4408 STONE CRESCENT, WEST VANCOUVER

RATIONALE FOR PROPOSED DETACHED SECONDARY SUITE (COACH HOUSE)

EXISTING SITE CONDITIONS

The property at 4408 Stone Crescent is an irregular, triangular-shaped lot, bounded by Stone Crescent to the northeast (continuous fronting), and neighbouring properties on all other sides. There is no lane access. The site slopes down 36' (11m) from the northeast tip at elevation 91' down to el. 55' at the southern extent over a distance of 230' (70m). This results in a small, oddly shaped and virtually inaccessible rear yard located at the farthest distance from the street at the south edge of the property. The property is also characterized by being situated entirely on a steep sloped rock outcropping which limits the possibility of a basement under much of the house.
Two (2) detached accessory buildings (2-car garages) currently exist within the front yard setback, one of which straddles the boundary between the front property line and the boulevard at the basement level of the existing house and the other at main floor level located further from the street. The combined footprint of the two existing structures located in the front yard is 600 square feet (55.7 sq.m). The northwest corner of the existing garage closest to the street is located 4'-4" onto the city boulevard. We are proposing the removal of both of these accessory buildings. See images of the existing site as seen from the street, attached.

RATIONALE FOR PROPOSED SITING

The proposed location for the Coach House is in the front yard parallel to Stone Crescent. This location partially overlaps the footprint of one of the existing accessory buildings (to be removed). This site is generally level and the adjacent ground is already disturbed and compacted due to the current garage use. The proposed Coach House is positioned to be consistent with the setback requirements of a Coach House or Accessory Building when located in a rear yard.
As such, the Coach House would maintain a front yard setback of 4'-0" (1.2m) from the Stone Crescent facing property line. The proposed Coach House location increases the distance from edge of asphalt (street at Stone Crescent) to the detached building by 10" (0.2m) compared to the existing accessory structure. The proposed building separation distance between the proposed Principle Dwelling and Coach House would be 13'-5" (4.1m) minimum. The existing natural features present in the front yard area would be maintained as much as possible while also augmenting the existing forest understory to provide additional screening to the proposed Coach House.

BUILDING

The proposed Coach House is a one-storey plus basement building, with a basement positioned substantially underground thus reducing it's apparent massing and visibility. The only window at the basement floor faces Southeast into the forest and is not visible from the street. The Coach House is sited in such a way that there is minimal alteration of existing grades.

Detached accessory building highlighted in blue

A well-lit pedestrian path will be provided directly from the street. It is substantially located on an existing driveway surface to minimize further disruptions to the site.

Exterior wall cladding, window detailing, and landscape materials will complement or match the new principal dwelling planned for the site. The exterior finish will predominantly consist of bush-hammered concrete with premium bronze anodized aluminum windows with an architectural metal canopy at the front door. These materials were selected in consultation with the project's Forestry Professional for their fire-resistant properties and so that the building blends in with the existing rock on the site. The windows of the Coach House do not overlook any neighbours so there are few privacy concerns.

The landscape palette will comprise native and adapted plants that have been chosen for their fire resistant properties and which are suited to the site's particular ecosystem in the understory of existing front yard and boulevard trees surrounding the Coach House. A variety of planting heights will be used to further reduce the apparent massing of the building, and provide privacy and interest from the street.

SUMMARY OF VARIANCES REQUESTED

1. Setback of the Coach House (to the Property Line)

Required	9.1m (29'-10 1/4")
Proposed	1.22m (4'-0")
Variance requested	7.88m (25'-10 1/4")

2. Building Separation Distance (from Principal Dwelling to Coach House)

Required	4.9m (~16'-0")
Proposed, minimum	4.1m (13'-5 1/2") (to the upper floor of the Principal Dwelling)
Variance requested	0.8m (2'-7 1/2")

No.	Date	Issue Notes
1	22/09/20	DSS DP application
2	23/01/30	DSS DP comments

MCLEOD BOVELL MODERN HOUSES

293 Columbia St
Vancouver BC V6A 2R5

STON COACH HOUSE DVP

4408 Stone
Crescent West
Vancouver BC

scale	drawn by
date	**reviewed by**
23/01/30	
project code	**status**
STON	DP

Design Rational

EXISTING DETACHED ACCESSORY BUILDING (GARAGE) IN FRONT-YARD SETBACK TO BE REMOVED

STONE CRESCENT

VIEW TOWARDS WEST

EXISTING DETACHED ACCESSORY BUILDING (GARAGE) IN FRONT-YARD SETBACK TO BE REMOVED

STONE CRESCENT

VIEW TOWARDS SUBJECT PROPERTY

No.	Date	Issue Notes
1	22/09/20	DSS DP application
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Street views

No.	Date	Issue Notes

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Exterior Materials and Renders

PROJECT DATA - DETACHED SECONDARY SUITE (DSS)

LEGAL DESCRIPTION	Lot B of Lots 4 and 5, BLOCK H, DISTRICT LOT 582, Group 1, New Westminster District, PLAN 6674		
P.I.D.	005-088-542		
CIVIC ADDRESS	4408 Stone Crescent, West Vancouver, BC V7W 1B7		
SITE AREA	21,113 sq.ft (1,961.5 sq.m)		
LOT WIDTH	186.69' ft (56.903 m)		
ZONING	RS3		
	Allowable / Required	**Proposed**	
SITE COVERAGE (30% of site) (see BP appl. for Principle Bldg)	6333.9 sq.ft (588.5 sq.m)		
Detached Secondary Suite (DSS)		4,731.7 sq. ft.	(439.6 sq. m.)
Total		661 sq. ft.	(61.4 sq. m.)
		5,392.7 sq. ft.	(501 sq. m.)
PARKING	1 off-street	1 off-street	
FAR -30% of site area	6,333.9 sq.ft (588.5 sq. m.)		
Principle Building		6,254.3 sq.ft	(581.0 sq.m.)
FAR Exemption - DSS			
130.08(3)(b)(ii)	799.75 (74.3 sq.m)	747 sq.ft	(69.4 sq.m.)
DSS - Total	1,200 sq.ft (111.5 sq. m.)	747 sq.ft	(69.4 sq.m.)
DSS - Main floor		661 sq.ft	(61.4 sq.m.)
DSS - Basement floor	before exemption 661 sq.ft after exemption 661 - 148.7 - 426.3 sq.ft	86 sq.ft	(8.0 sq.m.)
DSS FAR Exemptions			
130.03(3)(a) crawl space		148.7 sq.ft	(13.8 sq.m.)
130.08(4)(b) partially u/g bsmt			

Basement FSR exemption %
(74.9 - 67.0) x 100 = 83.2%
76.5 - 67

Area Eligible (sf)	Exemption %	Area to Exempt (sf)
512.4	83.2%	426.3 sq.ft (39.6 sq.m)

DSS BUILDING HEIGHT (single storey; avg. grade = 74.9')	4.57m (15'-0")	11'-1 1/4" (3.4m)
DSS BUILDING SETBACKS		
Side Yard - West	9'-10 7/46" (3m)	30'-11" (9.4m)
Front yard setback (DSS)	29'-10 1/4" (9.1m)	4'-0" (1.2m)
Building Separation (DSS to Pr.)	16'-0" (4.9m)	13'-5" (4.1m), min.
PRIVATE EXTERIOR AREA	64.6 sq.ft (6.0 sq.m)	73.4 sq.ft (6.8 sq.m)

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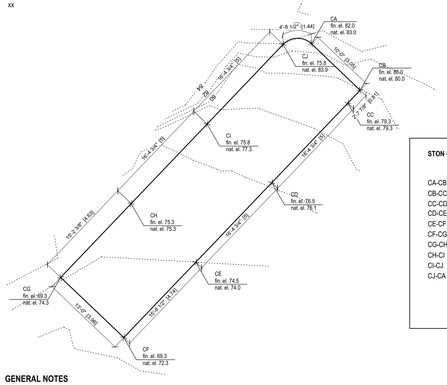

STON - AVERAGE EXISTING GRADES - COACH HOUSE (220318)

					LENGTH		AVERAGE ELEV.
CA-CB	82.0	+	80.0	/ 2	X 10.0	=	810.0
CB-CC	80.0	+	79.3	/ 2	X 2.7	=	215.1
CC-CD	79.3	+	76.1	/ 2	X 16.4	=	1274.3
CD-CE	76.1	+	74.0	/ 2	X 16.4	=	1230.8
CE-CF	74.0	+	69.3	/ 2	X 15.5	=	1110.6
CF-CG	69.3	+	69.3	/ 2	X 13.0	=	900.9
CG-CH	69.3	+	75.3	/ 2	X 15.2	=	1099.0
CH-CI	75.3	+	75.8	/ 2	X 16.4	=	1239.0
CI-CJ	75.8	+	75.8	/ 2	X 16.4	=	1243.1
CJ-CA	75.8	+	82.0	/ 2	X 4.7	=	370.8
TOTALS :					126.7		9493.6
AVERAGE GRADE:			9493.56	/	126.7	=	74.9

GENERAL NOTES

DRAWINGS AND CONSTRUCTION TO COMPLY WITH B.C. BUILDING CODE 2018
Building to comply with BCBC Energy Step Code - Step 3

EXCAVATIONS
1. Geotechnical Engineer is to certify a site is safe for workers when the slope of the excavations exceeds 3/4 horizontal to one vertical or excavation exceeds 48".
2. Inspections can only be done if site is posted as safe by Professional Engineer.
FOUNDATIONS
1. Pad footings are required to have a minimum footing area of 4.3sf supporting 1 floor, 8sf supporting 2 floors, & 10.7sf supporting 3 floors.
2. Footings are to extend 18" below grade minumum.
3. Foundation walls of basement below grade and crawl spaces must be insulated with R12 to 24" below grade.
4. Provide 1/2" dia. anchor bolts @ 6'-0" o.c.
5. Anchor posts to footings to resist uplift.
CRAWL SPACE
1. Provide crawl space access of 1'-8" x 2'-4", min. 18" clearance and ventilate to 1/500th of area.
2. Groundcover of 2" concrete over 6 mil U.V. poly required.
VENTILATION
1. Uniformly distribute ventilation to flat and vaulted roofs to 1/150 of insulated ceiling area. Venting is required to be two-way.
2. Min. 2x2 cross-purlins to flat, vaulted ceilings, and decks over living areas to conform to #9.19.1.2.
3. Provide min. 2 1/2" clearance between roof sheathing and insulation #9.19.1.3. Provide min 1" clearance between insulation and top of roof joists.
4. Ventilate attics to 1/300 of insulated ceiling area.
5. Roof vents must be uniformly distributed with a minimum of 25% at base and 25% in rooftop.
6. Provide attic hatch of 3.4sf in area with no dimension less than 1'-10".
7. Submit Mechanical Ventilation/Air Conditioning design and letter supervision by Professional Engineer, certified HRAI or RVC Technician at frame and final inspection.
8.Continuous or intermittent exhaust fans are required to all bathrooms and kitchens as per #9.32.3.3.
INSULATION
1. Insulation where subject to mechanical damage is to be covered as per #9.25.2.3.(7) with drywall or equivalent (eg. crawl storage areas).
2. Wall insulation to be R20 minimum if dwelling is not heated by natural gas.
3. Minimum insulation values R20 walls, R28 for flat or vaulted ceilings, and R40 for attic spaces.
4. Ceiling and walls to have 6 mil U.V. poly fully caulked as per #9.25
5. R10 rigid insulation required around unheated slabs on grade; 20" vertical or horizontal from bottom edge of slab.
6. R12 rigid insulation required under entire slab area and a thermal break at the exterior walls for slabs with radiant heating.
STAIRS
1. Straight stair: Rise min. 5" max. 7.87". Run min. 8.25" max. 14"
2. Maximum 1" nosing on stair treads.
3. Minimum headroom is 6'-5" from a line through nosings, measured vertically.
4. Handrail to be between 32" to 38" from a line, measured vertically, through nosing.
5. Winders to conform to 9.9.4.5.
6. Primary stair minimum width 2'-10".
7. Stairs 43° in width or greater require 2 handrails.
8. Handrail reqd. on interior stairs with three or more risers, and exterior stairs with four or more risers.
9. Handrail as a guard is to be between 36" and 38".
CHIMNEY & FIREPLACES
1. Minimum 2" clearance between chimney and combustible framing.
2. Minimum 4" clearance between fireplace and combustible framing.
3. Masonry fireplace hearths must conform to #9.22.5.1.
4. Hard wired C.O. detectors are required in each bedroom or within 5 meters of each bedroom door in conformance with #9.32.4.2.

GUARDRAILS
1. Guardrails to be minimum 42" exterior and 36" interior height.
2. No member facilitating climbing permitted from 5.5" to 36" above the floor or walking surface (in all guards)
3. Maximum 4" opening in all stair, deck and balcony guards (interior and exterior).
4. All glass guards to have top cap unless approved by Prof. Engineer.
5. A minimum of 36" in height is permitted for decks within 5'-11" of grade.
6. Guard required to all drops exceeding 24" where access is provided (eg. window wells)
7. Guard required where the adjacent surface within 1.2 m of the walking surface has a slope of more than 1 in 2.
GLAZING
1. Glass in windows and doors to be double-glazed.
2. Glass in entrance, shower and sliding doors, and windows within 8" of floors and within 36" of deadbolts are all to be safety glass.
3. Sidelights 20"+ in width are to be safety glass.
4. Windows in walls enclosing showers or tubs are to be safety glass and be located above the waterproof wall finish height.
5. The bottom of an openable window in a bedroom is not to exceed 4'-11" above the floor, and have a min. opening width of 15" with an area of 3.75sf, unless the house is sprinklered
6. Windows over stairs, ramps and landings that extend to less than 36" above the surface shall be protected with guards or be non-openable and designed to #4.1.5.15.
7. Window wells are to be 22" minimum width when required as a bedroom egress.
8. Bedroom windows required as exits must maintain the required opening during an emergency without the need for additional support in conformance with #9.7.1.2.2.b.
9. Where a protective enclosure is installed over a window well, it shall be openable from the inside without the use of keys, tools, or special knowledge.

MASONRY VENEER WALLS
1. Provide masonry/veneer wall flashing ties and weep holes as per #9.20.
GARAGES
1. Doors between garage and dwelling are to be a self-closing and weather-stripped solid core door.
2. Thicken slab at garage entry to 18" below grade.
MOISTURE PROTECTION
1. Provide flashing between horizontal intersections of differing wall finishes. All flashing to slope away from the building a minimum of 6%.
2. Provide flashing at all wall-roof junctions, including parapets for solid guards on decks.
3. Rainscreen assembly required for all buildings, with a minimum capillary break of 3/8".
4. All platforms are roofs.
5. All roofs must slope 1 in 50 AWAY from walls, this includes parapet walls surrounding decks.
6. 6" clearance required between deck membranes & floor.
MISCELLANEOUS
1. Cross bridging requird @ 7'-0" o.c. maximum for floor and roof joists.
2. Lino or equal required to bathroom floors.
3. Waterproof wallboard required as tile base around tubs and showers.
4. 5/8" Drywall required to ceiling members at 24" o.c.
5. Provide 8" clearance between grade and siding.
6. Damp-proofing slabs, including crawl spaces, are to be 6 mil "UV" poly.
7. Furnace and laundry room door width of 2'-8" min.
8. N.R.P. hinges required for outswing exterior doors.
9. Hardwired and interconnected smoke alarms required on every floor level differing by 36", within 5 meters of bedroom doors, and within 15 meters of each other.
10. A-5lb.A.B.C. dry chemical fire extinguisher is required near the kitchen.
11. Heating and air conditioning equipment must be secured to the building to resist overturning and displacement.

CONSULTANTS

Design	Mcleod | Bovell 293 Columbia Street Vancouver, BC V6A 2R5 Mary Cuk mary@mcleodbovell.com 604-838-8075
Structural	WHM Structural Engineers 2227 Douglas Road Burnaby, BC V5C 5A9 Dan Wicke dwicke@whmengineers.com 604-484-2859
Contractor	Artwork Homes Ltd. West Vancouver, BC V7V 3J3 Brian Wood brian@artworkhomes.com 604-780-7404
Wildfire	Diamond Head Consulting 3559 Commercial Street, Vancouver, BC V5N 4E8 Conor Corbett conor@diamondheadconsulting.com 604-733-4886
Geotechnical	Tertiare Engineering Group Ltd. 114-2433 Dollarton Hwy #114, North Vancouver, BC V7H 0A1 Geoff Dyer geoff@tertiaregroup.com 604-770-0355
Envelope	StrucARC Engineers Consultants Hoshang Mofedi hm-engg@yahoo.ca 778-689-5945
Energy	Ecolighten Energy Solutions 201-1515 Barrow St #201 North Vancouver, BC V7J 1B7 Rob Pope rob@ecolighten.com 604-219-7977
Survey	Chapman Land Surveying Ltd., B.C. Land Surveyors 107-100 Park Royal South West Vancouver, BC V7T 1A2 Bill Chapman bill@chapmansurvey.com 604-926-7311
Arborist	Outlook Arborist Services 5782 190th Street, Surrey, BC V3S 7M3 John Monk jmonktrees@gmail.com 604-816-2992

DRAWING LIST

SITE PLAN
SCALE: 1/8" =1'-0"

No.	Date	Issue Notes
1	22/03/16	iss DWV Planning Review
2	22/05/31	iss Wildfire coordination
3	22/06/03	iss survey coordination
4	22/06/07	iss Arborist/Wildfire coordination
5	22/06/09	iss DSS DP application
6	22/09/20	iss DSS DP-comments response
7	23/01/30	iss DSS DP-comments response

MCLEOD BOVELL MODERN HOUSES
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STON
4408 Stone Crescent, West Vancouver BC

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1/8" = 1'-0"	AH
date	reviewed by
23/01/30	YN
project code	status
STON	DD

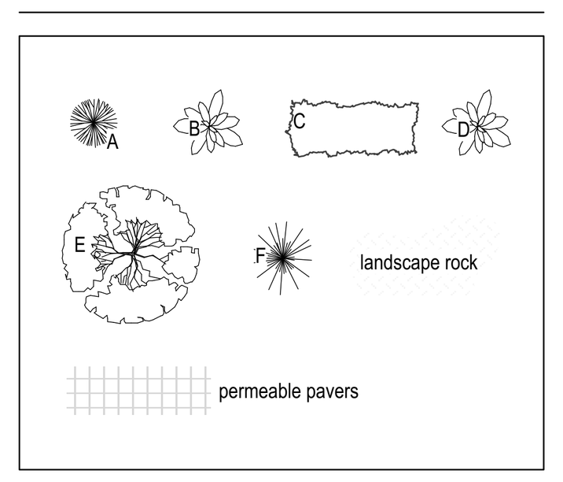
Detached Secondary Suite

AS0.01

PLANTING

PLANT ID	LATIN NAME	COMMON NAME	SIZE
A	Ajuga reptans	Bugleherb	
B	Lagerstroemia Indica	Crepe-myrtle	
C	Laurus Nobilis	Bay laurel	
D	Caryopteris x clandonensis	Blue beard	
E	Cercis canadensis	Eastern redbud	
F	Ceanothus prostratus	Prostrate ceanothus	

SYMBOLS



FIRESMART LANDSCAPE GUIDELINES

Non-Combustile Zone (0.0m to 1.5m Offset from Dwelling)
- crushed basalt aggregate ground cover (3" to 6")
- no new or retained planting

Zone 1 (1.5m to 10.0m Offset from Dwelling)
- crushed basalt aggregate ground cover (3" to 6")
- no new or retained conifer shrubs or trees

Zone 2 (10.0m to 30.0m Offset from Dwelling)
- no new conifer shrubs or trees
- remove existing combustible material from forested areas
- prune existing tree branches min 2m above finished grade

No.	Date	Issue Notes
1	22/06/07	iss for Wildfire review
2	22/06/09	iss for Coach House DP
3	22/09/20	iss DSS DP-comments respose

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Landscape Plan

A0.02

No.	Date	Issue Notes
1	22/09/20	DSS DP application
2	23/01/30	DSS DP comments

m1 Concrete - bush hammered finish

m3 Aluminum - 1/4" thick, painted concealed fastener

m5 Glazing - bronze anodized aluminum frame (triple glaze)

Assemblies

F1 Basement Slab-on-Grade
3/4" hardwood finish floor
1 3/4" conc. topping c/w radiant heating
4" concrete slab
10 mil poly vapour / air barrier
3" XPS rigid insulation, R15
6" layer of 3/4" drain rock over engineered fill as req'd

F2 Main Floor
3/4" hardwood finish floor
1 3/4" conc. topping c/w radiant heating
3/4" plywood sheathing
steel or TJI joists (per structural)
acoustic batt insulation (@ bathrooms, plumb. walls, bedrms.)
1/2" gypsum wallboard

R1 Roof Over Interior Space
3" depth of 1" dia. angular ballast (tbd ironform w/ structural for allowance)
dimple mat, soprema (tbd)
2-ply SBS Sopresa Sopralfa system
protection board (spec. tbd)
taper package varies from 1/2" to 3 1/2" sloped to drain
R15 - 3" XPS insulation
self adhered air / vapour barrier sopravap'r
3/4" ext grade t&g plywood sheathing
steel or TJI joists (per structural)
R30 - 5" 2lb BASF Walltite closed cell spray/foam insulation
2x4 dropped ceiling framing at 16" o.c. to nut
3/4" provided for 5/8" gypsum wallboard and mudding
vapour retarding primer paint

EW1 Exterior Concrete Wall @ Interior Space
drainage rock @ below grade portions only
1/2" dimple drainage mat @ below grade portions only
fully reinforced 80 mil. E-pro damp-proofing @ below grade portions only
concrete wall (see structural), tie holes plugged and parged
2x4 wood framing @ 16" o/c
2lb BASF Walltite closed cell spray/foam insulation 3" @ R5/in; R18
3/4" provided for 1/2" gypsum wallboard and mudding
vapour retarding primer paint

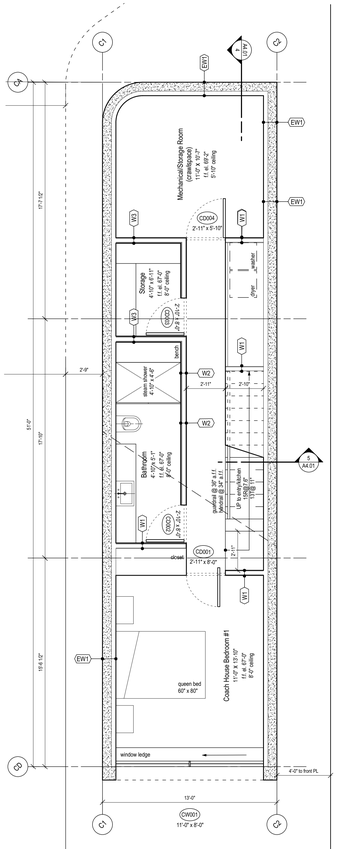
W1 Interior Wall (2x4)
1/2" gypsum wallboard
2x4 wood framing @ 16" o/c
acoustic batt insulation (@ bathrooms, plumb. walls, bedrms.)
1/2" gypsum wallboard

W1b Interior Wall (2x4)
same as W2a but with 2x6 framing

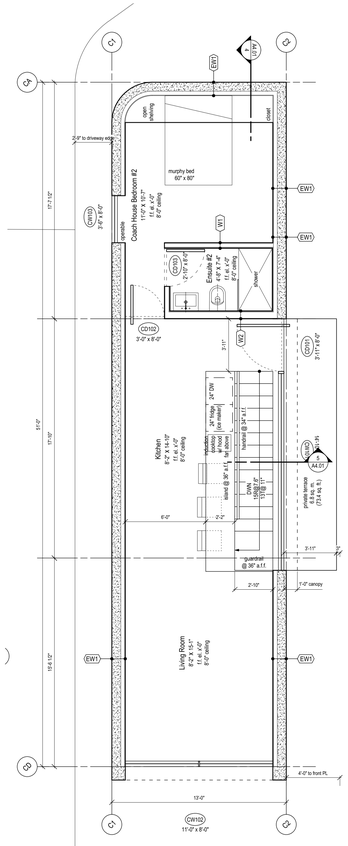
W2 Interior Wall (2x4) @ shower
1/2" gypsum wallboard
2x4 wood framing @ 16" o/c
acoustic batt insulation
1/2" Densfield backer board (or equiv.)
full height Kerdi membrane installed per mfg. specs.
1/8" premium grout
3/8" tile; spec. tbd

W2b Interior Wall (2x6) @ shower
same as W2a but with 2x6 framing

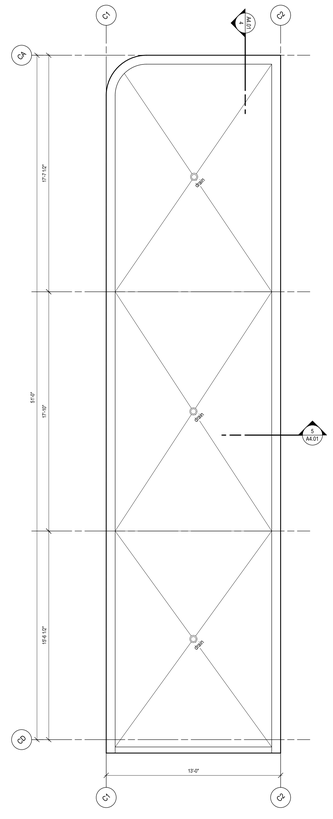
W3 Interior Wall (2x4) @ sauna
3/8" tile; spec. tbd (at shower)
1/8" premium grout (at shower)
1/2" gypsum wallboard (1/2" Densfield backer board, or equiv, at shower)
2x4 wood framing @ 16" o/c
acoustic batt insulation
1/2" Densfield backer board (or equiv.)
SAM air vapour barrier - tape and seal all joints
3/4" clear cedar



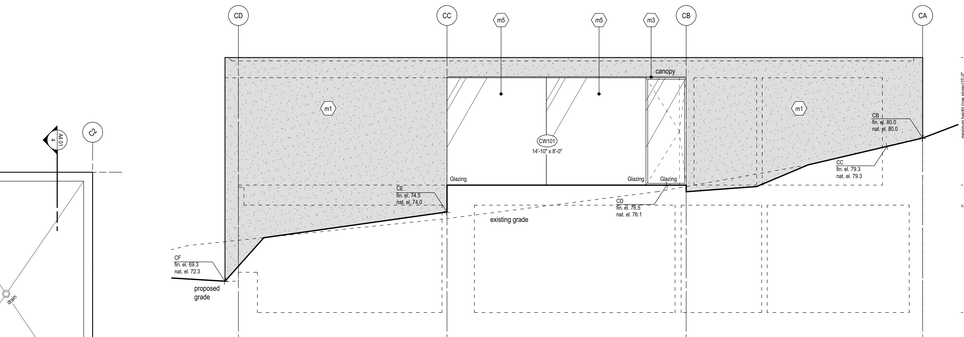
1 FLOOR PLAN - BASEMENT
SCALE: 1/4" =1'-0"



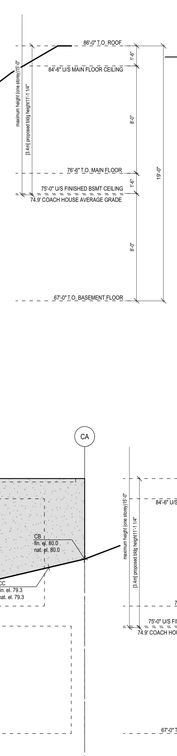
2 FLOOR PLAN - MAIN
SCALE: 1/4" =1'-0"

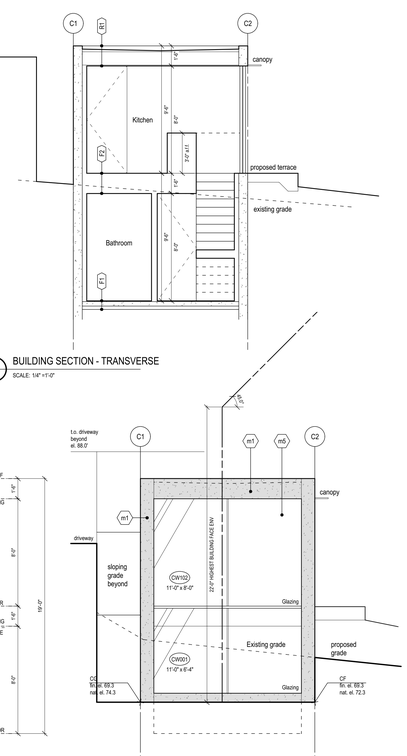


3 FLOOR PLAN - ROOF
SCALE: 1/4" =1'-0"



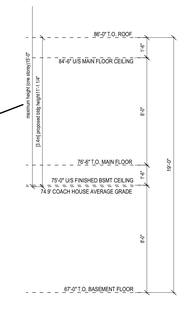
4 BUILDING SECTION - LONGITUDINAL
SCALE: 1/4" =1'-0"



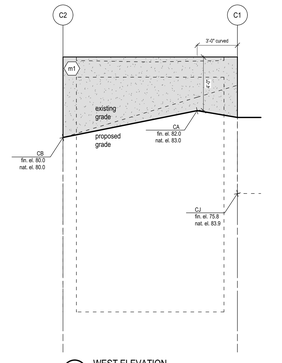


5 BUILDING SECTION - TRANSVERSE
SCALE: 1/4" =1'-0"

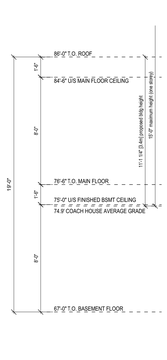
6 NORTH ELEVATION
SCALE: 1/4" =1'-0"

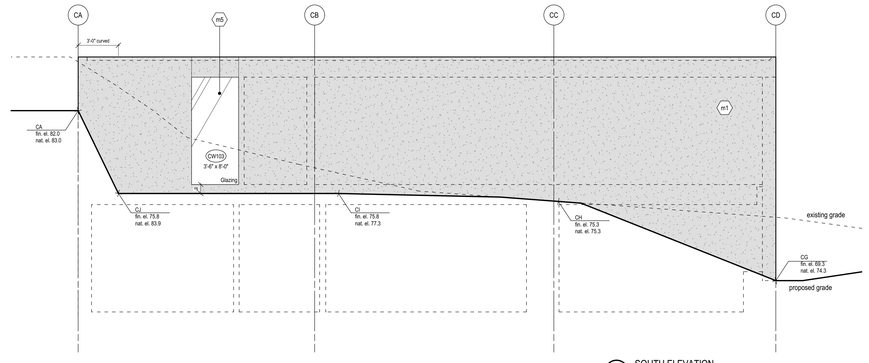


7 EAST ELEVATION
SCALE: 1/4" =1'-0"

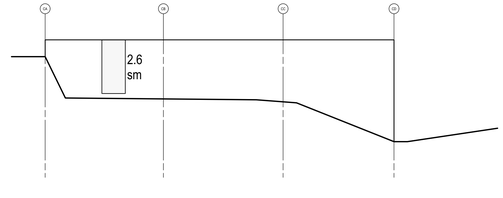


8 WEST ELEVATION
SCALE: 1/4" =1'-0"





9 SOUTH ELEVATION
SCALE: 1/4" =1'-0"



10 SPATIAL DIAGRAM
SCALE: 1/8" =1'-0"

PER BCBC 2018 TABLE 3.2.3.1.D
WEST ELEVATION - DETACHED SECONDARY SUITE

TOTAL EXPOSED BUILDING FACE	46.5 m² (500.5 ft²)
LIMITING DISTANCE	4.1 m (13'-5 1/2")
PERMITTED % OF GLAZED OPENINGS	58.8%
PROPOSED AREA OF GLAZING AREA	2.6 m² (28.0 ft²) 5.6%
CONFORMING	Yes

MCLEOD BOVELL MODERN HOUSES

293 Columbia St
Vancouver BC V6A 2R5

STON
4408 Stone Crescent, West Vancouver BC

scale	drawn by
1/4" = 1'-0"	AH
date	reviewed by
23/01/30	YN
project code	status
STON	DD

Detached Secondary Suite

A4.01