit a soil report for each soil type specified on site (including all imported soil and existing soil intended for re-use), to Landscape Consultant for approval prior to soil delivery to site. Soil report shall be dated no more than one month before submittal. Soil report shall include CLS measures of soil quality per specified soil type and recommendations for amendment.

4. Landscape Contractor shall amend approved soils per instruction of soil report. Provide documentation of fertilizer and lime applications and rates during the installation and maintenance periods.

5. The prepared sub-grade shall be approved by the Consultant prior to application of top soil mixtures and finish grading. Compacted subgrades shall be scarified to a minimum depth of 6" (150mm) immediately before placing growing medium.

6. The Landscape Contractor shall report discrepancies between plant quantities in the plant list and plan to the Landscape Consultant prior to ordering plant material. Where there is a discrepency the plan shall supersede the list.

7. All plant material, sod and seeds shall be approved by Landscape Consultant prior to delivery on site. The Landscape Contractor shall provide photographs with scale reference for trees and location information for container stock to the Landscape Consultant prior to the Landscape Consultant scheduling a field inspection. The Landscape Contractor shall provide cutsheets or samples of sod and seeds for approval. Plant material, sod and seeds rejected on site shall be replaced by the Landscape Contractor at no cost to the Owner.

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9. All plant material (including root balls) shall be free of pernicious weeds, sod, disease, infestation and infection. Plant material shall be supplied by nurseries who are certified by the Clean Plants program. Canadian Nursery Certification Institute (CNCI), current certification standard http://cleanplants.ca/. Non-conforming plant material provided by the Landscape Contractor shall be removed, disposed of and replaced at the Landscape Contractor's expense.

10. If obstructions or other conditions detrimental to healthy plant growth are encountered, the Landscape Contractor shall notify the Landscape Consultant and request additional instructions.

11. The exact location of trees shall be determined on site and field fit as required. The Landscape Consultant shall approve the final location of trees prior to planting.

12. Plants shall not be pruned prior to delivery unless otherwise noted by the Landscape Consultant

13. Install composted organic mulch to CLS standard on all shrub beds after planting and rake smooth. Follow CLS standards for depth and installation.

14. The Landscape Contractor shall provide level 1 maintenance per CLS standard for landscape type and a guarantee for all plant material, for 1 year after the date of substantial completion. Plants installed prior to June (Between Jan 1 and June 1) shall be under extended warranty until June 1 of the following year.

15. Offsite planting shall have landowner approval (municipal or otherwise) prior to installation. Size, species and location require approval at the time of installation.

16. All landscaping shall have a high efficiency irrigation system to BABC standards. Unless otherwise specified, the irrigation system shall be design-built by the Irrigation Contractor. The Irrigation Contractor shall provide shop drawings for Landscape Consultant approva

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3. Removal of the tree barriers requires advance coordination and approval by the project arbor

PLANT LIST - GROUND FLOOR					
ID	Latin Name	Common Name	Quantity	Scheduled Size	Notes
TREES					
Ara	Acer rubrum 'Armstrong'	Armstrong Red Maple	5	6 cm cal	B & B
FD	Fagus sylvatica 'Dawyckii'	Fastigiate Purple Leaf Beech	3	6 cm cal	B & B
Po	Picea omorika	Serbian Spruce	5	6 cm cal	B & B
SHRUBS					
Arb	Arbutus unedo 'Compacta'	Strawberry Tree	3	#5 pot	Conf. *Native
Auu	Arctostaphylos uva-ursi	Kinnikinnick	78	#1 pot @ 1'-0" oc	Conf. *Native
AVP	Astilbe 'Visions in Purple'	Astilbe 'Visions in Purple'	7	#1 pot	Conf.
Bcon	Berberis thunbergii 'Concorde'	Concorde Japanese Barberry	24	#1 pot	
CaKF	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	49	#1 pot	Conf.
CmID	Carex morowii 'Ice Dance'	Ice Dance Carex	122	#1 pot	Conf.
CoC	Cornus sericea 'Cardinal'	Cardinal Red Osier Dogwood	31	#2 pot	Conf. *Native
Je	Juncus effusus	Soft Rush	39	#1 pot @ 1'-6" oc	Conf. *Native
Lm	Liriope muscari 'Silver Dragon'	'Silver Dragon' Lily Turf	24	#1 pot	Conf.
Loci	Lonicera ciliosa	Western Trumpet Honeysuckle	3	#2 pot	Conf. *Native
Lp	Lonicera pileata	Privet honeysuckle	43	#2 pot	Conf.
Ma	Mahonia aquifolium	Tall Oregon Grape	98	#2 pot	Conf. *Native
Mr	Mahonia repens	Creeping oregon grape	13	#1 pot @ 2'-6" oc	Conf. *Native
Ph	Parthenocissus henryi	Chinese Virginia Creeper	3	#2 pot	
Pm	Polystichum munitum	Sword Fern	97	#1 pot	Conf. *Native
RaKL	Ribes sanguineum	Flowering Currant	19	#2 pot	Conf. *Native
GROUNDCOVER					
Assorted perennials selected by Landscape Architect at time of install			25	#1 pot	Conf.

Date	Issue Notes
2024-05-06	Reissue for DP
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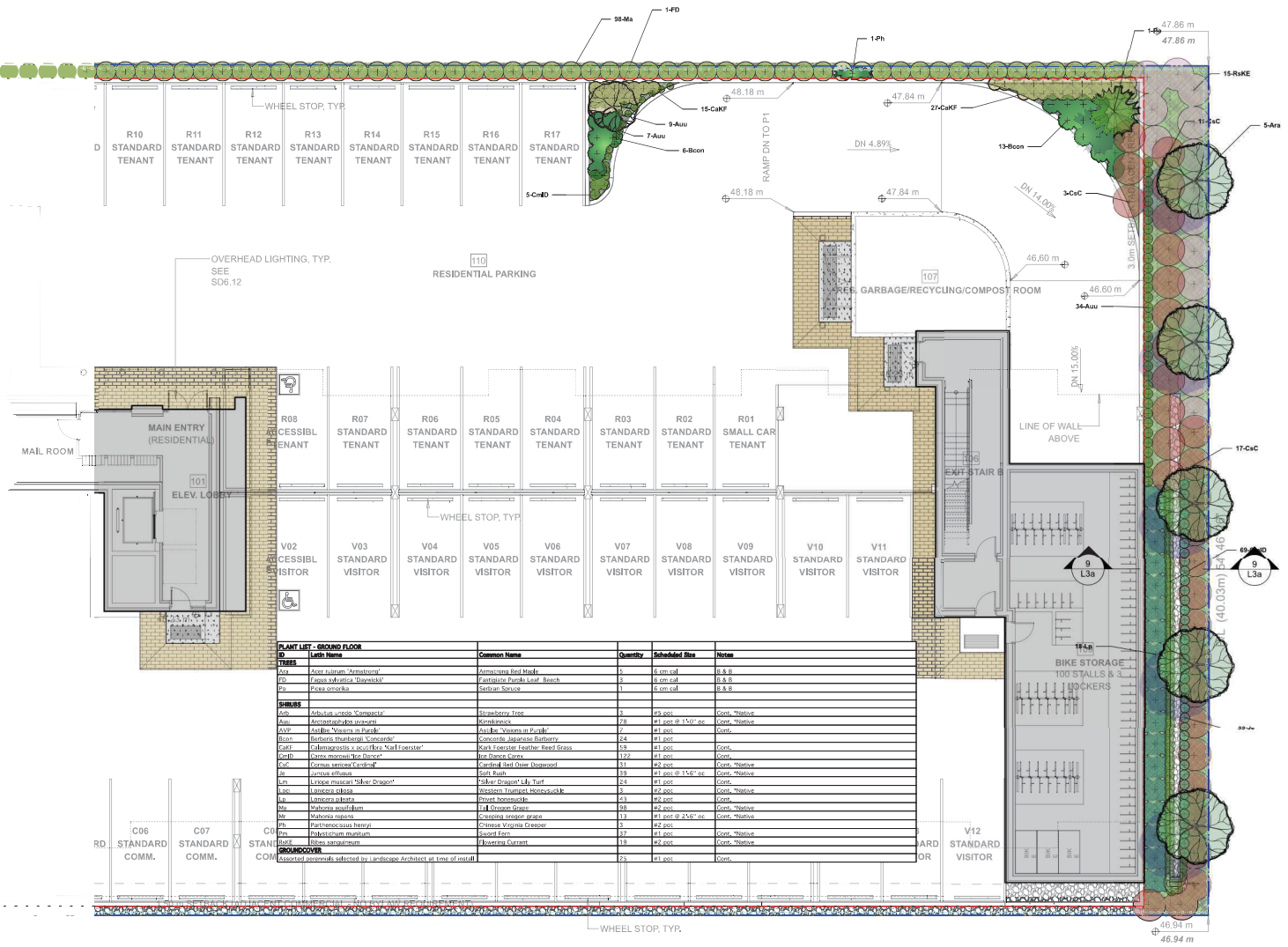
2023-07-07	Review

Prospect & Refuge
LANDSCAPE ARCHITECTS

Project Title and Address
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

Sheet Title
Landscape Planting Plan-West

Project No. 2023-14
Scale 1/8"=1'-0"
Project Manager AS
Sheet No. L2a
Reviewed By AS



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CaKF	Calamagrostis x acutiflora 'Karl Foerster'	Kark Foerster Feather Reed Grass	59	#1 pot	Cont.
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CsC	Cornus sericea'Cardinal'	Cardinal Red Osier Dogwood	31	#2 pot	Cont. *Native
Je	Juncus effusus	Soft Rush	39	#1 pot @ 1'-6" oc	Cont. *Native
Lm	Liriope muscari 'Silver Dragon'	'Silver Dragon' Lily Turf	24	#1 pot	Cont.
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GROUNDCOVER					
Assorted perennials selected by Landscape Architect at time of install			25	#1 pot	Cont.

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Project Title and Address
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

Sheet Title
Landscape Planting Plan-East

Project No.	Scale
2023-14	1/8"=1'-0"
Project Manager: AS	Sheet No. L2b
Reviewed By: AS	

3 **Landscape Planting Plan**
Scale: 1/8" = 1'-0"

PLANT LIST - ROOF LEVEL					
ID	Latin Name	Common Name	Quantity	Scheduled Size	Notes
TREES					
Axf	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance® Apple Serviceberry	2	2.5m full	B&B, Multi-stem, Specimen, 90cm branching
Cc-L-2	Cercis canadensis 'Merlot'	Merlot Redbud	4	4cm cal	B & B, Specimen, 90cm branching
Frt	Fruit tree-apple, plum or pear	Assorted Dwarf Fruit Trees	2	4cm cal	Review with LA, dwarf root stock, 90cm branching, cross pollinating
Gdb	Gingko biloba 'Dwarf Blagon'	Dwarf Maiden Hair tree	4	#10 pot	Cont., Specimen
SHRUBS					
ach m	Achillea x Moonshine	Moonshine Yarrow	10	#1 pot	Cont, *Cutting
Auu	Arctostaphylos uva-ursi	Kinnikinnick	58	#1 pot @ 1'-0" oc	Cont, *Native
Cas	Carex pachystachya	Sand dune sedge	16	10cm pot	Cont, *Native
Ep	Echinacea purpurea	Purple Cone Flower	7	#1 pot @ 1'-6" oc	Cont, *Cutting
Erla	Eriophyllum lanatum	woolly sunflower	14	10cm	Cont, *Native
Fv	Fragaria chiloensis	Beach Strawberry	22	4" pot @ 1'-0" oc	Cont, *Native
EgRQ-1	Geranium viscosissimum	Sticky Geranium	16	#1 pot @ 1'-6" oc	Cont, *Native
La	Lavandula angustifolia	English Lavender	57	#1 pot @ 1'-6" oc	Cont, *Cutting
Loci	Lonicera ciliosa	Western Trumpet Honeysuckle	4	#2 pot	Cont, *Native
lb	Melissa officinalis	Lemon balm	6	#1	Cont., *Edible
Mnt	Mentha x piperita 'Chocolate Mint'	Chocolate Mint	5	#1 pot	Cont, *Edible
Nep	Nepeta x faassenii 'Six Hills Giant'	Six Hills Giant Catmint	6	#1 pot	Cont, *Cutting
Pa	Petroselinum crispum	Parsley	6	#1 pot	Cont., *Edible
Ro	Rosmarinus officinalis	Rosemary	2	#1 pot @ 2'-0" oc	Cont, *Edible
Rb	Rubus 'Babycakes'	Babycakes Thornless Blackberry	5	#2 pot	Cont, *Edible
RIN	Rubus idaeus 'NR7'	Raspberry 'Shortcake'	7	#1 pot @ 2'-0" oc	Cont, *Edible
RR	Rubus idaeus 'Raspberry Shortcake'	Raspberry Shortcake TM Dwarf Thornless Raspber	4	#2 pot	Cont, *Edible
RTG	Rudebeckia fulgida 'Goldsturm'	Goldsturm Black Eyed Susan	6	#1 pot @ 1'-6" oc	Cont, *Cutting
So	Salvia officinalis	Sage	13	#1 pot	Cont, *Edible
Sc-1	Sedum oregonum	Oregon Stonecrop	10	#1 pot @ 1'-6" oc	Cont, *Native
Tp	Thymus praecox	Creeping Thyme	7	4" pot @ 0'-6" oc	Cont, *Edible
VcZ	Vaccinium corymbosum 'ZF06-179'	Jelly Bean Blueberry	9	#1 pot @ 2'-0" oc	Cont, *Edible
GROUNDCOVER					
Assorted perennials selected by Landscape Architect at time of install			25	#1 pot	Cont.

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4. Existing condition plans were prepared by others and actual conditions may vary from those shown. The Landscape Contractor shall conduct a site visit to review existing conditions and report all discrepancies between the plans and actual site to the Landscape Consultant prior to construction. The Landscape Contractor shall assume responsibility for actual site conditions (including subsurface).

5. The Landscape Contractor shall conduct a site visit and review to determine the extent of work required (including but not limited to demolition, preparation and removals). Landscape Contractor shall report any discrepancies between the required and proposed work, to the Landscape Architect prior to construction.

6. The Landscape Contractor shall verify all scaled and written dimensions in the contract drawings and on site prior to construction. The Landscape Contractor shall report any discrepancies or incompatibilities to the Landscape Consultant.

7. Provide positive grades away from buildings and toward lawn drains and catch basins. Slope away from building at a minimum of 2%.

8. All landscaping shall have a high efficiency irrigation system to IIABC standards with a rain water sensor. Unless otherwise specified, the irrigation system shall be design-built by the Irrigation Contractor. Provide design-build drip irrigation emitter system with XFS Rainbird sub-surface dripline, buried 6" in planting beds. All stub-out locations per Mechanical and Electrical Eng dwgs. Irrigation time clock and solenoids location TBC with mech. eng - with preference for inside mechanical/water entry room room. The Irrigation Contractor shall provide shop drawings for Landscape Consultant approval.

9. All substitutions shall be approved by the Landscape Consultant

10. The Landscape Contractor shall repair any damage resulting from work on site.

11. The Landscape Contractor shall provide 2 years of CLS level 2 maintenance (including watering) after the date of substantial completion.

12. All walls 3' or taller, all guards, all concrete footings and all rebar shall be designed by structural engineer. All walls shall be inspected and approved by geotechnical and structural engineer. Ensure positive drainage behind all walls.

13. When working within the City of Vancouver, the Landscape Contractor shall ensure all project activities conform to Japanese Beetle Regulation

P/L (97.19m) 144° 53' 46"

401 INDOOR AMENITY

417 UNIT A1 | 418 UNIT A2 | 419 UNIT A1 | 420 UNIT A1 | 421 UNIT A2 | 422 UNIT A1 | 423 UNIT A1.1 | ELEV. | ELEC. CLOSET | 402 UNIT A2.1 | 403 UNIT A1 | 404 UNIT A1 | 405 UNIT A2 | 406 UNIT A1 | 407 UNIT A1 | 408 UNIT A2 | 409 UNIT A1.3 | 410 UNIT B1.1

425 EXIT STAIR #1 | 430 ELEC. | 400 CORRIDOR | 424 EXIT STAIR #2 | 427 ELEC.

414 UNIT A1 | 413 UNIT A2.2 | 429 EXIT CORRIDOR VEST | 428 | 412 UNIT A1.4 | 411 UNIT B1.1

8.33% | DN | 8.33% | 8.33%

1-Gdb | 8-EgRQ-1 | 7-Erla | 9-Auu | 1-Cc-L-2 | 4-Cas | 2-Loci | 10-Auu | 39-La | 1-Ro | 5-Sc-1 | 7-Auu | 1-Ag | 7-Tp | 2-Mnt | 4-Ep | 4-So | 5-ach m | 3-Ep | 3-Pa | 3-Nep | 3-Mnt | 3-So | 3-Ib | 2-BB | 3-RTG | 3-Sc | 5-Rb | 5-La | 9-VcZ | 12-Fc | 1-Frt | 24-Loci | 7-RIN

1.50 m SETBACK (ADJACENT COMMERCIAL - NO BYLAW REQUIREMENT)

P/L (97.15m) 144° 47' 15"

D SD6.02 | B SD6.01

Date	Issue Notes
2024-05-06	Reissue for DP
2024-05-01	Issue for 30% BP
2024-04-24	Resubmit for DP
2023-12-13	Issue with Bioswale Revision
2023-09-27	Issue for DP
2023-08-04	Issue for Review
2023-07-17	Review
2023-07-07	Review

Prospect & Refuge LANDSCAPE ARCHITECTS

Project Title and Address: Gibbins Rd Mixed Use, 3096 Gibbins Rd, North Cowichan, BC

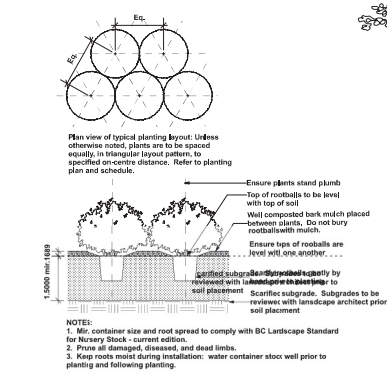
Sheet Title: Landscape Planting Roof

Project No.: 2023-14 | Scale: 1/8"=1'-0"

Project Manager: AS | Sheet No.: L2c

Reviewed By: AS

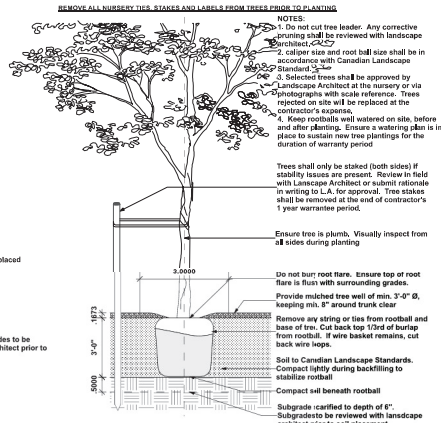
Schedule 3 – Landscape Plan 2024-05-06



Plan view of typical planting layout: Unless otherwise noted, plants are to be spaced equally, in triangular layout pattern, to specified on-centre distance. Refer to planting plan and schedule.

NOTE:
1. Min. container size and root spread to comply with BC Landscape Standard for Nursery Stock - current edition.
2. Prune all damaged, diseased, and dead limbs.
3. Keep roots moist during installation: water container stock well prior to planting and following planting.

1 Shrub and Perennial Planting on Grade
Scale: 1/2" = 1'-0"



NOTES:
1. Do not cut tree leader. Any corrective pruning shall be reviewed with landscape architect.
2. caliper size and root ball size shall be in accordance with Canadian Landscape Standard.
3. Selected trees shall be approved by Landscape Architect at the nursery or via photographs with scale reference. Trees rejected on site will be replaced at the contractor's expense.
4. Keep rootballs well watered on site, before and after planting. Ensure a watering plan is in place to sustain new tree plantings for the duration of warranty period

Trees shall only be staked (both sides) if stability issues are present. Review in field with Lanscape Architect or submit rationale in writing to L.A. for approval. Tree stakes shall be removed at the end of contractor's 1 year warrantee period.

Ensure tree is plumb. Visually inspect from all sides during planting

Do not bury root flare. Ensure top of root flare is flush with surrounding grades.

Provide mulched tree well of min. 3'-0" Ø, keeping min. 8" around trunk clear

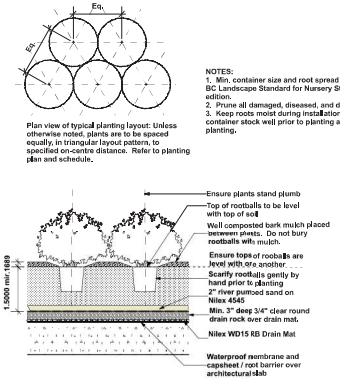
Remove any string or ties from rootball and base of tree. Cut back top 1/3rd of burlap from rootball. If wire basket remains, cut back wire loops.

Soil to Canadian Landscape Standards. Compact lightly during backfilling to stabilize rootball

Compact soil beneath rootball

Subgrade scarified to depth of 6". Subgrades to be reviewed with lanscape architect prior to soil placement

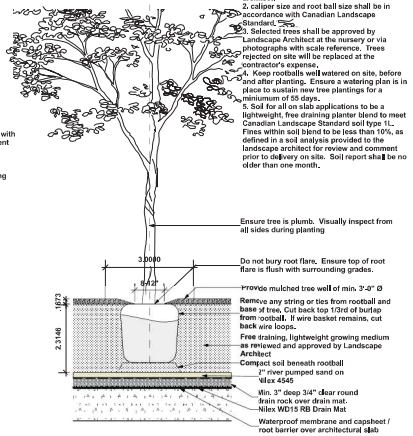
2 Tree Planting on Grade
Scale: 1/2" = 1'-0"



Plan view of typical planting layout: Unless otherwise noted, plants are to be spaced equally, in triangular layout pattern, to specified on-centre distance. Refer to planting plan and schedule.

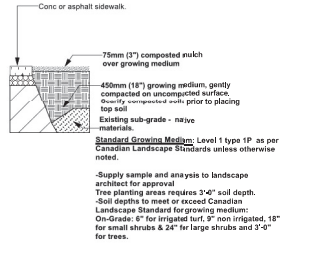
NOTES:
1. Min. container size and root spread to comply with BC Landscape Standard for Nursery Stock - current edition.
2. Prune all damaged, diseased, and dead limbs.
3. Keep roots moist during installation - water container stock well prior to planting and following planting.

3 Shrub Planting over Slab
Scale: 1/2" = 1'-0"



NOTES:
1. Do not cut tree leader. Any corrective pruning shall be reviewed with landscape architect.
2. caliper size and root ball size shall be in accordance with Canadian Landscape Standard.
3. Selected trees shall be approved by Landscape Architect at the nursery or via photographs with scale reference. Trees rejected on site will be replaced at the contractor's expense.
4. Keep rootballs well watered on site, before and after planting. Ensure a watering plan is in place to sustain new tree plantings for a minimum of 55 days.
5. Soil for all on slab applications to be a lightweight, free draining planter blend to meet Canadian Landscape Standard soil type 1L. Fines within soil blend to be less than 10%, as defined in a soil analysis provided to the landscape architect for review and comment prior to delivery on site. Soil report shall be no older than one month.

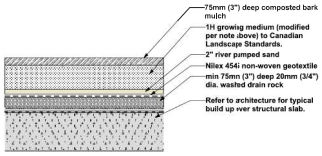
4 Tree Planting over Slab
Scale: 1/2" = 1'-0"



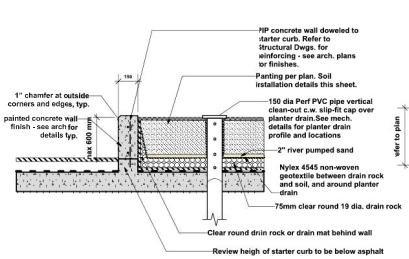
5 Growing Medium on Grade
Scale: 1/2" = 1'-0"

Notes:
1. Supply soil report and analysis to Landscape Consultant for approval prior to shipment to site. Soil report shall be no older than one month.
2. See planting details for soil depth. Final soil depths and buildups TBC and approved by structural engineer prior to installation. Fill all additional depths with light weight voiding.

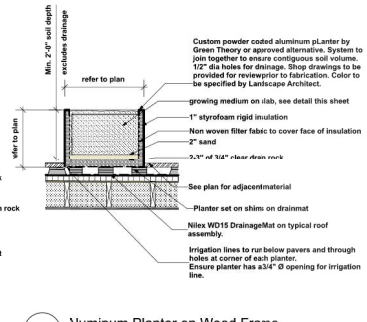
Standard Growing Medium: Level 1 type 1H as per Canadian Landscape Standards unless otherwise noted. Soil for all on slab applications to be a lightweight, free draining planter blend. Fines within soil blend to be less than 15%, as defined in a soil analysis provided to the landscape architect for review and comment prior to delivery on site.



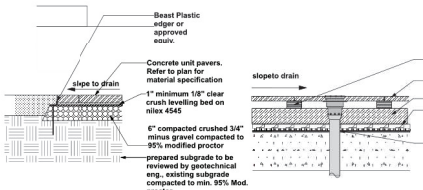
6 Growing Medium on Slab
Scale: 1/2" = 1'-0"



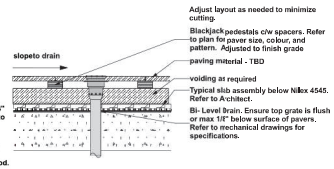
7 Concrete Planters over Slab
Scale: 1/2" = 1'-0"



8 Aluminum Planter on Wood Frame
Scale: 1/2" = 1'-0"

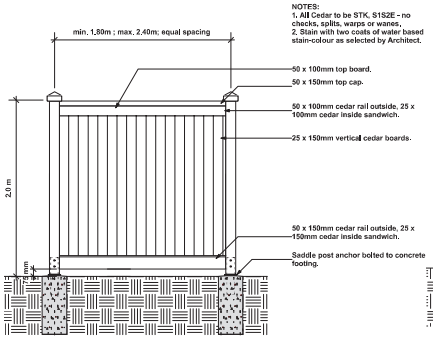


9 Concrete Unit Pavers on Grade
Scale:1/2" = 1'-0"

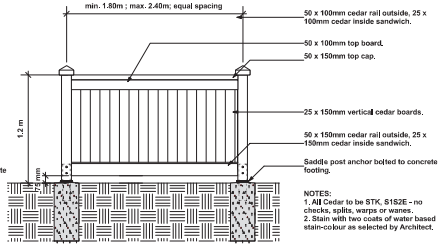


10 Paving Slabs on Pedestals
Scale: 1/2" = 1'-0"

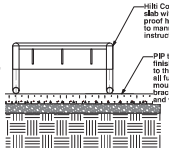
Date	Issue Notes
2024-05-06	Reissue for DP
2024-05-01	Issue for 30% BP
2024-04-24	Resubmit for DP
2023-12-13	Issue with Bioswale Revision
2023-09-27	Issue for DP
2023-08-04	Issue for Review
2023-07-07	Review



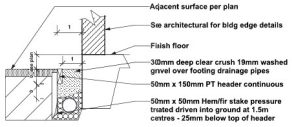
11 2.0 m Fence on PL
Scale: 1/2" = 1'-0"



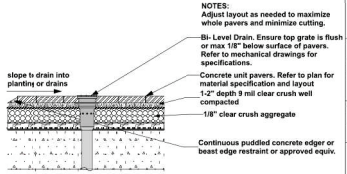
12 1.2 m Wood Guard at PMT
Scale: 1/2" = 1'-0"



13 Bike Rack Attachment
Scale: 1/2" = 1'-0"



14 Gravel Drip Strip
Scale: 1/2" = 1'-0"



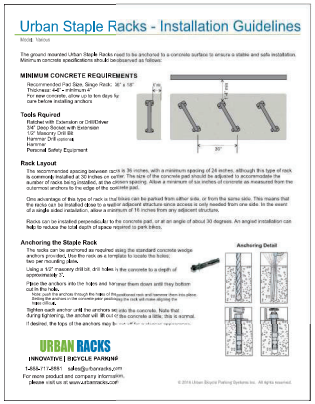
15 Concrete Unit Pavers on Slab
Scale: 1/2" = 1'-0"

Prospect & Refuge
LANDSCAPE ARCHITECTS
604-669-1003 info@prospectrefuge.ca
Building on over 25 years of history as Jonathan Losee, Ltd.

Project Title and Address:
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

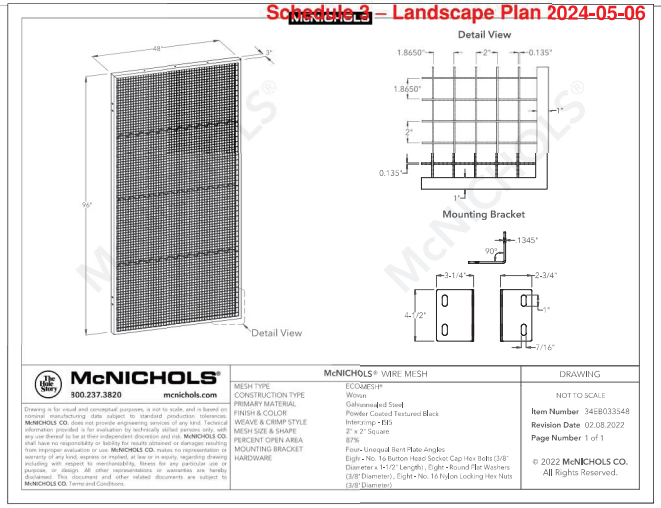
Sheet Title:
Landscape Details

Project No.	Scale
2023-14	1/2" = 1'-0"
Project Manager: AS	Sheet No. L3a
Reviewed By: AS	

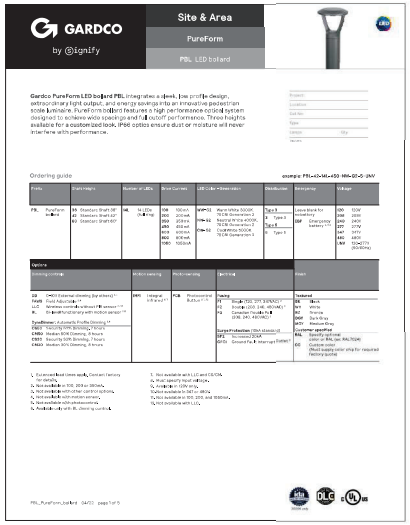


Colour: Black, powdercoated, surface-mounted to concrete with tamper proof hardware.

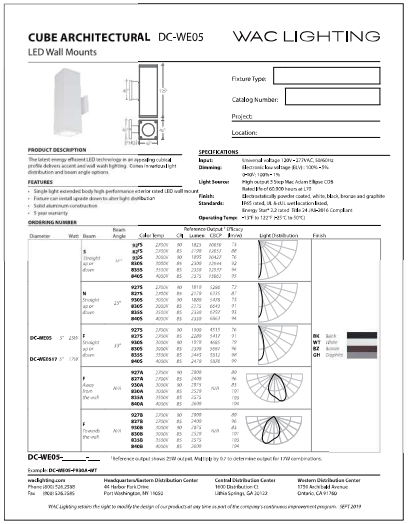
1 **Staple Style bike rack**
Scale: NTS



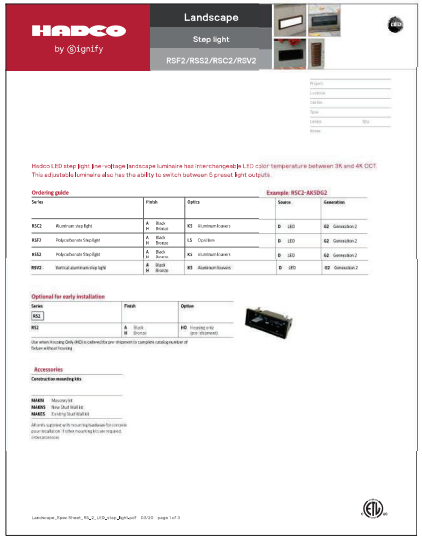
2 **Greenscreen for vines**
Scale: NTS



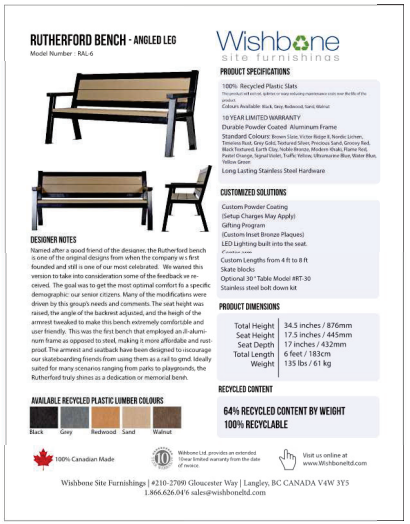
3 **Pole Light Concept**
Scale: NTS



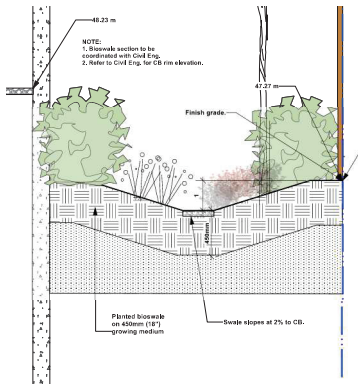
4 **Wall Sconce Concept**
Scale: NTS



5 **Wall/Step Light Concept**
Scale: NTS



6 **Bench - or approved equiv.**
Scale: NTS



7 **Raingarden/ Bioswale Typical Section**
Scale: 1/2" = 1'-0"

Date	Issue Notes
2024-05-06	Reissue for DP
2024-05-01	Issue for 30% BP
2024-04-24	Resubmit for DP
2023-12-13	Issue with Bioswale Revision
2023-09-27	Issue for DP
2023-08-04	Issue for Review
2023-07-07	Review

Seal

Prospect & Refuge
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Building on over 25 years of history as Jonathan Losee, Ltd.

Project Title and Address
Gibbins Rd Mixed Use
3096 Gibbins Rd, North Cowichan, BC

Sheet Title
Landscape Cut Sheets

Project No. 2023-14
Scale NTS
Project Manager AS
Sheet No. L3b
Reviewed By AS

Prospect & Refuge
LANDSCAPE ARCHITECTS

t: 604-669-1003
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www.prospectrefuge.ca

COST ESTIMATE FOR BONDING

06-May-24

3096 Gibbins Rd, North Cowichan

Opinion of Probable Cost for LOC-Onsite

Based on drawings dated 240506

ITEM	UNIT	QUAN	UNIT COST	TOTAL
Ground Floor				
Top soil for shrub bed at 450mm deep	M3	116	$45.00	$5,228.55
Mulch over planting beds at 75 mm deep	M3	19	$45.00	$871.43
Solid Board Fences - 2.0m ht.	LM	224	$120.00	$26,880.00
Irrigation system	lump	1	$15,000.00	$15,000.00
bike racks (1 rack services 2 bikes)	each	11	$600.00	$6,600.00
Benches	each	3	$2,500.00	$7,500.00
pavers	M2	464	$100.00	$46,400.00
SUB-TOTAL				**$103,251.43**
Fourth Floor				
Top soil for tree planting at 900mm deep	M3	16	$45.00	$720.00
Top soil for shrub planting at 600mm deep	M3	18	$45.00	$801.00
concrete paving slabs on pedestals	M2	474	$100.00	$47,400.00
rubber surfacing	M2	36	$120.00	$4,320.00
Site Furnishings	lump sum	1	$35,000.00	$35,000.00
Planters	each	21	$1,500.00	$31,500.00
Firebowl	each	1	$2,500.00	$2,500.00
Louvred Pergola	each	1	$10,000.00	$10,000.00
Lattice Fence Panels	each	2	$500.00	$1,000.00
Irrigation system	lump	1	$5,000.00	$5,000.00
SUB-TOTAL				**$138,241.00**
SUB-TOTAL HARDSCAPE				**$241,492.43**

PLANT MATERIAL FROM LIST

PLANT	SIZE	QUAN	UNIT COST	TOTAL
TREES - Ground				
Acer rubrum 'Armstrong'	6 cm	5	$200.00	$1,000.00
Fagus sylvatica 'Daywickii'	6 cm	3	$175.00	$525.00

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Picea omorika	6 cm	1	$175.00	$175.00
TREES - Fourth Floor				
Amelanchier x grandiflora 'Autumn Brilliance'	2.5m full	2	$225.00	$450.00
Cercis canadensis Merlot'	4cm cal	4	$317.00	$1,268.00
Fruit tree-apple, plum or pear	4cm cal	2	$265.00	$530.00
Gingko biloba 'Dwarf Blagon'	1.5m ht	4	$90.00	$360.00
SHRUBS - Ground				
Arbutus unedo 'Compacta'	#5 pot	3	$25.00	$75.00
Arctostaphylos uva-ursi	#1 pot	78	$4.90	$382.20
Astilbe 'Visions in Purple'	#1 pot	7	$4.90	$34.30
Berberis thunbergii 'Concorde'	#1 pot	24	$4.90	$117.60
Calamagrostis x acutiflora 'Karl Foerster'	#1 pot	59	$4.90	$289.10
Carex morowii 'Ice Dance'	#1 pot	122	$4.90	$597.80
Cornus sericea'Cardinal'	#2 pot	31	$11.00	$341.00
Juncus effusus	#1 pot	39	$4.90	$191.10
Liriope muscari 'Silver Dragon'	#1 pot	24	$4.90	$117.60
Lonicera ciliosa	#2 pot	3	$11.00	$33.00
Lonicera pileata	#2 pot	43	$11.00	$473.00
Mahonia aquifolium	#2 pot	98	$11.00	$1,078.00
Mahonia repens	#1 pot	13	$4.90	$63.70
Parthenocissus henryi	#2 pot	3	$11.00	$33.00
Polystichum munitum	#1 pot	37	$4.90	$181.30
Ribes sanguineum	#2 pot	19	$11.00	$209.00
SHRUBS - Fourth Floor				
Achillea x Moonshine	#1 pot	10	$4.90	$49.00
Arctostaphylos uva-ursi	#1 pot	58	$4.90	$284.20
Carex pachystachya	10cm pot	16	$2.50	$40.00
Echinacea purpurea	#1 po	7	$4.90	$34.30
Eriophyllum lanatum	10cm	14	$2.50	$35.00
Fragaria chiloensis	4" pot	22	$2.50	$55.00
Geranium viscossisimum	#1 pot	16	$4.90	$78.40
Lavandula angustifolia	#1 pot	57	$4.90	$279.30
Lonicera ciliosa	#2 pot	4	$11.00	$44.00
Melissa officianalis	# 1	6	$4.90	$29.40

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LANDSCAPE ARCHITECTS

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Mentha x piperita 'Chocolate Mint'	#1 pot	5	$4.90	$24.50
Nepeta x faassenii 'Six Hills Giant'	#1 pot	6	$4.90	$29.40
Petroselinum crispum	#1 pot	6	$4.90	$29.40
Rosmarinus officinalis	#1 pot	2	$4.90	$9.80
Rubus 'Babycakes'	#2 pot	5	$11.00	$55.00
Rubus idaeus 'NR7'	#1 pot	7	$4.90	$34.30
Rubus idaeus 'Raspberry Shortcake'	#2 pot	4	$11.00	$44.00
Rudebeckia fulgida 'Goldsturm'	#1 pot	6	$4.90	$29.40
Salvia officinalis	#1 pot	13	$4.90	$63.70
Sedum oreganum	#1 pot	10	$4.90	$49.00
Thymus praecox	4" pot	7	$2.50	$17.50
Vaccinium corymbosum 'ZF06-179'	#1 pot	9	$4.90	$44.10
SUB-TOTAL PLANT MATERIAL COST				$9,883.40
Installation cost at 0.66 x plant cost				$6,523.04
SUB-TOTAL INSTALLED PLANT MATERIAL				**$16,406.44**

SUB-TOTAL LANDSCAPING	**$257,898.87**
Contingency at 10%	$25,789.89
Sub-Total	$283,688.76
GST	$14,184.44
TOTAL LANDSCAPE COSTS	**$297,873.19**

WESTBROOK Consulting Ltd.

September 27, 2023 3913-02

North Cowichan Engineering
7030 Trans-Canada Hwy
Duncan, BC V9L 6L8

Re: 3096 Gibbins Road – Storm Water Management Plan

Westbrook Consulting has been engaged to provide civil engineering services for the above-named development.

Background

The property located at 3096 Gibbins Road in North Cowichan is proposed to be developed into a mixed-use low rise. The development will include commercial, office and residential space, one level of underground parking and surface parking.

There is a 450mm diameter CMP drain main fronting the site along Gibbins Road.

The storm water system was designed in accordance with the Municipality of North Cowichan's Storm Water and Rain Water Design Guidelines.

Design Concept

The storm water management system will consist of a storm water detention gallery in the form of Graff Ecobloc storage units, with each measuring 800mm x 800mm x 350mm high, and having the storage capacity of 0.22m3 per block. The blocks will detain storm water runoff from the site and release it to the municipal system at a pre-development rate through a controlled outlet.

Assumptions

The storm water management plan was designed based on the following assumptions:

- The entire site is impervious.
- The site has an area of 0.39 ha.
- The release rate (1.4 L/s/ha of Impervious area) and storage volume (1.2m^3/ha of Impervious area) were calculated as per the Municipality of North Cowichan's Storm Water and Rain Water Design Guidelines.
- The system has been sized for detention of surface runoff.
- Areas were taken from the site plan by Westbrook Consulting, dated August 8, 2023.

Calculations

The required storage volume was calculated as per the Municipality of North Cowichan Storm Water and Rain Water Design Guidelines and is as follows:

Storage Volume Required:

$$V = \frac{3900m^2}{100m^2} \times 1.2m^3 = \mathbf{46.8\ m^3}$$

Number of Chambers:

$$Number\ of\ Chambers = \frac{Storage\ Volume\ Required}{Storage\ Volume\ Per\ Chamber} = \frac{46.8m^3}{2.1m^3} = 22.29 \approx \mathbf{23\ Chambers}$$

Total Storage Volume Available:

$$V = Volume\ Per\ Chamber\ 2.1m^3 \times 23\ \text{Chambers} = \mathbf{48.3\ m^3}$$

The required storage volume of the detention gallery was calculated using the Municipality of North Cowichan's Storm Water and Rain Water Design Guidelines shown above. The required storage volume of **46.6 m³** with the total storage volume of **48.3 m³** achieved with twenty-three (23) StormTech SC-740 chambers.

Release Rate

The proposed development will have a release rate of 1.4 L/s/ha of impervious area. The calculation is as follows:

$$R = 1.4\ L/s/ha\ \times 0.39\ \text{ha} = \mathbf{0.546\ L/s}$$

Orifice Sizing

An orifice will limit the flow released by this system to that of a pre-development rate of 0.546 L/s as shown in the calculation above.

The equation used to size the controlled outlet is shown on the preceding page:

$$Q = C_d \times A \times \sqrt{2gh}$$

$$where,$$
$$Q = Flow$$
$$C_d = Coefficient\ of\ Discharge, 0.6\ for\ sharp\ edge$$
$$A = Cross - sectional\ Area, m^2$$
$$g = Acceleration\ due\ to\ gravity, 9.81m/s^2$$
$$h = Head\ (\text{use } 0.918\text{m})$$

Resulting in a **17mm** diameter orifice.

Overland Flood Route

Storm events which exceed the capacity of the storm water management system will pond at the catch basins until such time the storm subsides, and water can enter the system once again. Runoff will also flow overland to Gibbins Road where it will enter existing catch basins fronting the site.

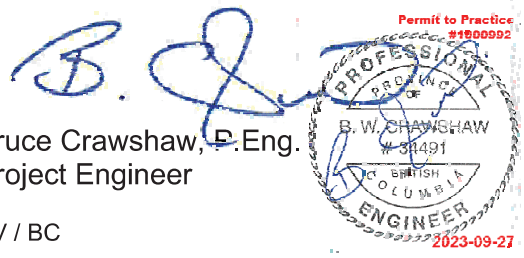
Summary

The storm water management system consists of an underground detention gallery that has been designed to detain the runoff from the proposed development and release it into the municipal system at a pre-development rate through a controlled outlet. The storm water system was designed as per the Municipality of North Cowichan's Storm Water and Rain Water Design Guidelines.

Should a storm event occur that exceeds the capacity of the detention gallery, the system will overflow though an overflow pipe and be directed towards Gibbins Road where it can enter catch basins fronting the site.

We trust that the above meets the requirements of your request. If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,
WESTBROOK CONSULTING LTD.



Bruce Crawshaw, P.Eng.
Project Engineer

EV / BC

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9/27/2023 11:44 AM

WESTBROOK Consulting Ltd.

TERRANE
GEOTECHNICAL GROUP

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North Vancouver, BC V7H 0A1

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info@terranegroup.com

Gibbins Road Holdings
215 Adams Road,
Kelowna, BC
V1X 7R1

January 29, 2024
6736 - TEG

Attention: **Dave Dacosta**

Re: **Gibbins Mixed Use Development**
3096 Gibbins Road, North Cowichan, BC

Aquifer Vulnerability Study

1.0 INTRODUCTION AND BACKGROUND INFORMATION

As requested, we carried out a study of the aquifer vulnerability with respect to the proposed development at the above-noted address. The findings of the study are summarized in this letter.

The site is within Aquifer #184, and this is located within Bings Creek. This study has been carried out in accordance with the applicable guidelines as stated within the Municipality of North Cowichan, Zoning Bylaw 1997, No. 2950. In addition, we have also reviewed the local British Columbia Well, Aquifer database, and BC Water Resources Atlas GIS mapping software (BC Water Resources GIS) with respect to local wells near the site.

Our office has been provided with a 26 page Architectural Design drawing package prepared by Keystone Architecture, dated September 26, 2023. The drawing package indicates the proposed site, parkade, and residential floor plans. The drawing package also includes sections. The topographic information has been presented on a preliminary site plan included within a two-page architectural design package dated May 1, 2023.

We have also been provided with the civil design package prepared by Westbrook Consulting Ltd. The package includes a site plan dated August 8th, 2023, and a three-page stormwater management plan. The stormwater management plan includes design calculations for the onsite detention tank and detention tank details.

2.0 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The proposed development site is rectangular in shape, with an area of approximately 3,900 m^2. The site is bound by commercial buildings/lots to the north and south, Gibbins Road to the west, and residential lots to the east. At the time of this report, the site is undeveloped and surfaced by grasses, shrubs, and some trees.

The topographic survey indicates that the site slopes from an elevation of 50 m at the southern property line of the site down to an elevation of 47 m at the northeast corner. This is also presented on the Municipality of North Cowichan Geographic Information System (GIS); which we understand presents elevations with respect to geodetic datum.

The design drawings indicate that the proposed mixed-use development includes one level of at-grade mixed use commercial space and parking, overlain by two levels of residential space. This is to be supported on a one level concrete parkade. The parkade footprint essentially occupies the entire site.

At this time, the floor slab elevations have not been defined on the design drawings. However, we envisage that the commercial space and at-grade parking will essentially match Gibbins Road to the west at an elevation of about 48 m. We understand that the parkade will be 2.43 m (8 ft) below the main floor or at grade elevation, and the footings will have a thickness of 0.6 m (2 ft). Thus, we envisage that the underside of the footing design elevation will be near an elevation of 45 m. Based on these elevations, the parkade's excavation depth will vary between 5 m at the southern property line and 2 m at the northeastern corner of the site.

The stormwater management system will consist of a detention tank, sized appropriately to capture the stormwater runoff from the proposed development and release it into the municipal system. We understand that the City of Duncan's water distribution system will supply water servicing for the development.

3.0 SITE CHARACTERIZATION

3.1 Geotechnical Site Investigation

A site specific drilling program was conducted on June 19th, 2023, to characterize the geotechnical subsurface conditions within the footprint of the proposed development. The investigation included drilling five testholes (TH-01, TH-02, TH-03, TH-04, and TH-05), supplemented with Dynamic Cone Penetration Test (DCPT) soundings at drill holes TH-02, TH-03, and TH-04.

The testholes and penetration tests were completed using a subcontracted track-mounted drill rig equipped with solid stem augers. When extracting the flight auger drill rods from the testholes, a continuous soil column is extracted on the auger flights that can be observed to determine the general subsurface profile at the testhole location. Soil samples were taken directly from the auger flights and returned to the lab for further review.

The penetration tests were completed immediately adjacent to the corresponding testholes and thus the data collected is presented on the corresponding testhole log. The dimensions of the specific equipment, including hammer drop distance and the efficiencies of the driving hammer used, are such that the resulting Blow Count "N value" is considered to be equivalent to a Standard Penetration Test (SPT) blow count "N value" that is 60 % efficient; thus the test presents "N60" blow count values, as defined within the National and BC Building Codes.

The testholes were terminated when practical refusal was achieved. Refusal refers to a situation where the drill rig encounters subsurface materials where it cannot advance further without risking damaging the drilling equipment. Refusal was achieved at depths of 5.79 m, 4.88 m, 5.79 m, 1.22 m, and 3.05 m at TH-01, TH-02. TH-03, TH-04 and TH-05 respectively.

Prior to carrying out the drill program, a BC one call was completed, and a subcontracted utility locate specialist attended the site to 'clear' the testhole locations of any underground services.

3.2 Subsurface Conditions - Soil

The surficial geology maps indicate that the site is underlain by a glaciomarine deposit of silt, clay, stone clay, and till-like mixtures. Glacio-marine deposits are formed from sediment being deposited within a marine environment. Thus, a sedimentary deposit is typically found in areas where glaciers advanced into the ocean or a glacial lake. These deposits can vary in composition as well as characteristics such as strength. This is consistent with the soil conditions observed during the investigation.

Generally, a silty sand topsoil material was encountered at the surface of the testholes to depths of 0.9 m, 0.3 m, 0.6 m, 0.9m, and 0.45 m at testholes TH-01, TH-02, TH-03, TH-04, and TH-05 respectively.

Blow the topsoil fill, the soil material encountered at the testhole locations consisted of various layers of silt, silty sand, silty sand, and gravel. The detailed description of the soil conditions found at each testhole location is attached following the text of this report.

It should be noted that the soil profile is based on the soils encountered in the specific testhole locations and only represents the general soil conditions in the immediate vicinity of the testhole.

However, generally, the development will be founded on various soil materials. In some testhole locations, a firm to stiff silt, with some to trace sand and gravel, was encountered at a depth of the proposed foundations. At some of the testhole locations, a very dense silty sand to silty sand 'till-like' material was encountered.

3.3 Subsurface Conditions – Groundwater

At testholes TH-01, TH-03, and TH-05, the soil material was observed to be wet at depths of 4.57 m, 4.57 m, and 2.75 m, respectively. We envisage that the water encountered within these above noted testholes is not a permanent groundwater "table" but "perched groundwater" on the very dense, light grey silt and sand.

Please note that the static groundwater level, or the "water table," is defined as the level at which the subsurface is saturated with water, and where the groundwater pressure is equal to atmospheric pressure. The groundwater level can vary and fluctuate due to many factors, such as seasonal precipitation, evaporation, and groundwater pumping.

Perched groundwater may be present during or soon after precipitation. Perched groundwater refers to localized and transient conditions whereby a phreatic surface or surfaces exist throughout the subsurface. Typically, perched groundwater occurs when an aquitard with low Hydraulic Conductivity or "permeability" is present, such as till, silt, clay, or bedrock, above the groundwater level, inhibiting the vertical water movement. Typically, the perched groundwater will move laterally along the aquitard. Again, perched groundwater is generally a transient condition often associated with heavy rainfall or surface water infiltration.

3.4 Aquifer Characterization

Again, the site is located within the boundary of Aquifer #184, as defined by the BC Water Resource Atlas. We have attached the *Aquifer Fact Sheet* following the text of this report.

This aquifer is an unconfined sand and gravel deposit formed by the late glacial outwash. The subject aquifer has a "low productivity, and the unconfined nature is such that there is a high vulnerability to contamination, resulting in an Aquifer Classification of "IIA," based on rankings generated in 2022.

This classification is based on two criteria: a classification component and a ranking value component. These two criteria consider;

- the water supply available,
- the demand placed on the aquifer,
- the vulnerability to contamination, and
- the importance.

The depth of the aquifer is between 20.4 m and 21.9 m (average 20.9m) as defined on the *Aquifer Classification Work Sheet*, which is also attached following the text of this report. The aquifer's thickness is unknown, and thus, the transmissivity of the aquifer is unknown. However, the aquifer materials are known to be comprised of sand and gravel outwash deposits; and these types of materials are typically associated with a comparatively high Hydraulic Conductivity.

The gradient, or direction of flow for the aquifer, has not been determined, nor has the source of the aquifer. However, it is inferred that the gradient of the aquifer would result in east to west flow, matching the topography.

4.0 DISCUSSION and CONCLUSION

Again, the proposed development will be supplied with water from the municipal distribution system, and there will be no demand on the subject aquifer. The type of development and construction is consistent with all other and previous developments in the area. No new materials or substances are being introduced to the site.

The proposed excavation for the development will be between 2 m and 5 m, approximately 18 m to 15 m above the aquifer. The low permeable till-like soil material between the development and the aquifer acts as an aquitard, or confining layer, between the excavation and the aquifer.

These fine grained soils proved very difficult to drill through and the drill rig reached "refusal" at depth. These low permeable materials represent an aquitard that precludes groundwater from freely flowing vertically through the profile. Moreover, the silt was noted to be wet in places with dry zones below, further supporting the conclusion that groundwater does not currently flow through the surficial materials and recharge the aquifer known to be present at depth.

In summary, the study's findings indicate that the quantity and quality of groundwater within the aquifer will not be impacted due to the proposed development.

For
Terrane Engineering Group Ltd.

Leah MacGillivray, E.I.T.
Project Engineer

PERMIT TO PRACTICE #1001310

For
Terrane Engineering Group Ltd.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J. T. ISSIGONIS

J. Troy Issigonis, P.Eng., M.Eng.
Principal

Attachments: ***Testhole Location Plan - one page***
Detailed Soil Logs – five pages
Aquifer Fact Sheet – BC Groundwater Resource Atlas – Aquifer #184 – one page
Aquifer Classification Work Sheet – BC Groundwater Resource Atlas – three pages

Locations of Testholes

TERRANE
GEOTECHNICAL GROUP
114 - 2433 Dollarton Highway
North Vancouver, BC, V7H 0A1
Phone: 604.770.0335

Proposed
Gibbins Mixed Use
Development

3096 Gibbins Road
Duncan BC

Testhole
Location Plan

6736 - TEG

Scale	Date
N/A	18 JUL 2023
Drawn: LM	Checked:
Design:	Issued:

Figure
1 OF 1

SOIL LOG: TH-01

PROJECT NAME:	3096 Gibbins Road, Duncan BC		
CLIENT:	Gibbins Road Holdings		
PROJECT #:	6736-TEG	SURFACE ELEVATION (m):	Approx 48 m
DRILLING CONTRACTOR:	Terratech Drilling Ltd.	INVESTIGATION DATE:	19/06/2023
DRILLING METHOD:	Solid Stem Auger	END OF TEST HOLE (m):	5.79
DRILLING EQUIPMENT:	Track Mounted Drill Rig	DEPTH TO WATER:	-
SAMPLING METHOD:	Grab	LOGGED BY:	LM
HAMMER WEIGHT: 63.5 kg (140 lbs)	DROP: 0.76 m (2.5 ft)	PROJECT ENGINEER:	JTI

DEPTH (m)	DEPTH (ft)	Sample	Classification	Lithology	DESCRIPTION (Surface Elevation: Existing Grade)	DCPT (N) Blows per foot	DCPT GRAPH 10 30 50 70	Notes	DEPTH (m)
0.0	0.0				Silty SAND (Fill), intermixed organic material, intermixed roots, light brown, dry, loose				0.0
0.5	1.0		SM						0.5
1.0	2.0								1.0
1.5	3.0				SILT, light brown/light grey, with rust staining, medium to low plastic insitu, firm to stiff				1.5
2.0	4.0								2.0
2.5	5.0								2.5
3.0	6.0		ML						3.0
3.5	7.0								3.5
4.0	8.0								4.0
4.5	9.0								4.5
5.0	10.0				SILT, some very fine grained sand, light grey with some rust staining, soft to firm				5.0
5.5	11.0								5.5
6.0	12.0		ML						6.0
	13.0								
	14.0								
	15.0				SILT, trace black rounded gravel, light grey, wet, soft				
	16.0		ML						
	17.0				SILT, SAND and GRAVEL, very fine grained, light grey, dry, very dense			Difficult to drill - Auger 'spinning' to advance	
	18.0		SW						
	19.0				End of testhole - Refusal				
	20.0								
	21.0								

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PROJECT NAME:	3096 Gibbins Road, Duncan BC	**SOIL LOG: TH-02**	
CLIENT:	Gibbins Road Holdings		
PROJECT #:	6736-TEG	SURFACE ELEVATION (m):	Approx 48.5 m
DRILLING CONTRACTOR:	Terratech Drilling Ltd.	INVESTIGATION DATE:	19/06/2023
DRILLING METHOD:	Solid Stem Auger	END OF TEST HOLE (m):	4.88
DRILLING EQUIPMENT:	Track Mounted Drill Rig	DEPTH TO WATER:	-
SAMPLING METHOD:	Grab	LOGGED BY:	LM
HAMMER WEIGHT: 63.5 kg (140 lbs)	DROP: 0.76 m (2.5 ft)	PROJECT ENGINEER:	JTI

DEPTH (m)	DEPTH (ft)	Sample	Classification	Lithology	DESCRIPTION	DCPT (N) Blows per foot	DCPT GRAPH (10 30 50 70)	Notes	DEPTH (m)
					Surface Elevation: Existing Grade				
0.0	0.0		SM		Silty SAND (topsoil), intermixed organic material, instermixed rootlets, light brown, dry, loose				0.0
	1.0				SILT, light brown, with rust staining, low plastic insitu, very stiff	9			
0.5	2.0					8			0.5
	3.0		ML			18			
1.0	4.0					31		Difficult to drill	1.0
1.5	5.0					32			1.5
	6.0				Silty SAND, trace black rounded gravel, light brown/light grey, very dense	50			
2.0	7.0					41			2.0
2.5	8.0		SM			78			2.5
	9.0					> 50 At 3 inches			
3.0	10.0				Silty SAND to sandy SILT, trace gravel, light grey, very dense				3.0
3.5	11.0							Very difficult to drill	3.5
	12.0		SM						
4.0	13.0								4.0
	14.0								
4.5	15.0				SILT and SAND, very fine grained, light grey, dry, very dense			Very dry and powedery	4.5
	16.0		SM		End of testhole - Refusal				
5.0	17.0								5.0
5.5	18.0								5.5
	19.0								
6.0	20.0								6.0
	21.0								

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Page 2

PROJECT NAME:	3096 Gibbins Road, Duncan BC	**SOIL LOG: TH-03**	
CLIENT:	Gibbins Road Holdings		
PROJECT #:	6736-TEG	SURFACE ELEVATION (m):	Approx 50 m
DRILLING CONTRACTOR:	Terratech Drilling Ltd.	INVESTIGATION DATE:	19/06/2023
DRILLING METHOD:	Solid Stem Auger	END OF TEST HOLE (m):	5.79
DRILLING EQUIPMENT:	Track Mounted Drill Rig	DEPTH TO WATER:	-
SAMPLING METHOD:	Grab	LOGGED BY:	LM
HAMMER WEIGHT: 63.5 kg (140 lbs)	DROP: 0.76 m (2.5 ft)	PROJECT ENGINEER:	JTI

DEPTH (m)	DEPTH (ft)	Sample	Classification	Lithology	DESCRIPTION (Surface Elevation: Existing Grade)	DCPT (N) Blows per foot	DCPT GRAPH (10, 30, 50, 70)	Notes	DEPTH (m)
0.0	0.0				Silty SAND (topsoil), intermixed organic material, intermixed rootlets, light brown, dry, loose				0.0
	1.0		SM			7			
0.5	2.0				Silty SAND, very fine grained, light brown to light grey, rust staining, compact	11			0.5
1.0	3.0		SM			20			1.0
	4.0					17			
1.5	5.0				SILT, light brown/light grey, some rust staining, low to medium plasticity insitu, very stiff	30			1.5
2.0	6.0					14			2.0
	7.0					16			
2.5	8.0					16			2.5
	9.0					24			
3.0	10.0		ML			30			3.0
	11.0					23			
3.5	12.0					21			3.5
4.0	13.0					27			4.0
	14.0					29			
4.5	15.0				SILT, trace and, trace gravel, very fine grained sand, intermixed sand seems, light grey, wet, very stiff	26			4.5
	16.0					22			
5.0	17.0		ML			14			5.0
5.5	18.0					23			5.5
	19.0					86			
6.0	20.0				End of testhole - Refusal	> 50 At 3 inches			6.0
	21.0								

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PROJECT NAME:	3096 Gibbins Road, Duncan BC	**SOIL LOG: TH-04**	
CLIENT:	Gibbins Road Holdings		
PROJECT #:	6736-TEG	SURFACE ELEVATION (m):	Approx 48.5 m
DRILLING CONTRACTOR:	Terratech Drilling Ltd.	INVESTIGATION DATE:	19/06/2023
DRILLING METHOD:	Solid Stem Auger	END OF TEST HOLE (m):	1.22
DRILLING EQUIPMENT:	Track Mounted Drill Rig	DEPTH TO WATER:	-
SAMPLING METHOD:	Grab	LOGGED BY:	LM
HAMMER WEIGHT: 63.5 kg (140 lbs)	DROP: 0.76 m (2.5 ft)	PROJECT ENGINEER:	JTI

DEPTH (m)	DEPTH (ft)	Sample	Classification	Lithology	DESCRIPTION	DCPT (N) Blows per foot	DCPT GRAPH 10 30 50 70	Notes	DEPTH (m)
					Surface Elevation: Existing Grade				
0.0	0.0				Silty SAND (topsoil), intermixed organic material, instermixed rootlets, light brown, dry, loose				0.0
	1.0		SM			9			
0.5	2.0					22			0.5
	3.0								
1.0			SM		SILT and SAND, very fine grained, light grey, dry, very dense	38			1.0
	4.0				End of testhole - Refusal	> 50	At 3 inches		
1.5	5.0								1.5
	6.0								
2.0	7.0								2.0
2.5	8.0								2.5
	9.0								
3.0	10.0								3.0
	11.0								
3.5	12.0								3.5
4.0	13.0								4.0
	14.0								
4.5	15.0								4.5
	16.0								
5.0	17.0								5.0
5.5	18.0								5.5
	19.0								
6.0	20.0								6.0
	21.0								

SOIL LOG: TH-05

PROJECT NAME:	3096 Gibbins Road, Duncan BC		
CLIENT:	Gibbins Road Holdings		
PROJECT #:	6736-TEG	SURFACE ELEVATION (m):	Approx 49 m
DRILLING CONTRACTOR:	Terratech Drilling Ltd.	INVESTIGATION DATE:	19/06/2023
DRILLING METHOD:	Solid Stem Auger	END OF TEST HOLE (m):	3.05
DRILLING EQUIPMENT:	Track Mounted Drill Rig	DEPTH TO WATER:	-
SAMPLING METHOD:	Grab	LOGGED BY:	LM
HAMMER WEIGHT: 63.5 kg (140 lbs)	DROP: 0.76 m (2.5 ft)	PROJECT ENGINEER:	JTI

DEPTH (m)	DEPTH (ft)	Sample	Classification	Lithology	DESCRIPTION	DCPT (N) Blows per foot	DCPT GRAPH 10 30 50 70	Notes	DEPTH (m)
					Surface Elevation: Existing Grade				
0.0	0.0		SM		Silty SAND (topsoil), intermixed organic material, instermixed rootlets, light brown, dry, loose				0.0
0.5	1.0								0.5
	2.0		SM		Silty SAND to sandy SILT, light brown, with rust staining, low plastic insitu, stiff				
1.0	3.0								1.0
	4.0				SILT, some very fine grained sand, light brown to light grey, rust staining, stiff				
1.5	5.0		MI						1.5
	6.0								
2.0	7.0								2.0
	8.0		ML		SILT, light brown, dry, stiff				
2.5	9.0								2.5
			SM		SAND and GRAVEL, light grey, angular, very dense, wet				
3.0	10.0				End of testhole - Refusal				3.0
	11.0								
3.5	12.0								3.5
4.0	13.0								4.0
	14.0								
4.5	15.0								4.5
5.0	16.0								5.0
	17.0								
5.5	18.0								5.5
	19.0								
6.0	20.0								6.0
	21.0								

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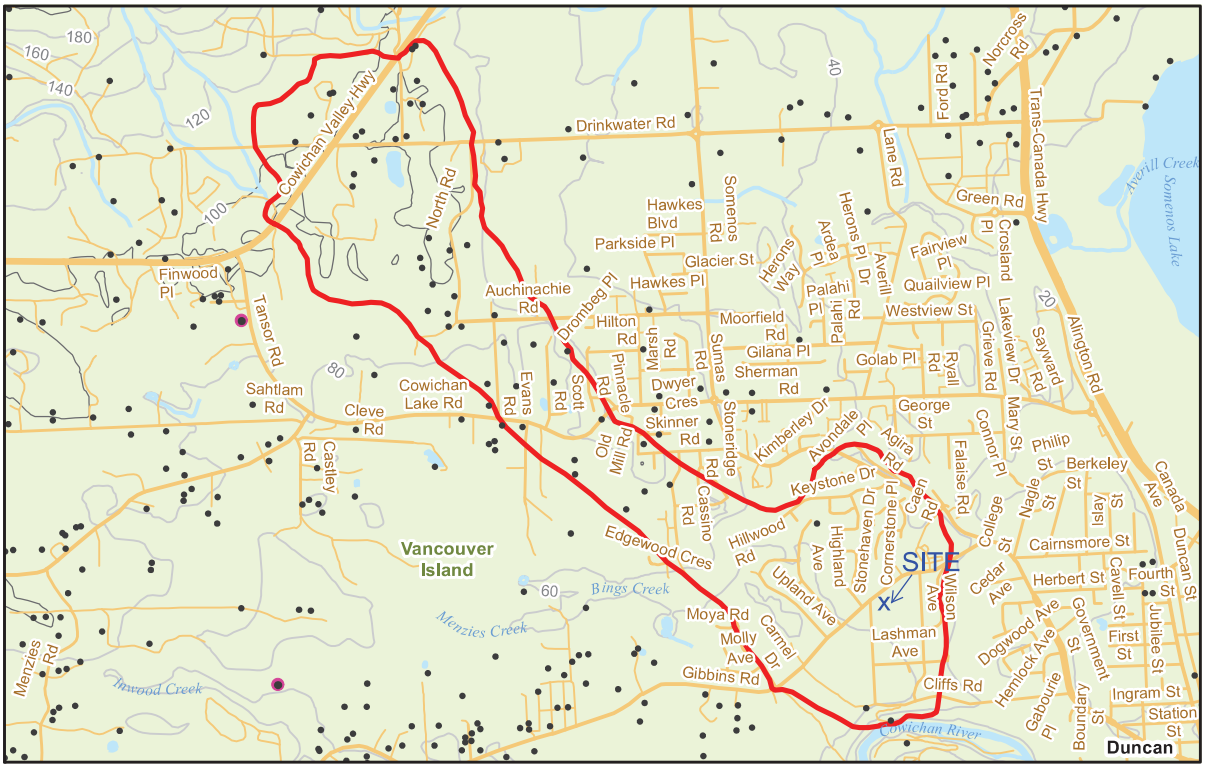
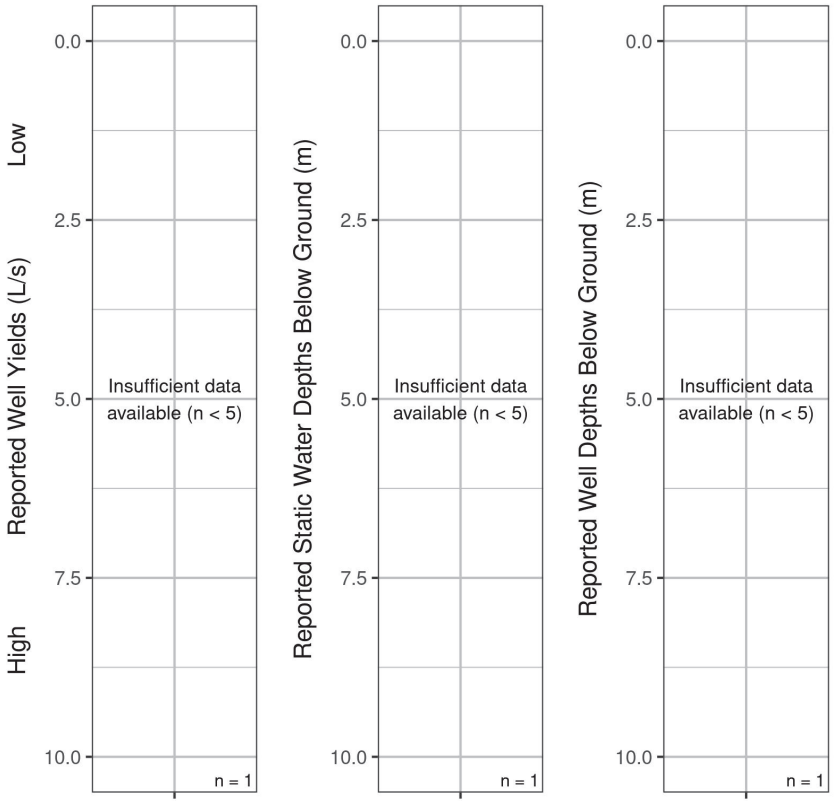
Aquifer #184



Aquifer Description (Mapping Report - 1995): Unconfined glacio-fluvial outwash or ice contact sand and gravel aquifers generally formed near or at the end of the last period of glaciation (subtype = 4a).

Aquifer Details	
Region	West Coast
Water District	Victoria
Aquifer Area	2.6 km^2
No. Wells Correlated	1
Vulnerability to Contamination	High
Productivity	Low
Aquifer Classification	IIA
Hydraulic Conductivity *	Unknown
Transmissivity *	Unknown
Storativity *	Unknown
No. Water Licences Issued to Wells	Unknown
Observation Wells (**Active**, Inactive)	None

* min - max
For Hydraulic Connection see guidance document



Detailed methods for all figures are described in the companion document (Aquifer Factsheet - Companion Document.pdf).
Factsheet generated: 2022-07-27. Aquifers online: https://apps.nrs.gov.bc.ca/gwells/aquifers.

AQUIFER CLASSIFICATION WORK SHEET

DATE:
November 23rd, 1995

AQUIFER LOCATION:
Bings Creek

REFERENCE NUMBER:
0184 (092B/13 #16)

DESCRIPTIVE LOCATION:
Duncan, B.C.

NTS MAP SHEET:
092B/13

WELL LOCATION MAPS:
Somenos and Quamichan Land District Maps.
BCGS Mapping Areas: 092B.072.3.3.4; 092B.072.3.4; 092B.082.1.1.2

CLASSIFICATION: IIIA RANKING: 9

Aquifer Size:
Approximately 2.7 km2.

Aquifer Boundaries:
Linear Glacio-fluvial feature located east of Bings Creek.

Geologic Formation (Aquifer):
Coarse gravel and sand. Ice-contact delta. Glacio-fluvial deposit of Vashon Drift, Cenozoic Era.

Confined/Unconfined/Bedrock:
Unconfined.

Productivity:
Low to moderate. Reported well yields range from 0.16 to 0.44 L/s (2.5 to 7 gpm). The geometric mean well yield is 0.24 L/s (3.8 gpm) and the median well yield is 0.22 L/s (3.5 gpm). See notes. No wells in the Bings Creek Aquifer have had pumping tests conducted to determine the transmissivity and specific capacity of the aquifer.

Vulnerability:
High. Unconfined coarse gravel and sand aquifer. The depth to water table is moderately shallow. The permeability of the aquifer materials is high.

Depth to Water Table:
The reported depth to static water level ranges from 20.4 to 21.9 metres (67 to 72 feet). The geometric mean depth to static water level is 20.9 metres (68.7 feet) and the median depth to static water level is 20.7 metres (68 feet).

Direction of Flow:
Has not been determined. The probable direction of flow would be towards the east based on the slope of the land. Additional water level data is required to determine the direction of flow.

Recharge:
Likely from precipitation.

Domestic Well Density:
Approximately 1.5 wells/km2.

Users/Level of Use:
Domestic use only.

Reliance on Source:
Conjunctive. The southern end of this aquifer is serviced by the City of Duncan Municipal Water System and also the Municipality of North Cowichan's Southend System. Water licenses exist on Bings Creek, springs and other small streams in the area.

Conflicts Between Users:
None documented.

Quantity Concerns (type, source, level of concern):
None documented.

Quality Concerns (type, source, level of concern):
None documented.

Notes:
Water well depths range from 23.8 to 27.4 metres (78 to 90 feet). The geometric mean depth of wells is 25.2 metres (82.6 feet) and the median depth of wells is 24.8 metres (81.5 feet).

The productivity of this aquifer is probably higher than the statistics have indicated. The statistics represent only four water well records. It is possible that high productive wells could be completed in this aquifer, however aquifer production could be limited by the available drawdown.

References:
Clapp, C.H. 1918. *Duncan Sheet, Vancouver Island Map 42A*. Canada Department of Mines, Geological Survey. Memoir 96, No. 80, Ottawa Government Printing Bureau 1918, No. 1192.

Halstead, E.C. 1965. *Surficial Geology, Duncan, B.C., Map 14 - 1965*. Geological Survey of Canada.

Kreye, R. and M. Wei, 1994. *A Proposed Aquifer Classification System for Groundwater Management in British Columbia*. Ministry of Environment, Lands and Parks, Water Management Division, Hydrology Branch, Groundwater Section. File No. 00400-20. 68 pp.

AQUIFER CLASSIFICATION AND RANKING

AQUIFER LOCATION: Bings Creek

REFERENCE NUMBER: 0184 (092B/13 #16)

CLASSIFICATION: IIIA RANKING VALUE: 9

Classification Component: (III) Low level of development. Moderate demand and moderately low yields.

Vulnerability: (A) High vulnerability to contamination.

Ranking Component:

	Value
Productivity:	1
Vulnerability:	3
Size:	1
Demand:	2
Type of Use:	2
Quality Concerns:	0
Quantity Concerns:	0
Total	9

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December 11, 2023 File: DP000339

Anthony Price
Development Planner
Municipality of North Cowichan
7030 Trans-Canada Highway
Duncan, British Columbia, V9L 6A1

Dear Mr. Price:

Re: North Cowichan Zoning Bylaw "Energy & Emissions DP Guidelines E" – 3096 Gibbins Road

Please find our itemized responses (in gray) to the noted objectives in the bylaw document below:

5.3.1 Energy Conservation

(a) With respect to energy, show how conservation is incorporated and how the project endeavours to use renewable energy sources. Building siting is an important component.
- Use of wood frame construction which is a renewable resource/building material.

(b) Select materials and colours in building and roof construction that minimize heat absorption.
- Low – E glazing to reduce heat absorption.
- High reflectivity, light coloured roof to reduce heat island effect.

(c) Select materials that encourage thermal massing and seasonal thermal energy storage.
- Use of concrete on podium level provides thermal mass.
- Extensive use of cement board cladding promotes some minimal thermal massing as well as durability.

(d) Use energy-efficient exterior lighting systems with timers and sensors to provide light only when required.
- LED lighting reduces energy consumption.

(e) Where possible, use lighting systems that are powered by renewable energy sources, such as solar energy.
- Common area lighting power to be provided via a small solar array to be located on the roof of the building.

(f) Control light glare such that light does not rise more than 90 degrees from the ground (nadir) and does not cross property boundaries. Consider installing high efficiency lighting and use shields to reduce glare to the outside.
- Dark sky compliant lighting via downlighting and cove lighting.

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(g) Minimize the amount of lighting on signs. Installation of video, reader board, neon or LED signs is discouraged.
- Commercial lighting to be downlit or illuminated via cove lighting within the architectural frame element.

5.3.2 Water Conservation

(a) With respect to water, show how conservation is incorporated. Site landscaping is an important component (see Objective 3 – Site Design and Landscaping).
(i) Manage stormwater flows and water quality by designing systems in accordance with the Ministry of Environment's Stormwater Planning: A Guidebook for British Columbia.
i. Civil design to be a stormwater detention tank with controlled release to mimic predevelopment flows into the drain main offsite.

(ii) Install above-or below-ground rainwater collection systems such as naturalized ponds, bioswales, rain gardens and/or cisterns to capture, store and potentially re-use rainwater to irrigate non-edible plants and landscaping.
i. Landscape to design a rain garden or bioswale in the undeveloped setback area on the eastern side of the site complete with catch basin for overflow in the south-east corner.

(iii) Design, install and manage cost-effective and efficient irrigation systems that support water, soil and energy conservation practices (including system features such as temporary (2 year plant establishment), drip irrigation, mulching, watering schedules, moisture sensors and timers, and water-use monitoring for leakages).
i. Current landscape drawings note a high efficiency irrigation, design/build, to IIABC standards. A performance specification has been added to include controllers for water use monitoring and moisture sensors.

(v) To ensure that irrigation systems are cost-effective and efficient, use certified irrigation designers and installers. The Irrigation Industry Association of British Columbia is a certifying body in the province.

ii. Current landscape drawings note a high efficiency irrigation, design/build, to IIABC standards.

(vi) Use low or no water toilets, appliances and fixtures.

iii. Low flow toilets and energy star appliances to be specified for this project.

(b) Manage stormwater flows and water quality.
(i) Discuss plans with the District to determine the site and off site (downstream) needs for storm water management to establish design parameters for infiltration, retention, and detention.
- Civil design will comply with all district requirements for stormwater management.

(ii) Minimize the length and amount of infrastructure (such as sewer and water lines, and roads) planned for a site

- Reduced length/amount of service lines to site by locating mechanical and electrical rooms close to the street.

5.3.3 Solid Waste

Reducing the amount of construction waste that ends up in landfills assists the Municipality and the Regional District in meeting their goals of reducing the amount of solid waste requiring disposal and in attaining the long-term goal of Zero Waste. It also reduces GHG emissions generated by transport of waste.

(a) Consider renovation and adaptive reuse of existing buildings.
  (i) n/a. Site currently undeveloped

(b) Use durable exterior and interior finishes to reduce the likelihood of material ending up in landfills.
  (i) Cement board cladding highly durable

(c) Consider using salvaged materials (where permitted in BC Building Code), both for buildings and landscape (as per BC Landscape standards).
  (i) n/a. Site currently undeveloped

(d) Consider specifying materials that are recycled, reused, and renewable or contain recycled content.
  (i) Option to use percentage of recycled materials in cabinetry and flooring

(f) Consider using products made from wood waste where appropriate (but watch for indoor air quality and possible off-gassing).
  (i) Pre-Fabricated/Plant construction will reduce waste by up to 60% on material waste and general refuse.

(g) Consider designing structures to maximize the use of standard size materials in building design for the efficient use of materials (less waste)
  (i) Pre-Fabricated/Plant construction will reduce waste by up to 60% on material waste and general refuse.

(h) In assessing and selecting finishes, review their comparative aesthetics, comfort and acoustical control.
  (i) Woodtone Cement board cladding gives warm and welcoming aesthetic.

(i) Select appropriate material for all projects (e.g. through life-cycle assessments).
  (i) Concrete and cement board both very durable materials with long life cycles.

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(j) Consider building materials that have low "embodied energy," are from rapidly renewable sources, and/or have been acquired with minimal transportation kilometres. Consider using:

(iii) durable materials for long service life and low maintenance;

i. Concrete and cement board both very durable materials with long life cycles.

(iv) materials with recycled material content, locally harvested materials, and sustainably harvested and certified wood.

i. Wood frame construction considered a locally sourced material.

(k) Maximize the use of safe and healthy materials.

(i) Use roofing materials that support rainwater harvesting (cedar and asphalt can transfer chemicals).

i. Project will likely use SBS roofing membrane thus avoiding chemical runoff

(iii) Use high-performance windows.

i. High performance vinyl windows to be used.

(iv) Choose wood with natural preservatives over chemically treated wood where appropriate.

i. n/a. Pre-fab construction will utilize steel stud and not wood frame.

(l) Minimize the generation of solid waste in construction.

(i) Install with deconstruction in mind to allow for material reuse.

i. n/a. Site currently undeveloped

(ii) Avoid demolition of old buildings to waste. Consider reuse/renovation as an option.

i. n/a. Site currently undeveloped

(iii) Prepare a plan for materials staging to protect materials from damage and possible waste (e.g. schedule just-in-time delivery; fence and protect staging area from weather).

i. Will be included in construction plans.

(iv) Use preassembled, pre-cut components (e.g. trusses) to reduce site waste.

i. Pre-Fabricated/Plant construction will reduce waste by up to 60% on material waste and general refuse.

(v) Minimize the selection of materials with excessive packaging.

i. Pre-Fabricated/Plant construction will reduce waste by up to 60% on material waste and general refuse.

(m) Maximize the diversion of solid waste from landfill.

(i) Use local facilities for reuse and recycling of products that are not at the end of their useful lives (consider providing a facility on site for multi or large developments).

i. Pre-Fabricated/Plant construction will reduce waste by up to 60% on material waste and general refuse.

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(ii) Incorporate full recycling options for the completed development (e.g. recycling, organics, composting), as well as garbage collection.
   i. Client will provide a full recycling program for the development.

(iii) Use chipped vegetation as mulch on site, and use logged wood from the site in the design of the building or components.
   i. Any salvageable lumber will be used for landscaping (eg. mulch).

(iv) Design adequately for waste diversion techniques on site, and locate these conveniently for use but not to negatively impact public access, corridors or areas.
   i. On site waste storage obscured from the street but still allows straightforward access for waste collection vehicles.

(n) Make areas for recycling collection, composting and waste disposal sufficiently large and easily accessible and plan them so they have the capacity for expansion.
   i. On site waste storage oversized and allows straightforward access for waste collection vehicles.

We hope the above responses are to your satisfaction. If further clarification or additional information is required, please let us know.

Kind regards,

Noel Lim
Project Manager
Keystone Architecture & Planning Ltd.

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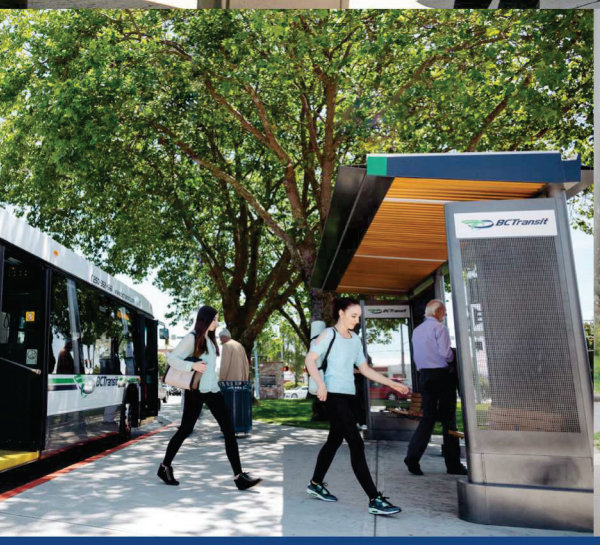
MAY 2024

Transit Shelter Program



newshelterprogram@bctransit.com | shelterpricing@bctransit.com

BCTransit

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BC Transit Shelter Program

Preface

BC Transit is pleased to provide an updated overview of bus stop shelter designs for use around the province. The design concepts were created to standardize the look, feel and functionality of bus stop amenities while improving the transit experience for customers.

Simultaneous with the implementation of shelter design standardization, BC Transit introduced a capital upgrade funding program to assist municipalities in acquiring these shelters. This funding program has been instrumental in facilitating the installation of more than 500 standardized shelters since 2010.

Background

Bus stops are the access point for every customer using BC Transit service. While they can be a positive feature of transit travel, they are often cited as a barrier to transit use due to poor quality shelters, inadequate lighting or other design and infrastructure characteristics. Market analysis has shown shelters and improvements at bus stops were among the top five enhancements needed to encourage new riders to transit who are currently using other modes of travel.

Feedback from municipalities across BC have indicated a desire for a standardized design and provincial procurement strategy. BC Transit embarked on an initiative to examine the existing bus stop infrastructure and shelter configurations around the province. Historically the selection of shelter design and functionality has been led by the municipality for which the service is being provided. As such, a broad variety of manufacturers and designs have been utilized, and no set standardization methodology or procurement strategy employed (Figure 1).

Figure 1: Examples of existing shelter diversity

This program provides municipalities with access to capital funding in order to purchase standardized shelters for use in their communities. The objectives are to provide improved amenities to customers, reduce procurement and ongoing maintenance costs incurred by municipalities, and improve overall ridership levels.

The New Standards

BC TRANSIT SHELTER DESIGNS

As the bus stop shelter program has grown, feedback received from the participating municipalities, installation crews and manufacturers has resulted in further shelter design improvements such as more vandal resistant perforated mesh and harsh weather shelter designs.

Shelter designs feature modularity for future expansion and energy efficient LED grid and solar powered lighting options and many more.

Shelter designs are classified by "Type" based on the expected number of users and application:

- **Type 1** – bus stop upgrades
- **Type 2** – low to medium passenger boardings per weekday (10-20)
- **Type 3** – moderate to high passenger boardings per weekday (21-200)
- **Type 4** – park and rides (less than 100 stalls), small transit exchanges, stops with high levels of passenger boardings per weekday (400+)
- **Type 5** – rapid bus, tram stations

All BC Transit shelters have modular components that allow for the overall length of the shelters to be expanded or contracted post-production to accommmodate and meet ridership capacity unique to each shelter location. This modular design features a cantilevered structural roof design, allowing you to choose side panels or additional back panels.

Standard Design Highlights

- Perforated back & side walls
- Mechanically sealed roof system
- Cantilevered structural design
- Corrosion and vandal resistant design
- Wood and timber architectural accents
- Designed and engineered to exceed wind, snow, and seismic loads throughout B.C.

Figure 2: BC Transit Type based shelters in the field

Shelter Purchase Options

Municipalities interested in purchasing one of the BC Transit standard shelter designs can do so in one of the following ways:

SHARED PROVINCIAL FUNDING

1. Lump Sum Contribution

Municipalities can choose to purchase via a lump sum payment to BC Transit upon completion of installation. As per the provincial funding model, municipalities are responsible for a percentage of the total cost of the shelter(s) as per the standard cost splitting model for their conventional service.

Federal funding has been secured to help further lower the capital cost of new bus stop amenities. The program is jointly funded by the Federal and Provincial Government under the Investing in Canada Infrastructure Program (ICIP). Availability of this funding depends on the level of participation in the program.

If the shelter request has been approved, the municipality will receive a contract from BC Transit confirming the locations, responsibilities of each party and the estimated lump sum total, exclusive of: taxes, additional packaging and freight charges to their location, allowances for installation crews, shelter storage fees, or BC Transit program management costs. Upon return of a signed copy of this contract, BC Transit will place the orders.

Following completion of all shelter installations in the requesting municipality, BC Transit will invoice for the agreed portion of the costs. Any costs incurred that are not covered by the shelter program will be discussed prior to being incurred.

2. Financing through Addendum to AOA

If the municipality requests to access funding via an addendum to their Annual Operating Agreement (AOA), BC Transit will recover the municipal portion of the capital funding through an annual charge back of the debt service costs over the useful life of the asset. Debt service charges will begin in the month that the asset is placed in active service.

The estimated financing costs will be outlined to the municipality in the contract confirming approval of shelter request. The estimate will be exclusive of taxes, additional packaging and freight charges to your location, allowances for installation crews, shelter storage fees, or BC Transit program management costs.

MUNICIPALITY FUNDED PURCHASE

3. Direct Purchase

Municipalities that would prefer to purchase any of the standardized shelter designs directly without cost sharing, can access BC Transit's negotiated standing offer pricing via direct purchase orders. Developers and regions not identified in an active AOA are eligible to purchase shelters through the program but are not eligible for cost sharing. These purchases will be managed by BC Transit and 100% of all costs will be billed to the requestor.

Municipalities are strongly encouraged to consult with BC Transit prior to engaging in the planned installation of any new transit infrastructure in their communities, to ensure that there are no conflicts with possible service changes, scheduling, route changes or operational and safety concerns . BC Transit recommends that the bus shelter approval process be followed in the same manner as for shelters being purchased under the provincial cost sharing program.

Application Process for Capital Funding

Funding for the BC Transit Bus Stop Shelter Program is limited and funds will be allocated based on a first come first served basis while ensuring equity across the province. All requests for shared funding purchases will be reviewed by BC Transit based on internal selection criteria prior to approval and prioritization of locations may be required if demand exceeds the annual budgeted provincial funding amount for any given year.

Municipalities are requested to follow the application process as indicated in Appendix A – Application Process.

A quick link to the online application form can be located on each municipality web page which is then submitted to BC Transit via the online portal. Using Victoria as an example:

https://www.bctransit.com/victoria/transit-future/corporate-infrastructure-initiatives/transit-shelters

SELECTION CRITERIA

BC Transit will place all applications through a series of selection criteria to ensure that the best utilization of the shelter is achieved by the municipality, and the local transit network. The selection criteria used to assess any proposed shelter installation location includes:

- Number of passenger boardings per weekday (where data is available)
- Operational planning network plans
- Long term strategic planning network plans
- Safety of location in terms of passengers, operators, and general traffic
- Historical or present operation concerns
- Available funding
- Initial site survey details

BC Transit encourages the participation from all municipalities in integrating the BC Transit standardized designs into the local networks whereever possible. In the rare instance where a municipality has an application reviewed and subsequently denied by BC Transit based on the selection criteria, the municipality is invited to discuss the decision with BC Transit directly. The intent is to determine if any unique circumstances exist which would warrant the approval of the location.

Applications for shelters on Ministry of Transportation and Infrastructure (MoTI) Right of Way (ROW) will be denied. The provincial government has a program intended to address these locations. If your desired bus stop is on a MOTI ROW, you are encouraged to apply for funding from the Minor Betterments Program. More information can be found here:
https://www.tranbc.ca/tag/transit-minor-betterments-program/

ORDER QUANTITIES

Any approved orders that meet or exceed the selected manufacturer's minimum order quantities (MOQ) will be processed under normal stated manufacturer lead times. If shelter MOQ's are not met by one individual order, this order will be held for consolidation with additional orders from across the province until such time as the MOQ quantity is reached . Once orders are submitted and finalized with the manufacturer(s), delivery dates will be determined and installation schedules will be negotiated.

Additional Costs

Breakdown of additional fees will apply and will also be estimated in your contract. These fees are cost shared with the municipality. See Appendix B— 'Additional Costs' and Appendix C —'Travel Rate Prices'.

BC TRANSIT OWNED ASSETS

Under the capital update program, the bus shelters are owned by BC Transit as assets in order to facilitate the capitalization of costs and allow for cost sharing with participants.

Cost sharing for shelter purchases under the Bus Stop Program will follow the standard contribution agreement for capital projects.

The capital costs for the shelters will be split between the Local Government Partner and the Province at the rates set out by the cost sharing models in each system's Annual Operating Agreement (AOA). Through ICIP, BC Transit applies for Federal funding, which may reduce the Local share of eligible costs to 20%. Please contact newshelterprogram@bctransit.com for more details.

BC Transit will offer any assistance required in the form of technical clarification, estimating, presentation materials or personnel to municipalities if specific Council approvals are required to proceed with purchase and implementation.

Spare Parts – All Purchase Types

As part of the capital program, BC Transit has negotiated fixed pricing with the manufacturer on spare parts and an agreement for them to hold limited stock of replacement parts at the manufacture's location for a maximum of five years after installation. These are available for purchase by any municipality utilizing the standard shelter designs, regardless of purchase method.

Any municipality requiring spare parts for maintenance work must request these directly from the supplier. BC Transit will not be stocking replacement parts for the shelter designs at any of BC Transit's facilities.

A list of spare parts and price list can be found in Appendix D.

Infrastructure & Maintenance

The municipality is responsible for any civil and electrical work required to prepare a site for shelter installation. This includes the funding and construction of any infrastructure such as, but not limited to, bus pads or engineered foundations, pullouts, sidewalk construction, and electrical grid connections where required.

Municipalities, through their acceptance and willing participation in this program, agree to maintain the BC Transit shelters in accordance with standard industry practice. Solar powered shelters require the roof solar panels be regularly cleaned to ensure full system functionality and maintain the solar powered lighting warranty. Failure to properly maintain the solar panels will lead to premature lighting failure and greatly reduced battery life. This maintenance, funded 100% by the municipality includes (but is not limited to) the following regular maintenance items:

- Removal of snow and ice when required
- Removal of garbage
- Prompt removal of graffiti
- General cleaning (power washing) of structure on a regular basis
- Soft clean solar roof panels and remove debris monthly
- Monitoring and replacement of damaged components in a timely manner
- Proper maintenance of solar batteries

The municipality, through the acceptance and willing participation in the program, accepts the responsibility for the maintenance and care of these assets as indicated above. Failure to maintain, repair, and keep in good order may impair the ability for the municipality to apply for future shelter funding.

PREPARING YOUR SITE FOR INSTALLATION

Each municipality is responsible for ensuring that the site is fully ready for installation on the scheduled date. To help municipalities with the process please contact newshelterprogram@bctransit.com and a guide can be supplied for tips on how to prepare your site. If the site is not ready on the installation date, additional costs will apply and may impact municipalities' eligibility for future shelter purchases.

BC Transit Shelters Overview of T and E-Series Types and Pricing

Typical BASE costs* for each type of shelter (excludes any applicable taxes, CPI (consumer price index), additional variable costs incurred for installation such as ferry and travel costs or add-on's such as site surveys, BC Transit program management costs, traffic control, and permitting fees). ***Refer to Appendix B for aditional costs, Appendix C for travel rates and Appendix E for shelter footprint sizes.***

SHELTER TYPE

TYPE 1: Bus stop upgrades

Where to use:

- Locations that require a small upgrade or where shelters are not practical

Included: Vandal and weather resistant wood finish on bench; Option for a bench with a back rest or ID pole mounted seat (1 or 2 seater) Pairs nicely with a vandal resistant garbage can.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Free standing bench with back rest or ID pole mounted seat with 1 or 2 seater(price varies).

$2,915 | Starts at $3,477

SIGNATURE SERIES

Where to use:

- Bus stops with average daily ridership of 20-200 passengers

Included: Glass wall design with a glass roof; 2 upper side panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Glass wall design with a glass roof.

$21,069

TYPE 2 (T2) SERIES: 10 – 20 boardings per day

Where to use:

- Bus stops with low to medium levels of daily passenger boardings, not higher than 10-20 per weekday
- Bus stops with restricted space due to property lines, or obstructions which cannot be relocated

Included: The Cantilevered roof system with wood slat inserts, support columns; vandal resistant perforated aluminum back panels or tempered glass walls; 2 upper back panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting or extra features

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Cantilevered, single back wall, single bench seat, tempered glass panels available.

$17,076

TYPE 2 (E2) SERIES: 10 – 20 boardings per day

Where to use:

- Bus stops with low to medium levels of daily passenger boardings, not higher than 40-50 passenger boardings per week
- Bus stops with restricted space due to property lines, or obstructions which cannot be relocated

Included: The Standard roof system with wood slat inserts, side walls; vandal resistant perforated aluminum back panels or tempered glass walls; 2 upper back panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Intended for locations in low to medium levels of daily passenger boardings.

$18,593

TYPE 3 (T3) SERIES: 20 – 200 boardings per day

Where to use:

- Bus stops with average daily ridership of 20-200 passengers

Included: The Cantilevered roof system or side wall options; wood slat inserts in roof; support columns; vandal resistant perforated aluminum panels or tempered glass walls; 2 upper side panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Cantilevered or side wall design, 1 bench seat, optional extra rear panel, tempered glass panels also available.

$24,394 | $26,390

TYPE 3 (E3) SERIES: 20 – 200 boardings per day

Where to use:

- Bus stops with average daily ridership of 20-200 passengers

Included: The Standard roof system with side walls; wood slat inserts in roof; support columns; vandal resistant perforated aluminum panels or tempered glass walls; 2 upper side panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Accomodates bus stops with high daily levels of passenger boardings.

$26,995

TYPE 4 (T4) SERIES: 400+

Where to use:

- Bus stops with high daily ridership (400+), or for park and ride facilities (less than 100 stalls) and small transit exchanges

Included: The Cantilevered roof system or optional side panels; wood slat roof inserts; support columns; vandal resistant perforated aluminum panels or tempered glass walls; 2 side panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Cantilevered or side wall design, 2 bench seats, optional extra rear panel.

$36,168 | $36,995

TYPE 3 (E3/E4) HARSH WEATHER SERIES: 20 – 200 boardings per day

Where to use:

- In areas that experience frequent inclement weather. The two or three panel front wall offers greater protection from the elements

Included: The standard roof system with tempered glass side, rear and two panel front walls; 2 side panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting. Recommended with glass walls for visibility.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Accomodates bus stops with high daily levels of passenger boardings. Provides extra protection from the elements, such as wind, snow, rain.

E3H $29,377 | E4H $38,730

TYPE 5 (T5) SERIES: Custom

Type 5 Shelters are customized per application for large transit exchanges, park and rides with 100+ parking stalls. Pricing is quoted separately specific to needs assessment. Contact BC Transit for more information.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

Rapid bus/Tram Station

Starting at $63,496 | Starting at $127,700

TYPE 4 (E4) SERIES: 400+ boardings per day/<100 stalls

Where to use:

- Bus stops with high daily ridership or park and ride facilities and small transit exchanges

Included: The Cantilevered roof system or optional side panels; wood slat roof inserts; support columns; vandal resistant perforated aluminum panels or tempered glass walls; 2 side panel inserts with BC Transit logo, two person wooden bench and an unlit system icon. Prices referenced are for installation of the basic model with no lighting.

****Excluded:** Price excludes taxes, additional installation and travel costs. *See pages 14 and 15.*

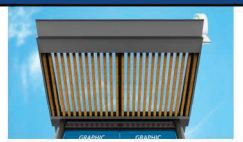
Primary use in a Park & Ride (less than 100 spaces) or small on street transit exchanges, and stops with high levels of passenger boardings

$36,396

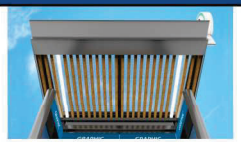
BC Transit Shelters – Options and Add-ons

SHELTER LIGHTING OPTIONS

All shelters have the option for non-illuminated, illuminated with LED lighting or solar lighting.



Wood slat soffit system
Non-illuminated



LED Illuminated Roof

Solar Light
Illuminated roof

Solar Light roof panel

SHELTER AD PANEL OPTIONS

Shelters have the option for illuminated or non-illuminated Ad Panels and Directory displays.

All advertising revenue and contract management resides with the Municipality.

Additional Options

- Tempered glass back, partial front & side walls (optional for harsh weather shelters)
- Impact resistant LED light bars for bright and efficient LED illumination
- Self-sustainable solar kit, which integrates into the roof system
- Lit system Icons (standard if you purchase LED/Solar lighting—optional for unlit shelters)
- Add or remove wall panels to suit needs
- Add or remove wooden cantilever benches to suit needs
- Illuminated or non-illuminated Ad or directory Display panels

OPTIONAL ADD-ONS These costs listed below are cost shared with the municipality if requested on the initial shelter order.

1. Garbage Receptable, round

$4,879

2. Schedule frame 7" x 24", pole mounted

$512

3. Ad panel **

Illuminated
$4,334
Non-Illuminated
$3,280

4. Additional bench, Cantilevered

$2,012

5. Bike Rack

$793

6. Additional back walls for angled roof/round base shelters

$3,477

7. Additional back walls for flat roof/ square base shelters

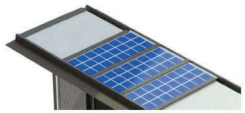
$3,477

9. USB charging ports

$2,343

10. Solar lighting option, LED +

$7,149



11. Visual indicator of a passenger inside shelter

$4,879

12. Bike Locker

$3,660

13. Grid Lighting Option, LED*

Starting at $1,507

14. Additional Bench

E-Series
$1,513
T-Series
$2,012

15. Map Display***

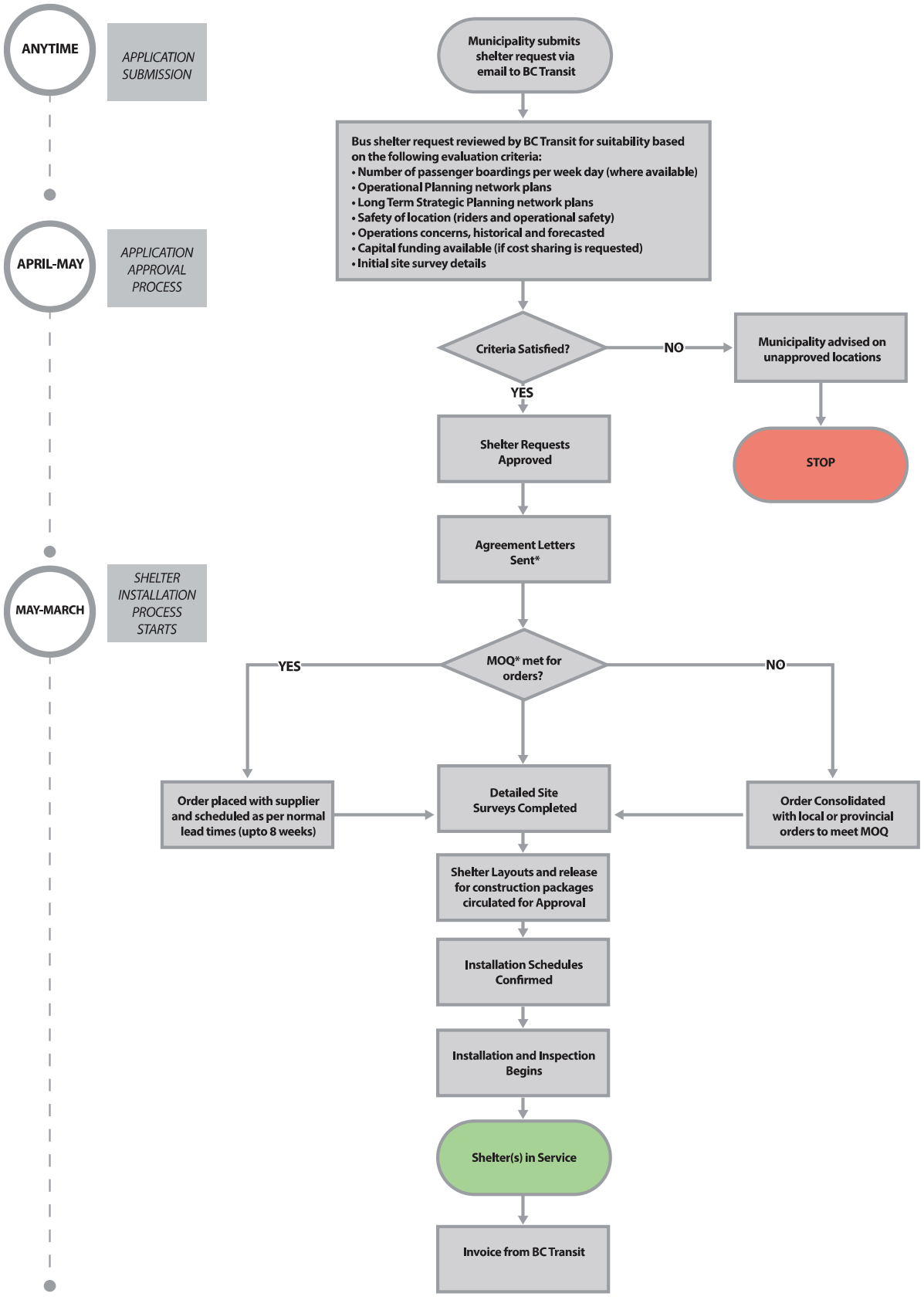
$1,951

** requires electrician on site during install*

+ requires install of solar grounding kit in slab

**** excludes installation costs*

Appendix A — APPLICATION AND APPROVAL PROCESS



*MOQ = Minimum shelter order quantity from supplier
*Review is based on the selection criteria, Page 9
*Agreement Letters are sent based upon Budget approval.

BC TRANSIT SHELTER REQUEST FORM

Please download the form, fill it out and save it. Send it as an attachment to **newshelterprogram@bctransit.com**

BCTransit **Bus Shelter Request Form**

SUBMIT FORM | CLEAR FORM

Request submitted by:				Contact Information:			
MUNICIPALITY:		DATE:		NAME:		PHONE:	EMAIL:

Signing Authority Contact		
NAME:	TITLE:	EMAIL:

Proposed Location for Shelter Placement Details

				Stop Name				Shelter Construction Options																	
										Extra Options															
Row No	Desired Fiscal Year	Priority	BC Transit Stop ID#	Street Name	Nearest Cross Street	Intersection Location	Direction of Travel	Shelter Type	Lighting	Garbage	Schedule Frame	Lit-Ad Panel	Non-Lit Ad Panel	Additional Bench	Bike Rack	Glass walls	Additional Glass walls	USN Charging	Bicycle Locker	Map Locker	Visual Indicator***	Is this to replace an existing shelter?*	Are these Floating Bus Stops?	Comments / Notes
1.																								
2.																								
3.																								
4.																								
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								

Shelter Type Description	
T1 Series – Bench	E2 Series – Low to medium levels of passenger boardings per weekday (up to 50)
T1 Series – ID Post Mounted Seat	E3 Series – High levels of passenger boardings per weekday (100-200)
T2 Series – Low to medium levels of passenger boardings per weekday (up to 50)	E4 Series – High levels of passenger boardings per weekday (200+) Park & Rides, small exchanges
T3 Series – Moderate to high levels of passenger boardings per weekday (21-200)	OPTION: E Series Harsh Weather glass
T4 Series – High levels of passenger boardings per weekday (200+), Park & Rides, Small exchanges	Signature Series – Glass wall design with a glass roof

Bus Stop Design Details	Yes/No
For the above listed locations, Is site drawing available?	
Have the BC Transit Infrastructure design guidelines been read?	
Will the above listed sites upgrades conform to the guidelines?	
Will the above listed sites be accessible?	
Will land negotiations be required for any of the above listed sites?	

Additional Notes / Comments

* Municipality is responsible for removal of existing shelter prior to installation

** Visual Indicator is of a passenger inside shelter

To apply for BC Transit Bus Shelter Program, send this form to: newshelterprogram@bctransit.com
For pricing inquiries, contact: shelterpricing@bctransit.com

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Appendix B —ADDITIONAL COSTS

Additional fees outlined below will apply and will also be estimated in your contract. These fees are cost shared with the municipality. See Appendix C for travel pricing.

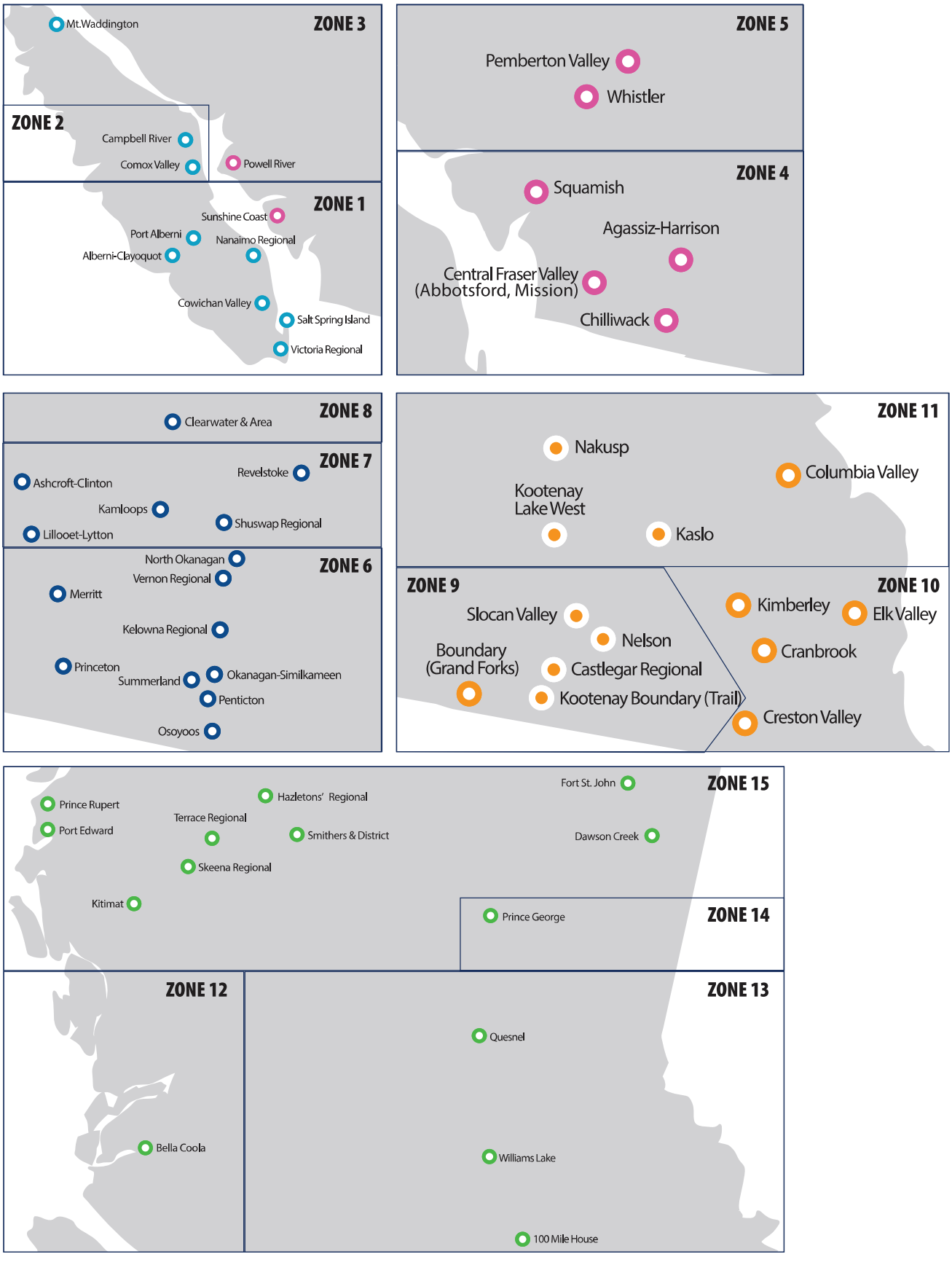
Cost Plus Item	Applicable Shelter Types	Plus	Inclusions
PERMIT FEES	AS APPLICABLE	15%	Admin fee to fill out application, local pickup of approved permit and City fees
TRAFFIC CONTROL	AS REQUIRED	15%	Flagging crews (TCP), safety and traffic control signage, pedestrian control, traffic mgmt plan (TMP), lane closures
CONCRETE PEDESTALS	AS REQUIRED	15%	Price will vary per pole, depending on slope of the site and the number of poles requiing a pedestal
WORK DELAYS	AS APPLICABLE	15%	Monarch will provide our Standard Rate Sheet but other subcontractors like flagging, hydrovac and concrete may have minimum charges
CORING EXTRAS	AS APPLICABLE	15%	For cantilevered shelters only. Monarch will make every effort to install multiple caissons in the same trip to reduce setup fees from the flagging, hydrovac and concrete subcontractors. Monarch would like to be able to add any extra charges to the Cost Plus protocol if there are reasons beyond our control in keeping a lean schedule.

Appendix C—TRAVEL RATE PRICE

Shelter Type	Trip Quantity	Travel & LOA Zones															Notes
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
T2S, T3S, T4S, E2, E3, E4 Shelter	(4) Shelter Load	$1,148	$1,148	$1,470	$1,148	$1,148	$1,148	$1,218	$1,280	$1,435	$1,860	$1,736	$2,108	$1,373	$1,736	$2,794	Price per shelter based on a (4) shelter load
	(3) Shelter Load	$1,387	$1,387	$1,842	$1,387	$1,387	$1,387	$1,506	$1,589	$1,797	$2,363	$2,196	$2,694	$1,714	$2,196	$3,608	Price per shelter based on a (3) shelter load
	(2) Shelter Load	$1,903	$1,903	$2,589	$1,903	$1,903	$1,903	$2,084	$2,208	$2,518	$3,367	$3,119	$3,865	$2,394	$3,119	$5,235	Price per shelter based on a (2) shelter load
	(1) Shelter Load	$3,455	$3,455	$4,825	$3,455	$3,455	$3,455	$3,815	$4,063	$4,685	$6,384	$5,886	$7,379	$4,437	$5,886	$10,118	Price per shelter based on a (1) shelter load
T2C, T3C, T4C Shelter	(4) Shelter Load	$1,926	$1,926	$2,611	$1,926	$1,926	$1,926	$2,347	$2,471	$2,782	$3,543	$3,295	$4,041	$2,658	$3,119	$5,235	Price per shelter & caissons based on a (4) shelter load
	(3) Shelter Load	$2,450	$2,450	$3,363	$2,450	$2,450	$2,450	$3,011	$3,178	$3,592	$4,608	$4,275	$5,271	$3,426	$4,158	$6,980	Price per shelter & caissons based on a (3) shelter load
	(2) Shelter Load	$3,324	$3,324	$4,693	$3,324	$3,324	$3,324	$4,166	$4,415	$5,037	$6,208	$5,710	$7,203	$4,788	$5,710	$9,942	Price per shelter & caissons based on a (2) shelter load
	(1) Shelter Load	$5,944	$5,944	$8,683	$5,944	$5,944	$5,944	$7,629	$8,126	$9,370	$12,064	$11,069	$14,056	$8,873	$11,069	$19,531	Price per shelter & caissons based on a (1) shelter load

Okanagan Valley, Lower Mainland and Greater Victoria area

Travel Rate Zone Matrix



Appendix D —SPARE PARTS PRICES

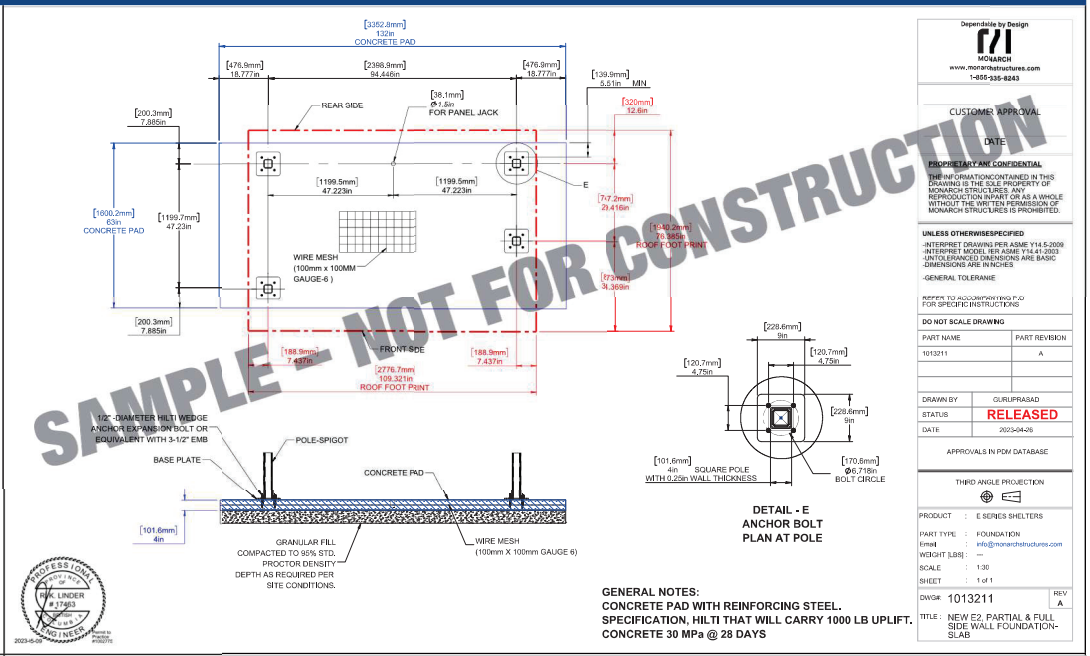
Item	Spare Part Description	Shelter Type	Total Price
1	Backwall beam w/bracket	T-Series	$493
2	Back wall	T-Series	$875
3	Base plate cover (4" or 6" oblong)	T-Series	$299
4	Base plate cover (4" or 6" round)	T-Series	$237
5	Electrical box	T-Series	$324
6	End Cap	T-Series	$381
7	Extrusion- T3 Bottom Back	T-Series	$320
8	Extrusion- T3 Bottom Front	T-Series	$328
9	Extrusion- T3 Sunshade	T-Series	$379
10	Extrusion- T3 Top Back	T-Series	$332
11	Extrusion- T3 Top Front	T-Series	$219
12	Graphic - Back Wall	T-Series	$38
13	Graphic - Side Wall	T-Series	$38
14	LED Lite Bar	T-Series	$146
15	T3 Polycarbonate Roof Panel	T-Series	$164
16	Rear connector	T-Series	$523
17	Roof cross member	T-Series	$420
18	Roof front connector	T-Series	$375
19	Side wall	T-Series	$1709
20	Sidewall support pole	T-Series	$1296
21	Support pole	T-Series	$569
22	System icon Assembly	T-Series	$517
23	System icon face only	T-Series	$105
24	Bench wood slat	T-Series	$66
25	Roof wood slat	T-Series	$41

Other parts available upon request.

Appendix E — SAMPLE CONCRETE PAD DRAWING

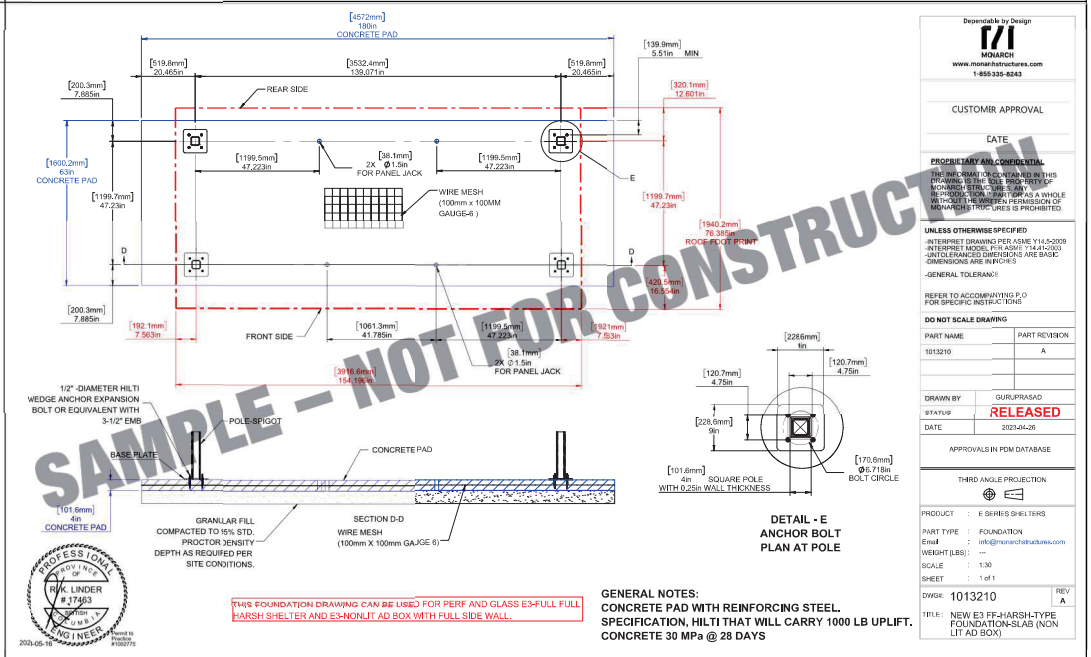
E-Series Slab Foundations

Style E2



Style E3

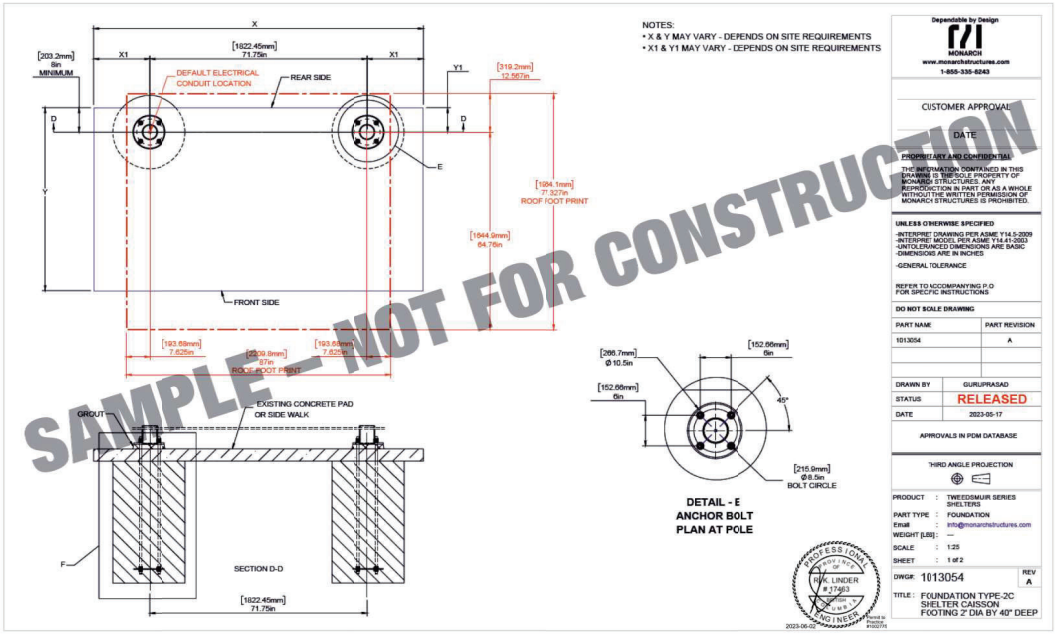
Harsh-Type
Foundation-Slab
(Lit Ad Box)



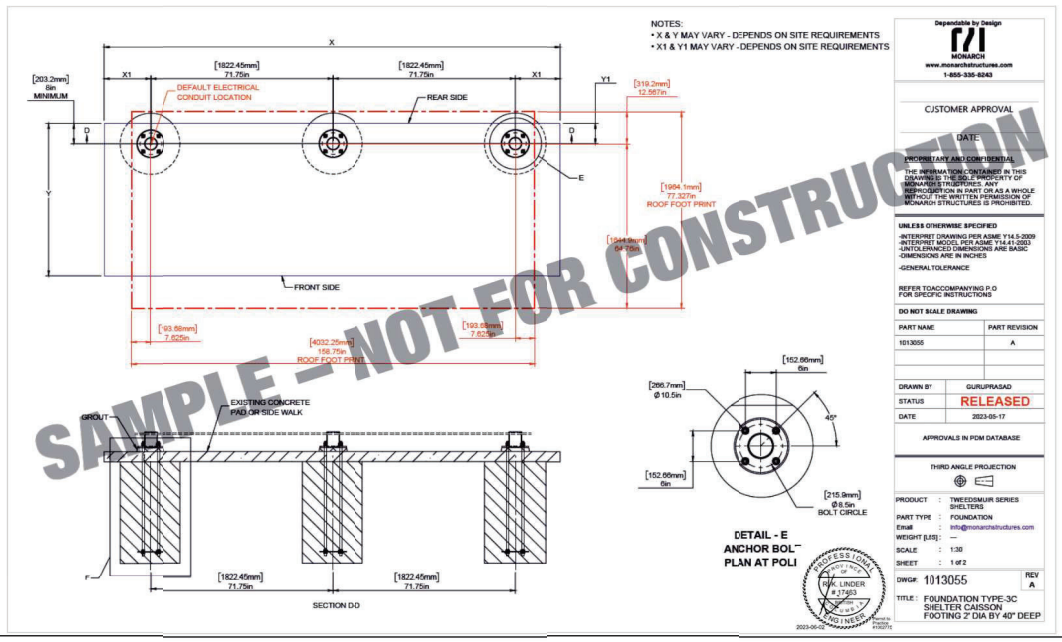
Disclaimer: these drawings are intended to be for reference only. Specific drawings for your shelter will be supplied at the time of order. Please contact BC Transit if you have any questions about shelter sizing for your locations.

T-Series Caisson Foundations

Style T2

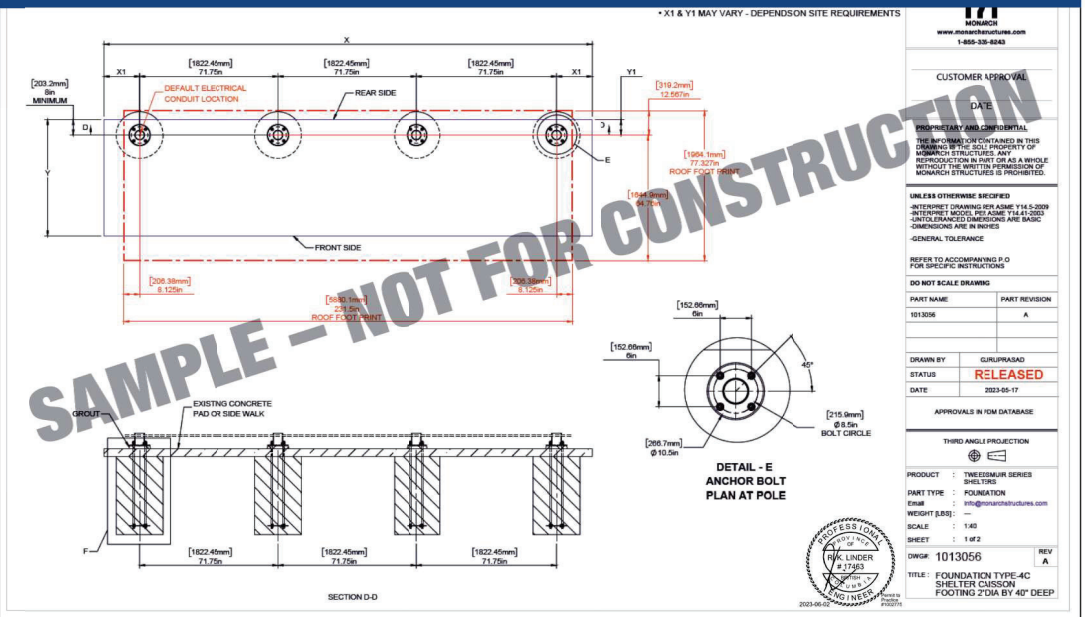


Style T3



T-Series Caisson Foundations

Style T4



Contact Us

Shelter program details: newshelterprogram@bctransit.com

Shelter pricing related inquires: shelterpricing@bctransit.com

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