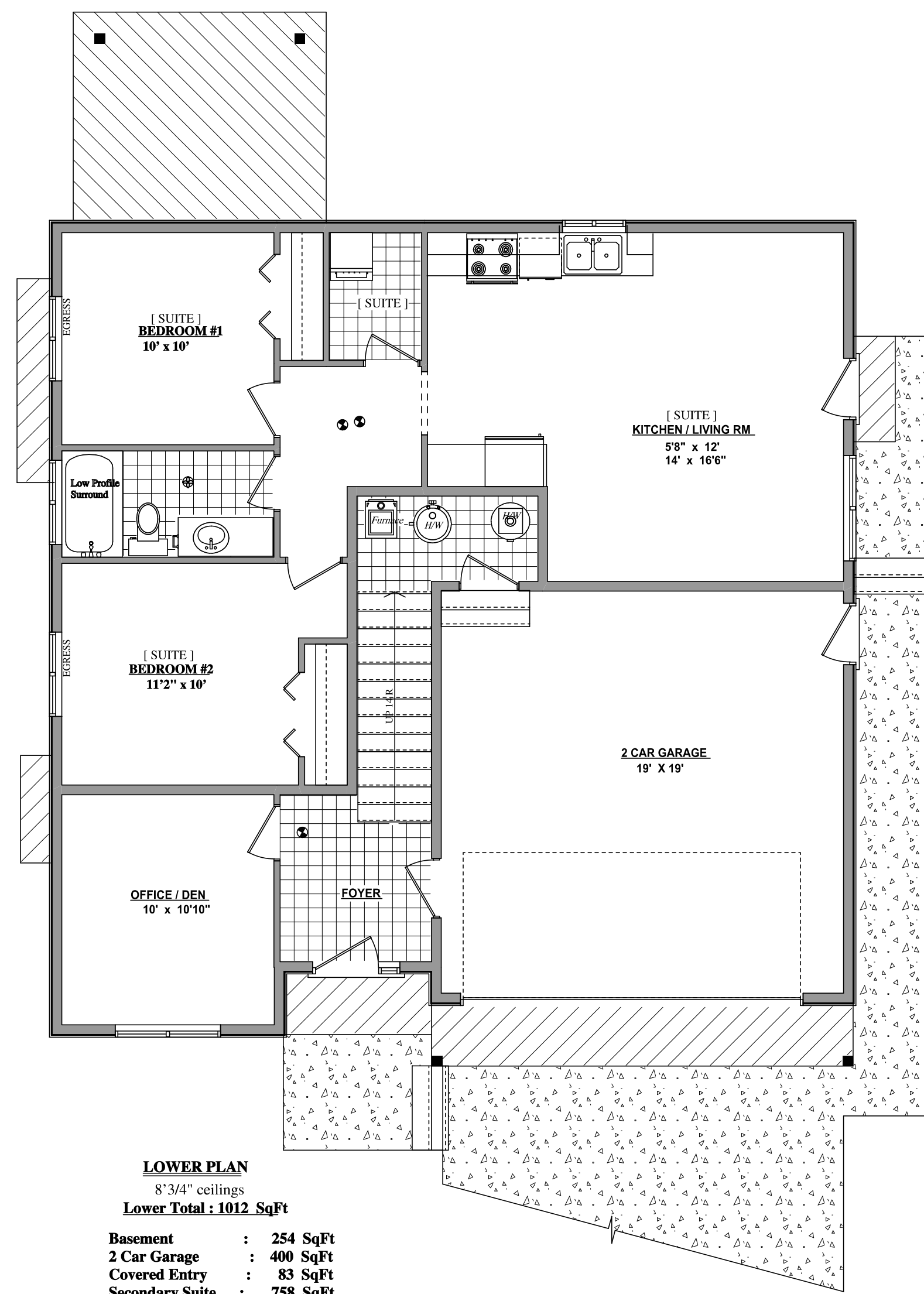
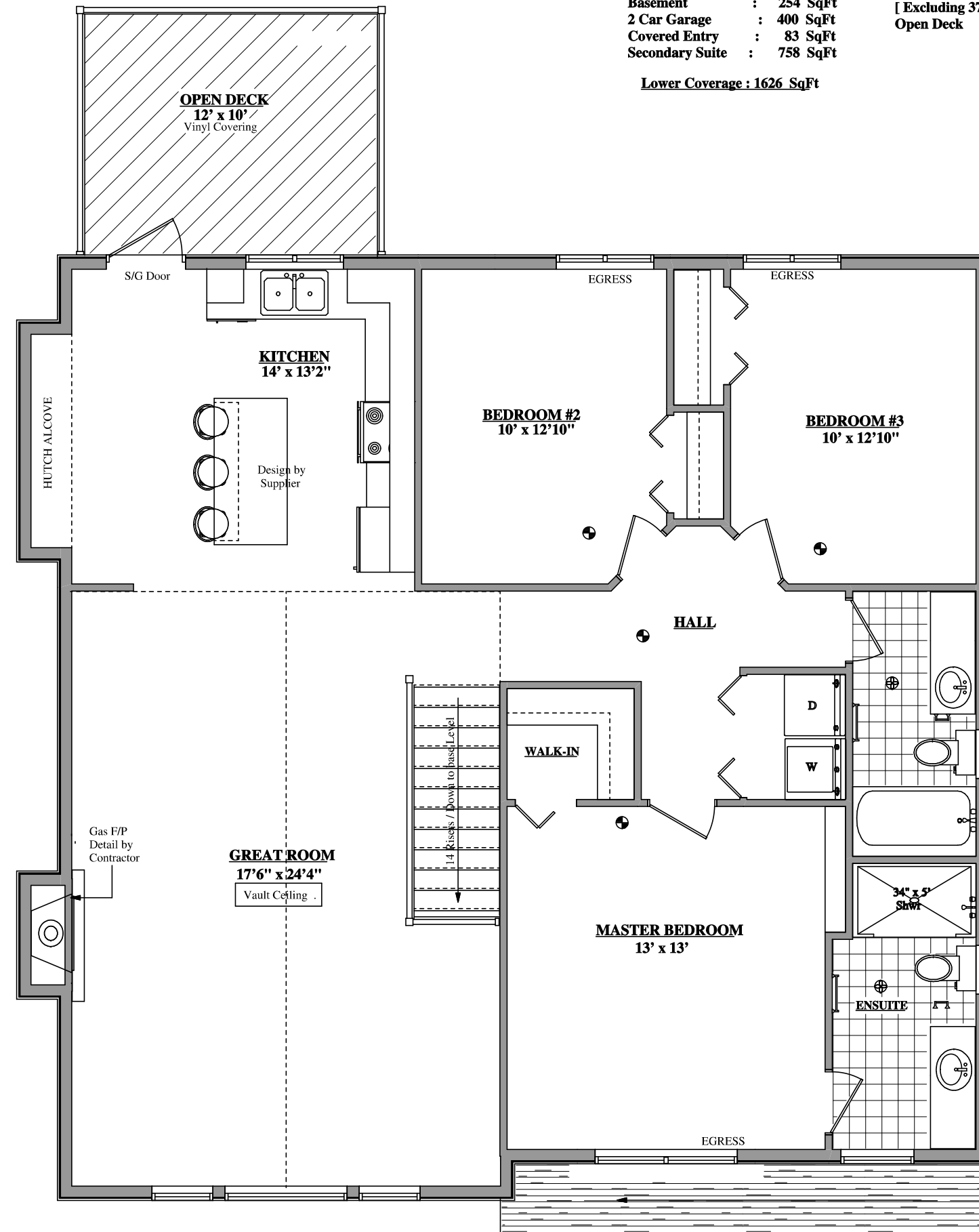




QUICK 3D ONLY
MAY NOT BE ACTUAL



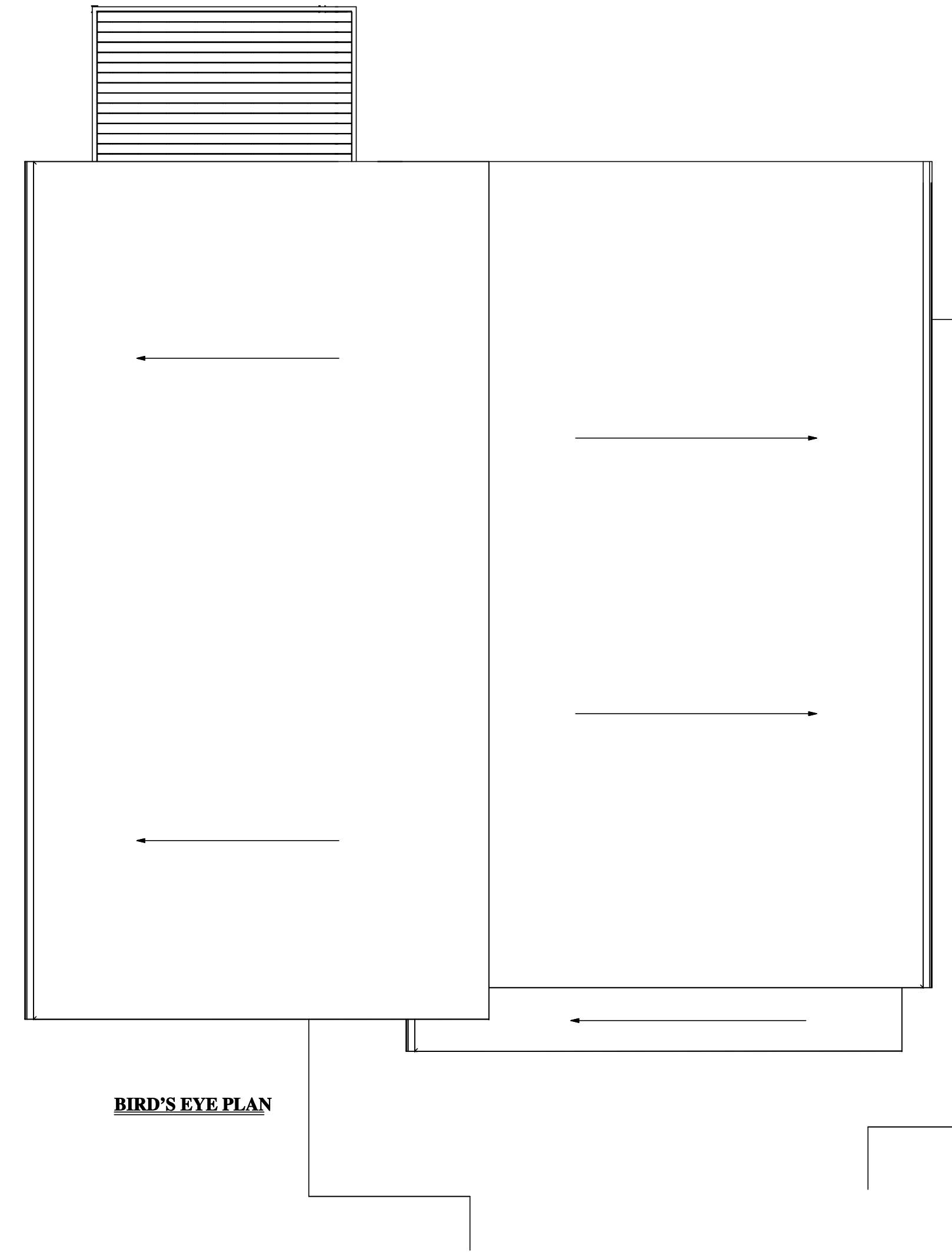
LOWER PLAN
8' 3/4" ceilings
Lower Total : 1012 SqFt
Basement : 254 SqFt
2 Car Garage : 400 SqFt
Covered Entry : 83 SqFt
Secondary Suite : 758 SqFt
Lower Coverage : 1626 SqFt



MAIN FLOOR PLAN
9' 0 3/4" Ceilings
Main Floor : 1430 SqFt
[Excluding 37 SqFt Stairwell]
Open Deck : 120 SqFt

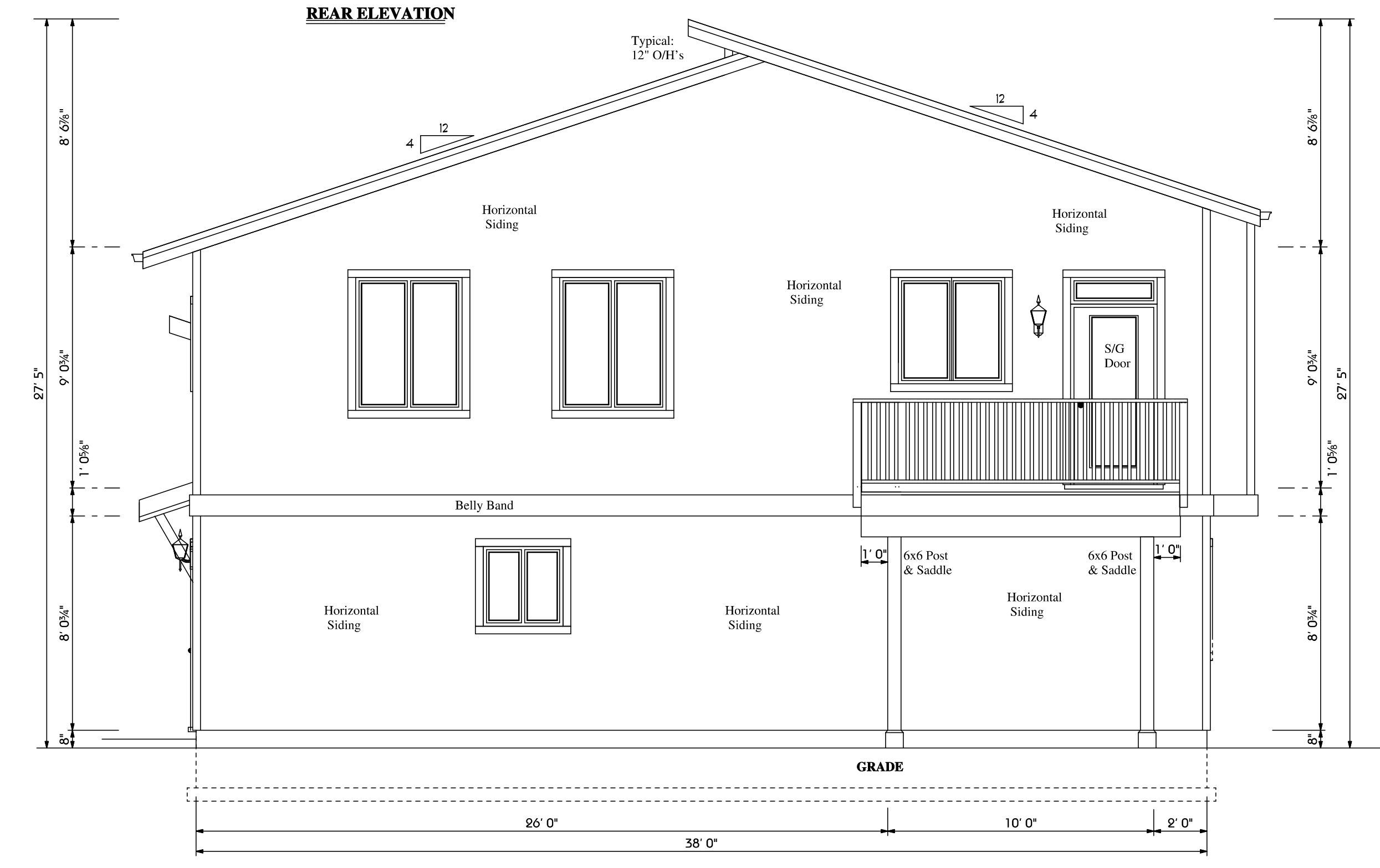
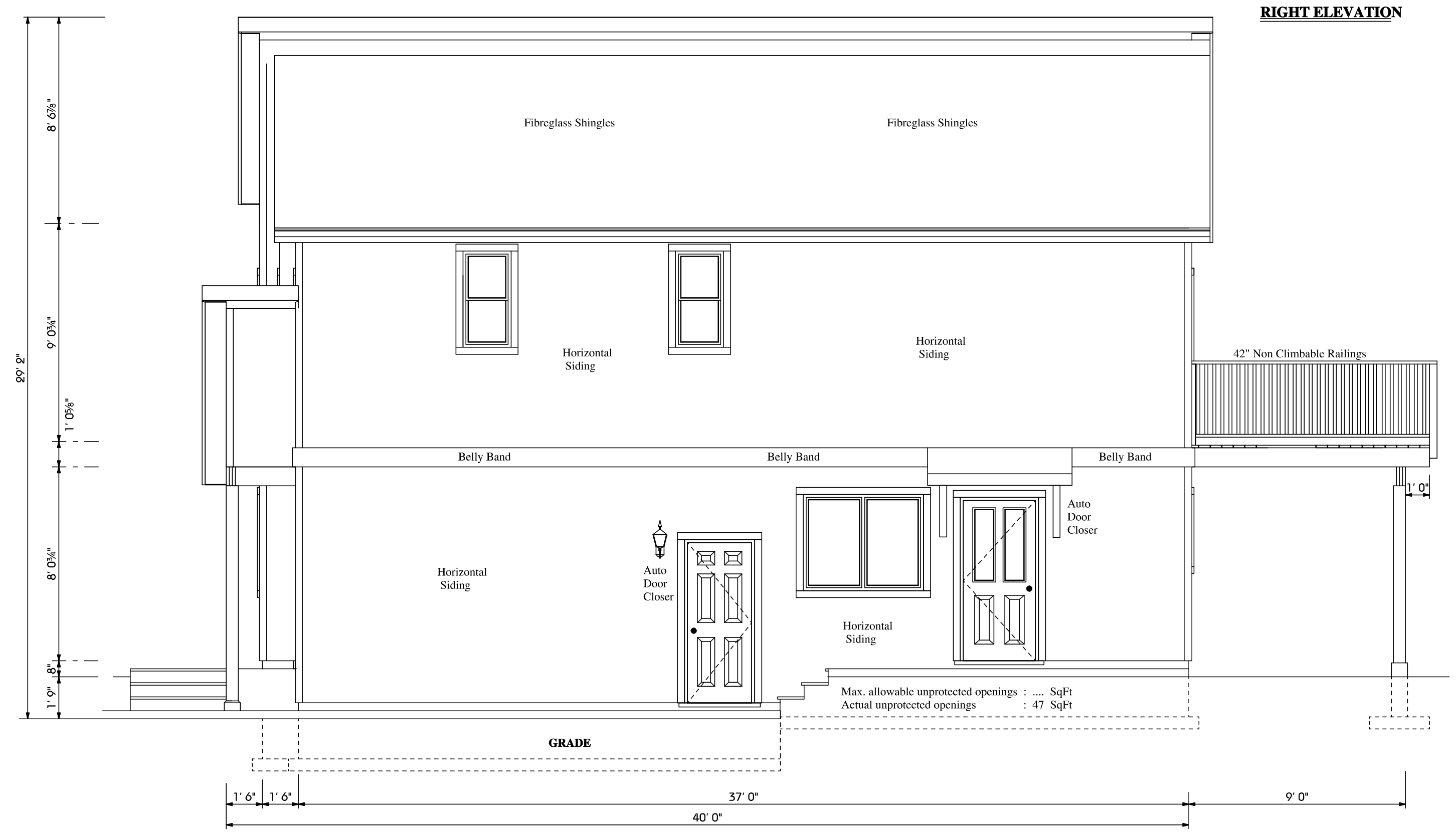
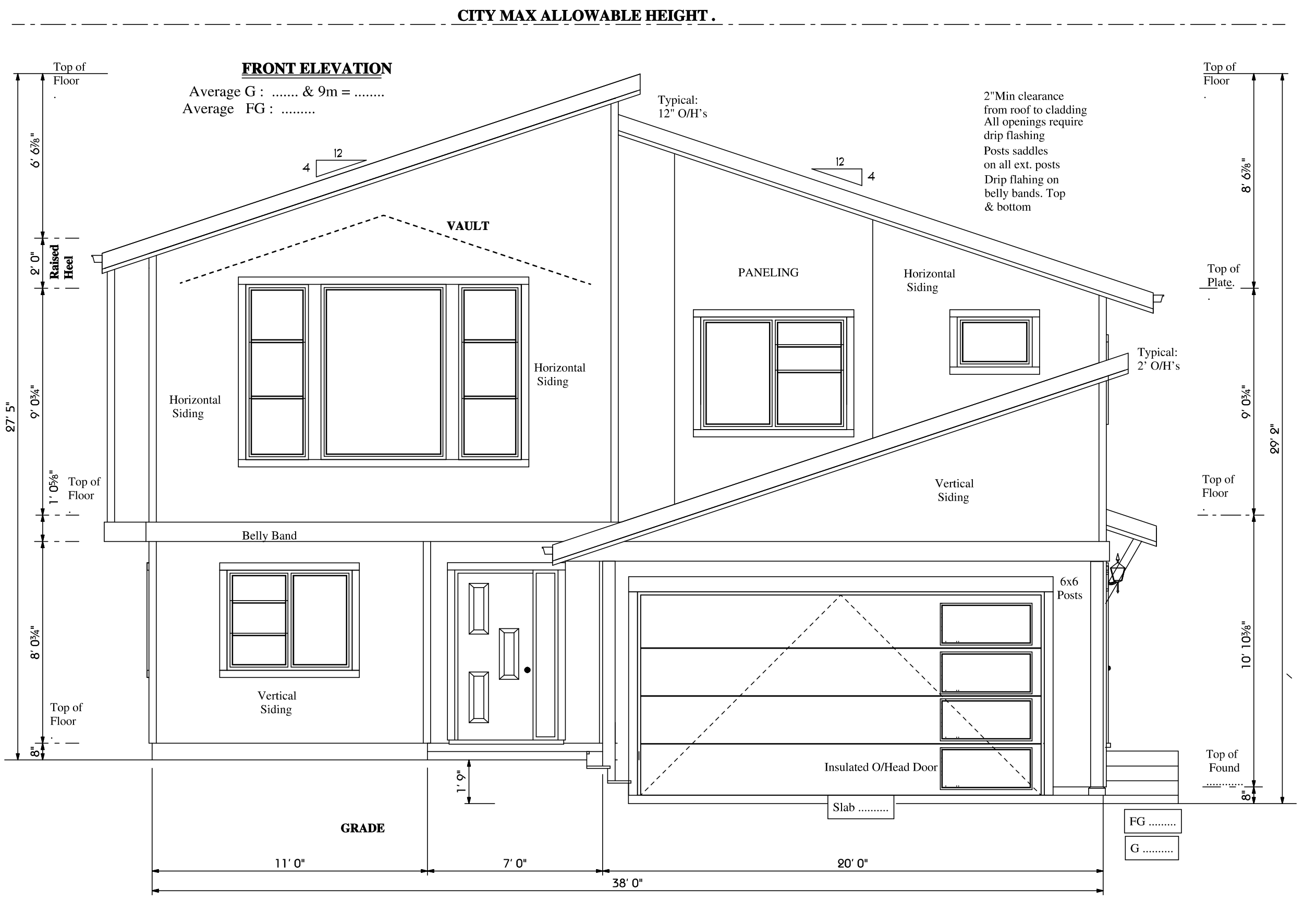
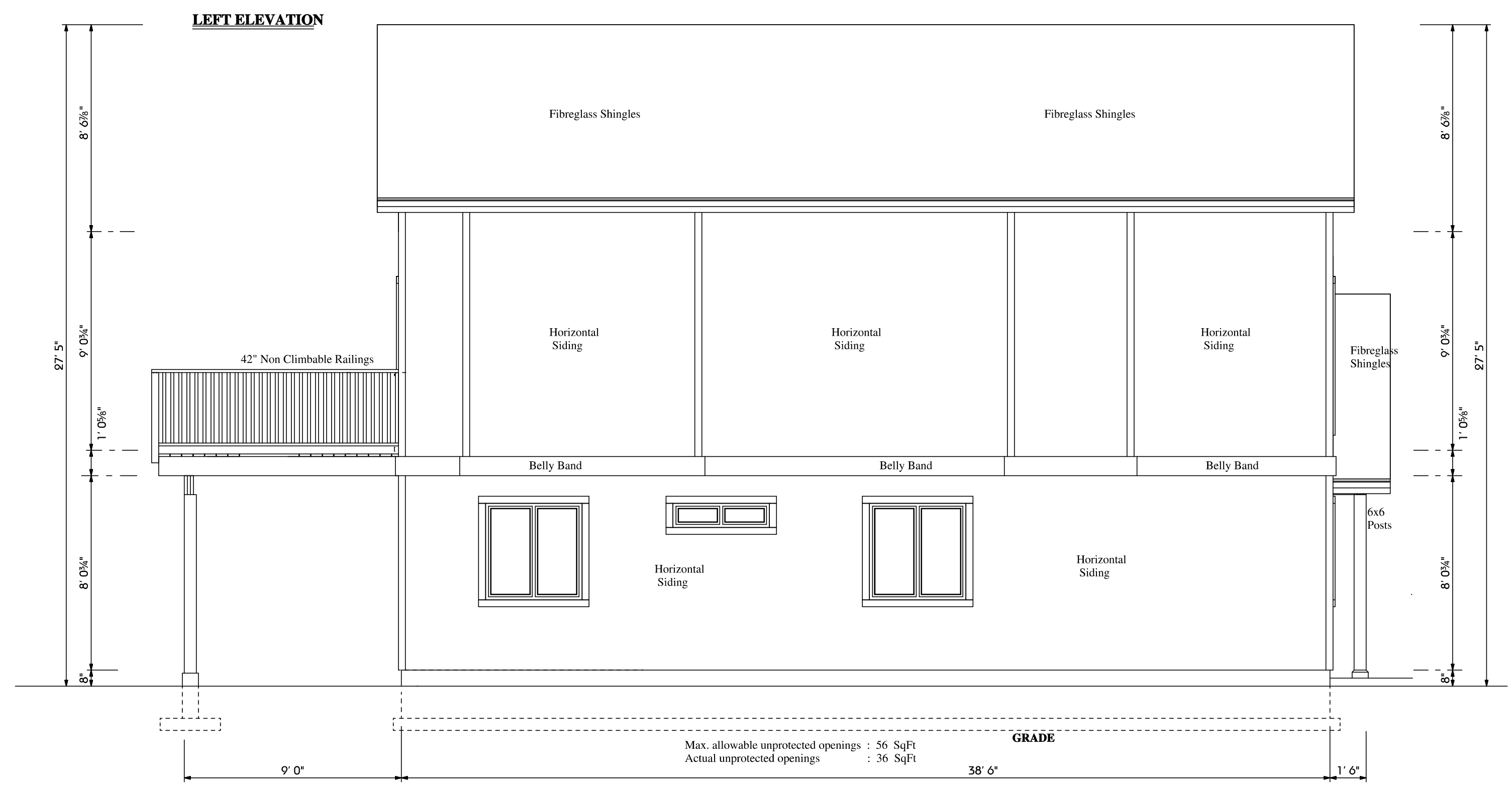
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[Excluding 37 SqFt Stairwell]
Open Deck : 120 SqFt



BIRD'S EYE PLAN

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Disclaimer
 The attached drawings have been drawn by Sea Swan Ent. for construction purposes and every effort has been made to make these plans accurate and authoritative. Sea Swan Ent. does not warrant responsibility (Financial or otherwise) for its accuracy or completeness. The attached plan design is considered a guide only and may be subject to change at any time, due to building codes, municipal bylaws and restrictions, natural surroundings, engineering requirements, construction practices and requirements. It is the responsibility of the users to apply their professional knowledge in the use of the information provided in these plans.

Contractor
 The Contractor shall be responsible for ensuring that construction complies to the British Columbia Building Code as well as all National and local Municipal regulations. It is highly recommended that the Contractor acquire the services of a Structural Engineer and a Geotech. It is the sole responsibility of the Contractor to verify the structural integrity of this building prior to any construction. Sea Swan Ent. has design these drawings based on the info supplied and excepts no financial or otherwise liabilities pertaining to these drawings. The Contractor shall verify all dimensions, materials, equipment and components prior to construction. Commencement of construction by Contractor shall imply acceptance of responsibility of all specifications, dimensions and requirements as well as all surfaces and conditions as being suitable to receive said work.

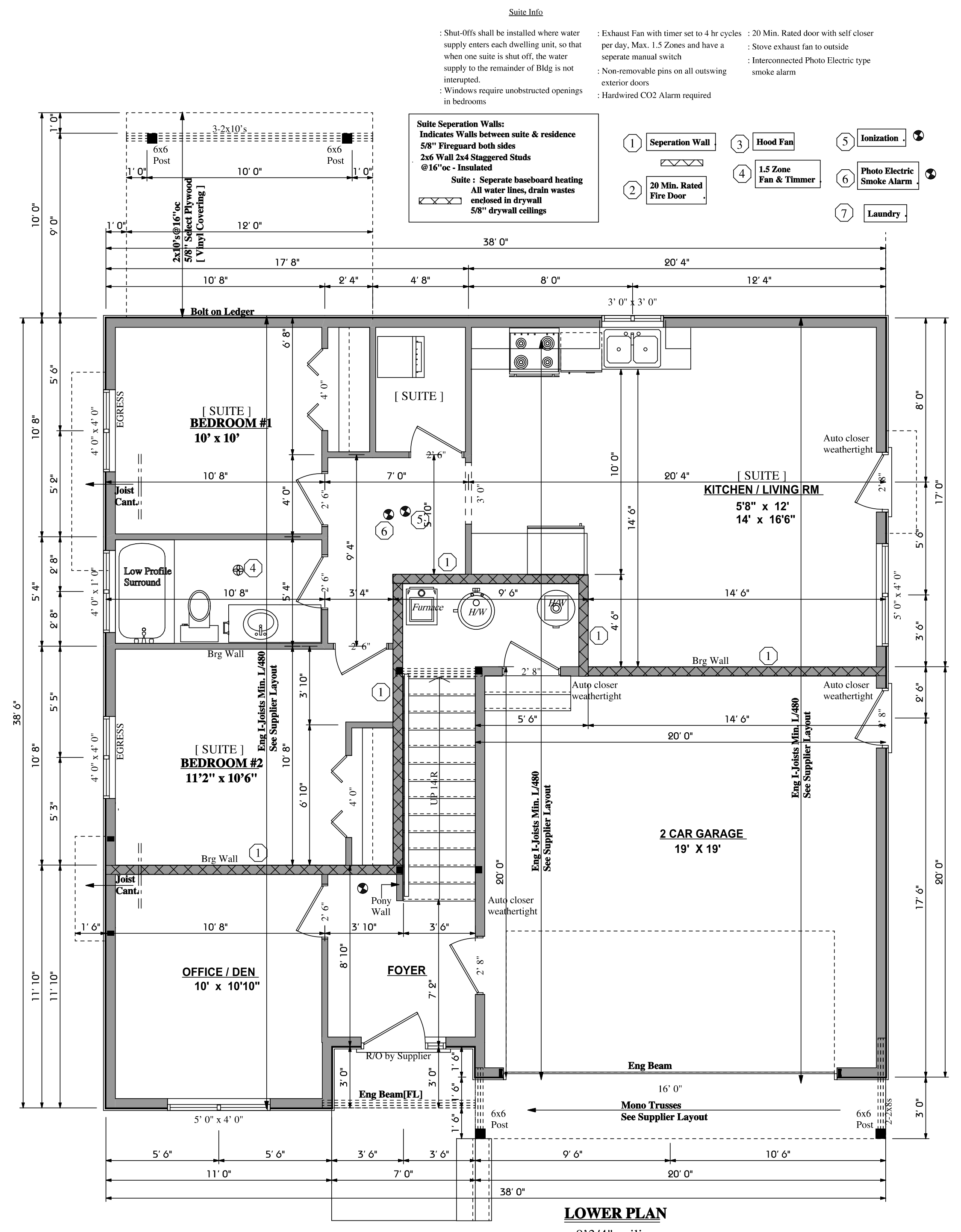
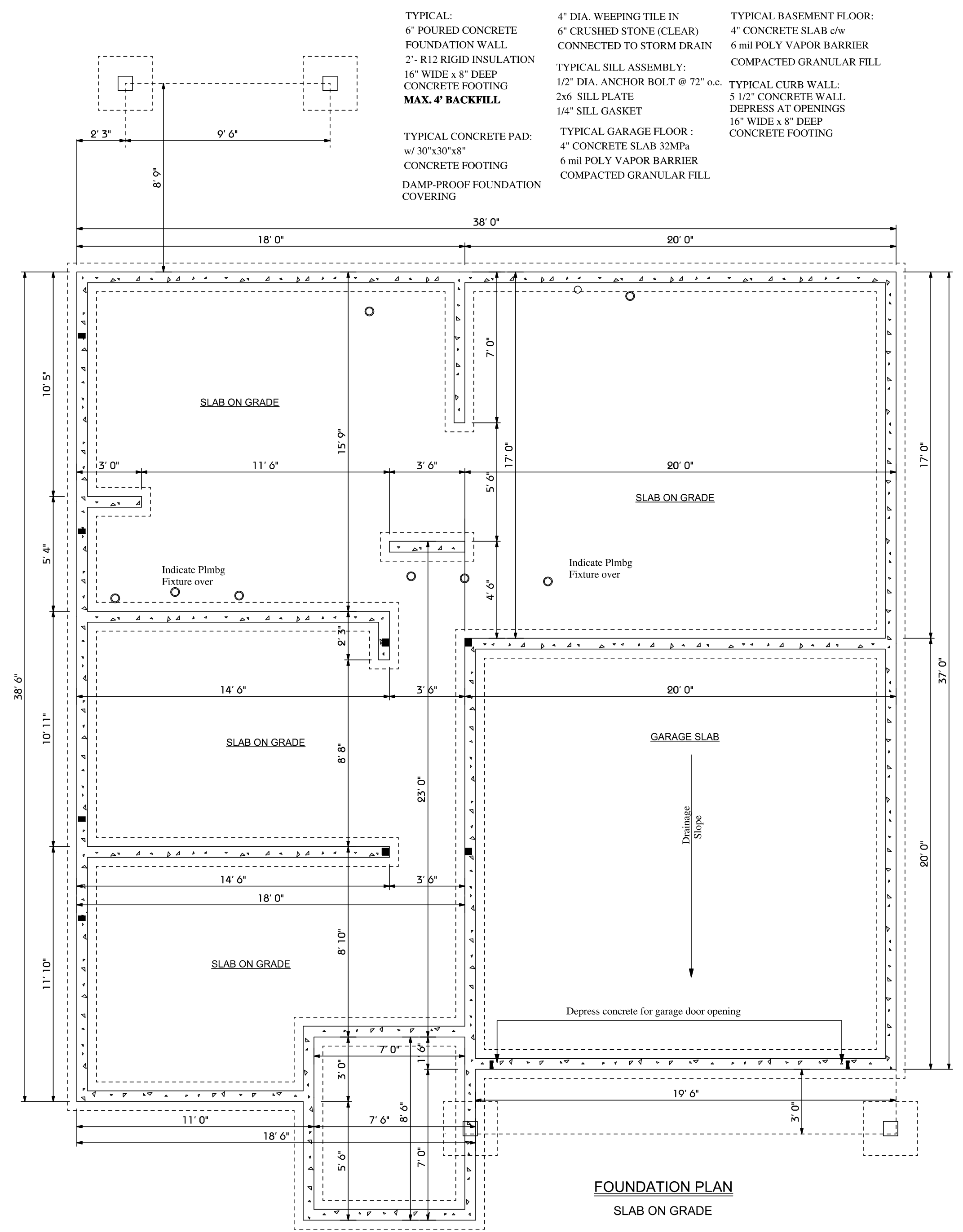
Excavation & Foundation
 Excavation for footing structures shall extend to undisturbed soil. Excavation shall be kept free of standing water. Building grade are to be sloped a min. of 2% away from dwelling and structures. Retaining walls are to be built according to good construction practices and may require a structural engineer. Footings are assumed to be constructed on a soil bearing capacity of 2000 p.s.f. or greater. Footings shall be placed on undisturbed soil at an elevation below frost line. Footings being stepped the vertical rise between horizontal portions may not exceed 2". Horizontal distances between the risers may not be less than 2". Reinforcing of concrete must be designed by a Structural Engineer. Waterproofing and damp proofing as per Sec 9.13.1.1(1) BCBC 2006. Concrete shall conform to Section 9.3.1 of BCBC 2018. Concrete shall have a min. compressive strength of 25 MPa after 28 days. Concrete used for garages, carports and exterior stairs shall have a min. compressive strength of 32 MPa at 28 days.

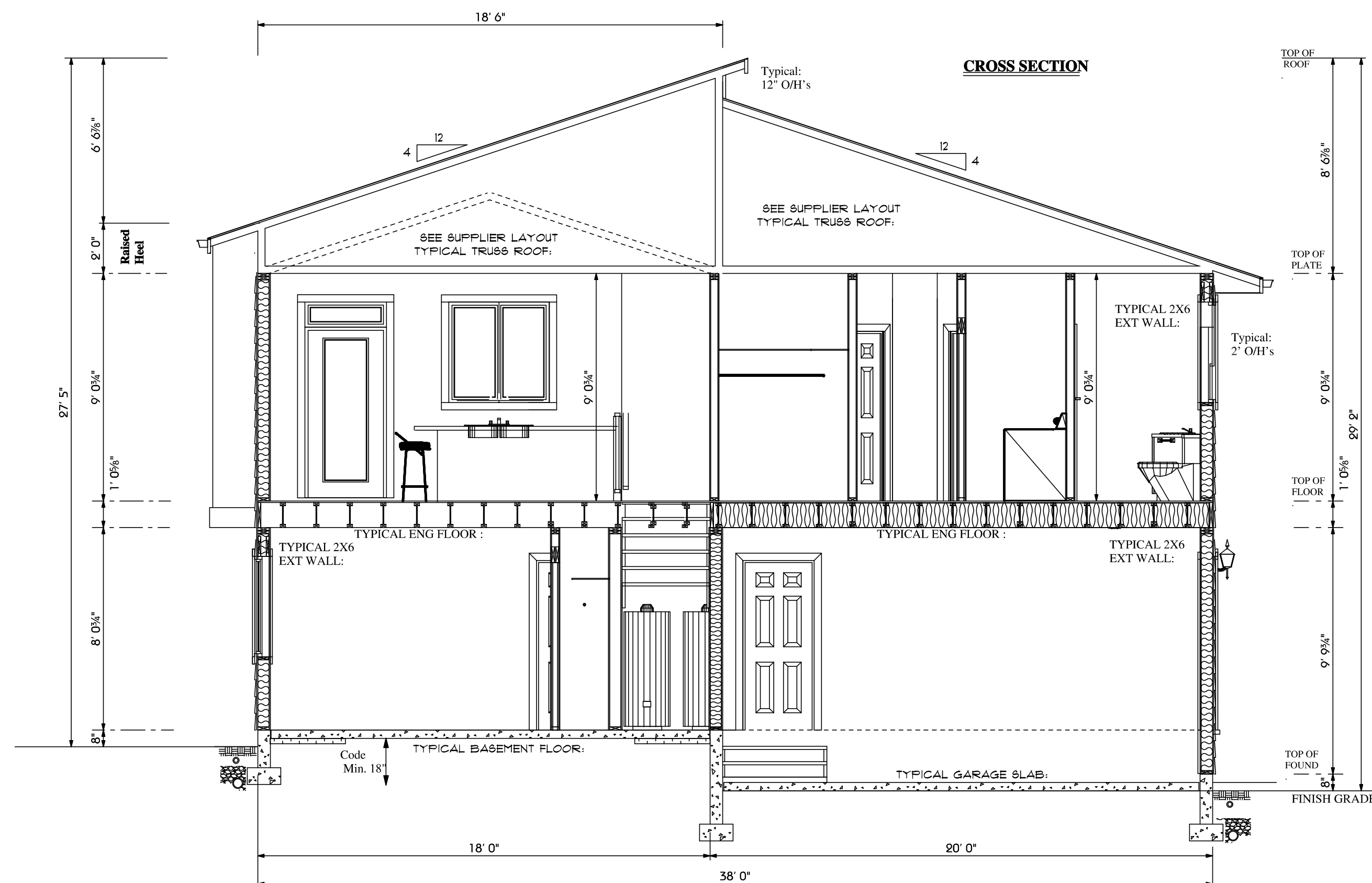
Wood Framing & Construction
 Beams shall not have less than 3 1/2" length of bfg. at end support. Load bearing interior & exterior lintels are to be a min. 2-2x10's unless otherwise specified or engineered. Wood columns must have a bearing support equal in size. Knocking or drilling of wood framing shall comply with Section 9.23.5 of the BC Building Code 2018. All wood products to concrete must have damp proofing with an approved sill gasket. Pressure treated wood required anywhere wood contacts concrete. Floor joists may not have less than 1 1/2" of bfg. support. All structural members beyond Part 9 of the Bldg. Code (i.e. Manufactured Roof & Floor Trusses, LVL Beams, supporting hangers must be designed by a professional Engineer. All Electrical & Plumbing is to be done by qualified trades and adhering to current codes and instructions. Windows, Doors, Siding, Roofing & Flashings are to adhere to current codes. Plan has been designed to meet client's requirements and adhere to Engineering Guide for Wood Frame Construction (CNV 2004). If in question it is the responsibility of the Contractor to verify this with a Structural Engineer and adjust to their required recommendations.

CITY MAX ALLOWABLE HEIGHT.

General Notes

- Artificial stone must be installed over a 2" x 2" grid in place unless applied over wood frame walls. (Max. height 3m)
- French Doors to be half glass.
- Concrete sloop can not be poured against wood framing. Concrete foundation to be completed or top hung joist system in sloop area.
- Max. Height of Backfill: Aggregates 8" thick concrete walls. 16" if laterally supported at top 4'0" if laterally unsupported. Structural review by Professional Engineer if backfill height exceeded on the total height of walls is more than 10'.
- Exterior walls - 2 layers of 30 min bidg paper.
- Double drains required.
- Solid pipe system for roof water. Perforated pipe system for foundation water.
- All footings to be placed on solid bearing at a min. 18" below grade.
- Foundation walls:
 - Damp-proofing of concrete walls below grade.
 - Moisture barrier between foundation walls and mud seal.
 - Foundation drains required as per municipal Bldg. Codes.
 - Concrete footings shall be on solid undisturbed firm ground below frost line.
 - Grades on plan are estimates determined by contractor unless indicated by a document provided by a BC Surveyor.
- Exterior doors are to be solid core type 4 weather stripped. Flashing is required (to current codes) at all horizontal changes in exterior finishing. Caulking required around all exterior openings. Flashing over all unprotected openings. Flashing to be installed to meet current BC Bldg. Codes. Vapor barrier on top of and at end of walls & over beams against exterior walls & attic spaces. Interior ratings are to be 300mm in height and exterior ratings are to be 1087mm. Constructed to code requirements & safety glass if applicable. Bldg heights must be verified to meet municipal requirements.
- Electrical & Plumbing:
 - To be performed by a qualified tradesman and to meet BCBC2018 / Municipal Codes. (Information not supplied by Designer)
 - Windows BCBC2018 / Doors / Finishes
 - All products to be supplied must be verified by suppliers with contractor prior to any manufacturing or ordering.
- General Notes:
 - Attached plan has been designed to the clients specifications and must meet the current BC Bldg. Codes and local Municipal Codes.
 - Construction is to be performed by a qualified contractor. It is the responsibility of the contractor to verify all measurements, sizes, details etc. prior to any construction.
 - Any structural design required must be performed by a certified structural engineer.
 - Foundation is to be approved by the local Bldg. Dept. authorities or by a structural engineer. Timber framing if applicable to be designed by others.
- Designer Notes & Recommendations:
 - Designer assumes no liability for omissions or errors on attached plan.
 - Qualified established Contractor to perform construction.
 - Engineered notes floor systems (L480 min. design)
 - Manufactured roof load & floor joists prior to construction.
 - Structural & Geotechnical Engineers (if applicable)
 - Contractor to verify with clients all windows, doors finishing & exterior & interior prior to construction.
- Note: Contractor must adhere to all the new Codes - BCBC2018



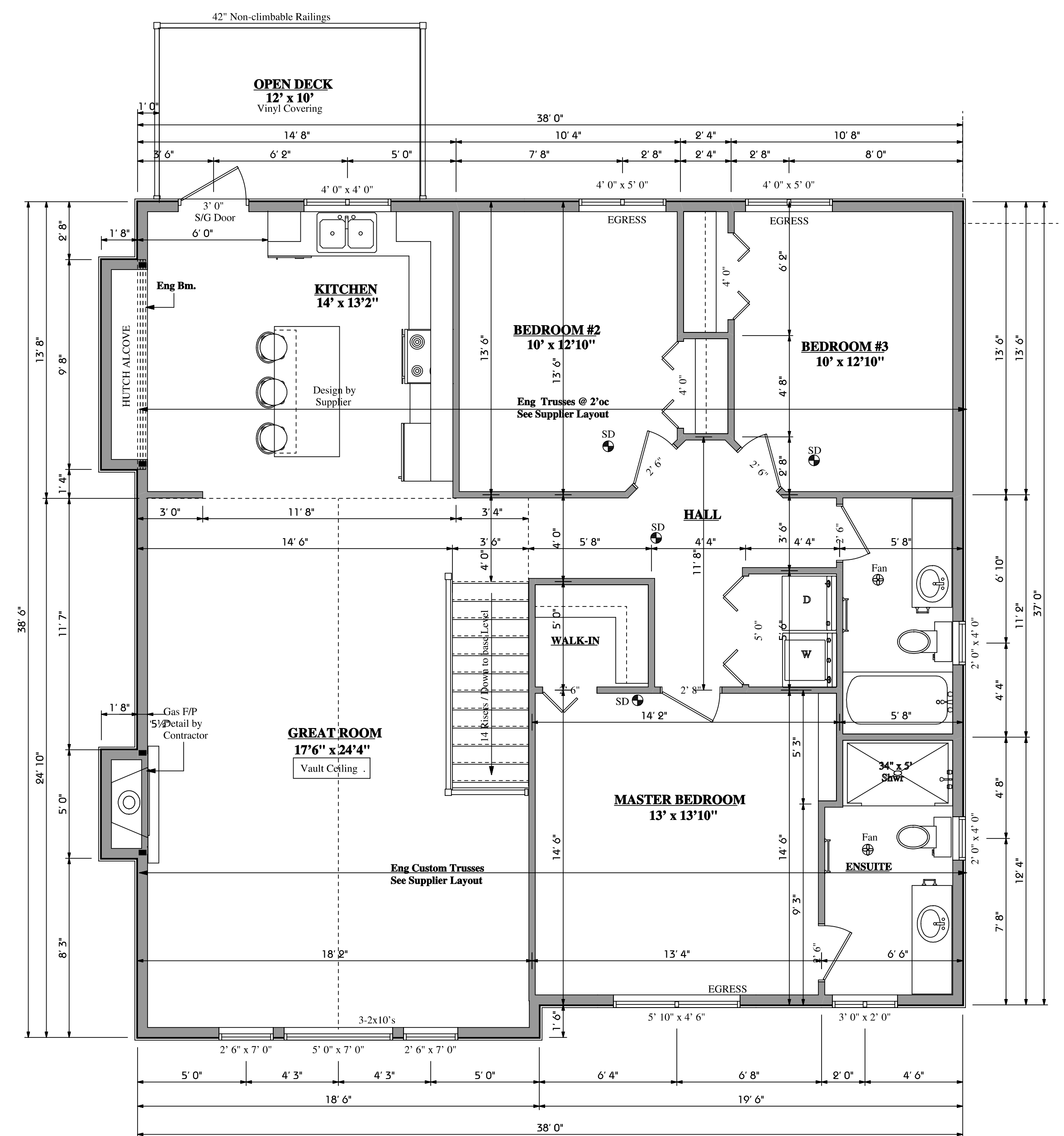
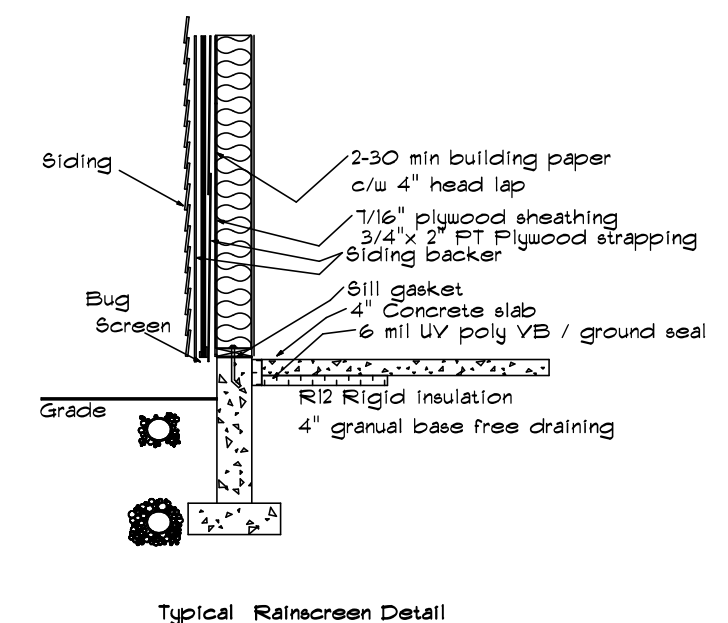
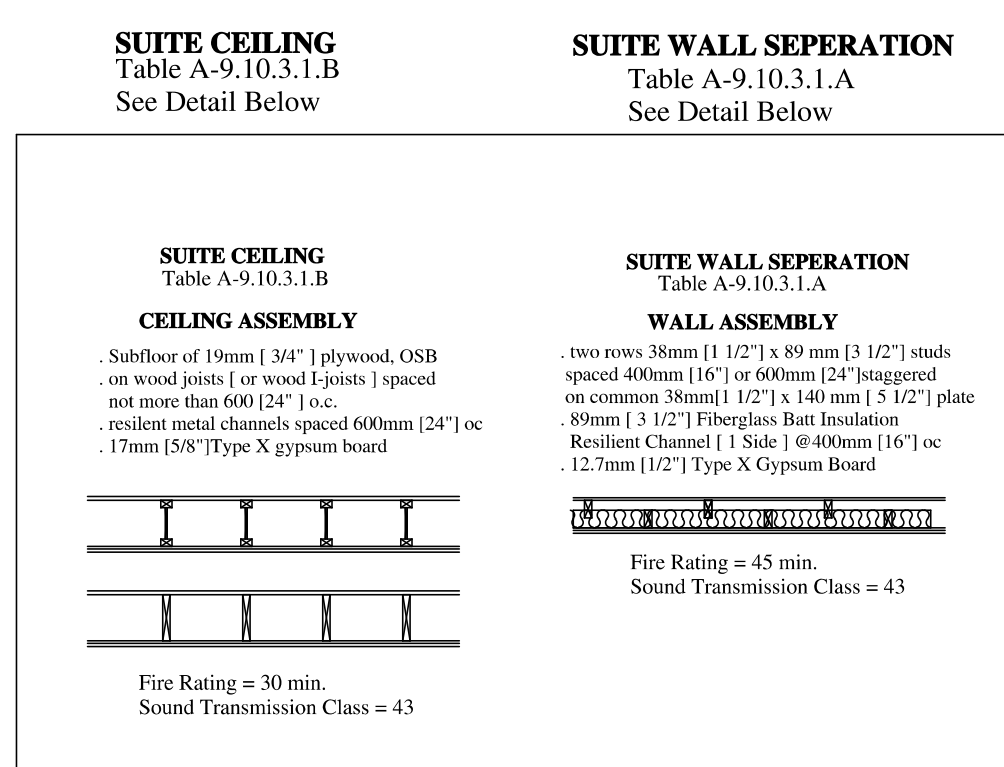
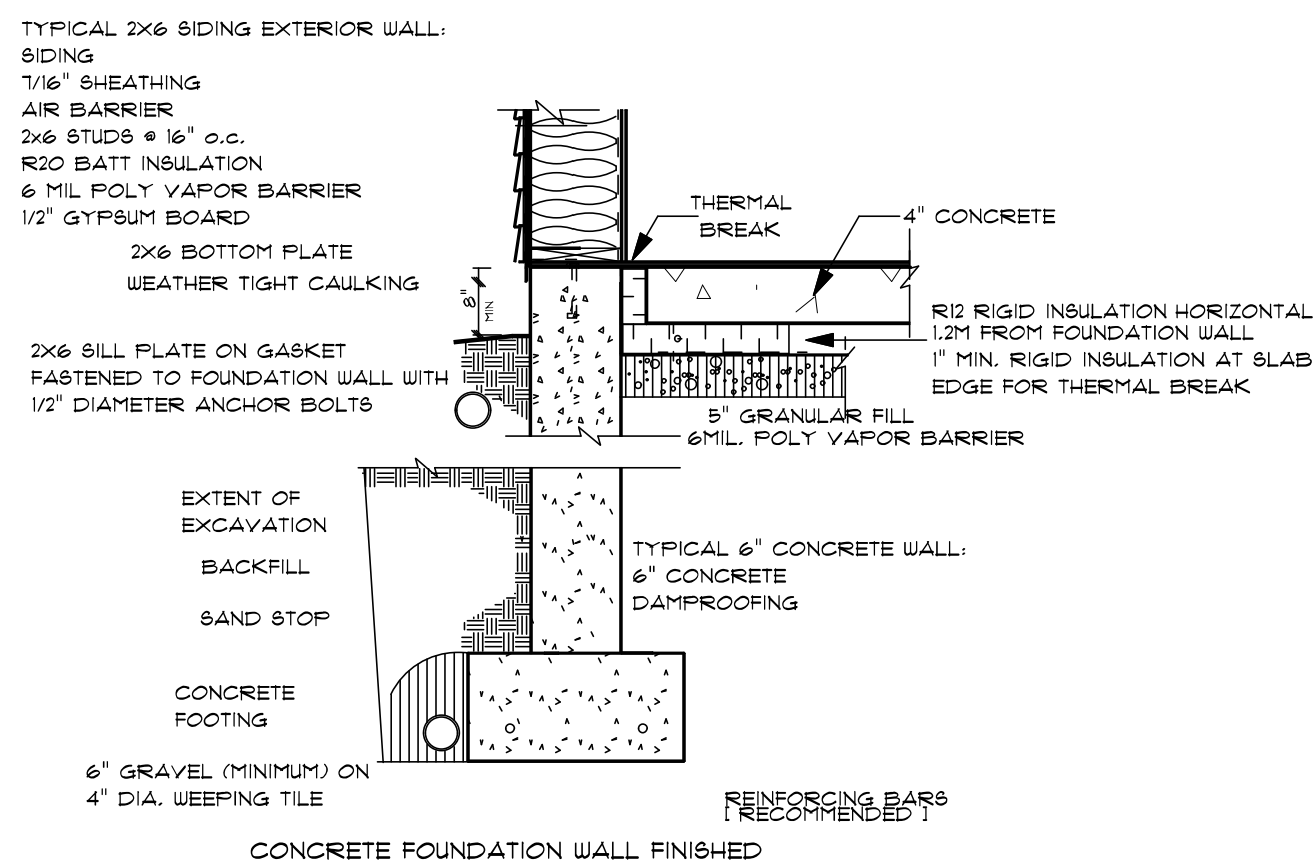


- TYPICAL:**
8" FOUNDED CONCRETE FOUNDATION WALL
2" RIGID INSULATION 1/2" MIN.
16" WIDE x 8" DEEP CONCRETE FOOTING REBAR RECOMMENDED
MAX. 7"6" BACKFILL
- TYPICAL:**
6" FOUNDED CONCRETE FOUNDATION WALL
2" RIGID INSULATION 1/2" MIN.
16" WIDE x 8" DEEP CONCRETE FOOTING REBAR RECOMMENDED
MAX. 4" BACKFILL
- TYPICAL CONCRETE PAD:**
w/ 30"x30"x8" CONCRETE FOOTING
DAMP-PROOF FOUNDATION COVERING
4" DIA. WEEPING TILE IN 6" CRUSHED STONE (CLEAR) CONNECTED TO STORM DRAIN
- TYPICAL BILL ASSEMBLY:**
1/2" DIA. ANCHOR BOLT @ 12" o.c.
2x6 BILL PLATE
1/4" BILL GASKET
TYPICAL GARAGE FLOOR:
4" CONCRETE SLAB 3/4" c/a
6 mil POLY VAPOR BARRIER
COMPACTED GRANULAR FILL
- TYPICAL BASEMENT FLOOR:**
4" CONCRETE SLAB c/a
6 mil POLY VAPOR BARRIER
COMPACTED GRANULAR FILL
- TYPICAL CURB WALL:**
8 1/2" CONCRETE WALL
16" WIDE x 6" DEEP CONCRETE FOOTING
- TYPICAL ENG FLOOR:**
3/4" TAG SUBFLOOR
SCREWED 4 GLED
ENG 1-10/16" MIN. L/490
SEE SUPPLIER LAYOUT
- TYPICAL 2x6 SIDING EXT WALL:**
SIDING (VERIFY)
1/16" PLYWOOD SHEATHING
2 LAYERS 90° MIN BLDG PAPER
RAIN SCREEN DETAIL (If applicable)
2x6 STUDS @ 16" o.c.
R20 BATT INSULATION
6 mil POLY V.B.
1/2" DRYWALL
TAPED & SANDED
- TYPICAL TRUSS ROOF:**
FIBREGLASS SHINGLES
1/16" ROOFING PLYWOOD c/w 1" CLIPS
2x8 BLOCKING AT PEAK
FIRE-ENG. TRUSSES @ 24" o.c.
2x4 TRUSS BRACING
R40 BATT INSULATION
6 mil POLY V.B.
5/8" CEILING BOARD
TAPED & SANDED
SEE SUPPLIER LAYOUT
- NOTE:**
VENTILATE ROOF TO 1/300TH OF INSULATED CEILING AREA

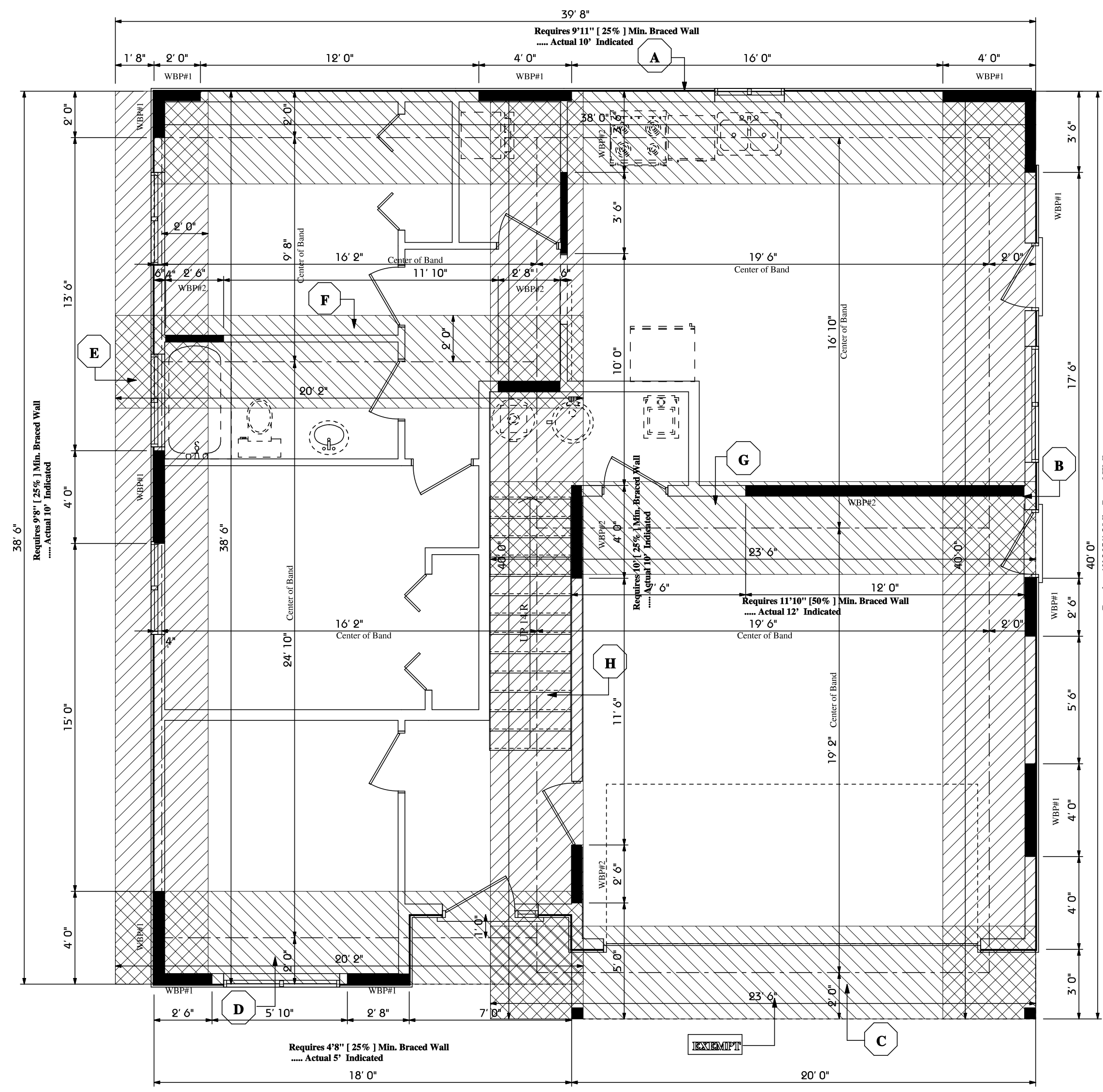
Climate Zone 4 Section 9.36. of the BC Bldg Code

Typical Roofs	RSI 6.91 [R-39.2]	Typical Windows & Doors	US1 1.80 [U-0.32]
Typical Cathedral Ceilings & Flat Roofs	RSI 4.67 [R-26.5]	Typical Door to Garage	RSI 1.1 [R-6.25]
Typical Skylights	US1 2.90 [U-0.52]	Typical Access Hatch	RSI 2.6 [U-0.46]
Typical Skylights Shafts	RSI 2.78 [R15.8]	Typical Front Door	US1 2.6 [U-0.46]
Typical Ext. Walls	RSI 3.5 [R-20]	Typical Glass Block	US1 2.9 [U-0.51]
Typical Floors over Unheated Spaces	RSI 4.67 [R-26.5]		
Typical Foundation Walls	RSI 1.99 [R-11.3]	Contractor must adhere to the new Energy Efficiency Requirement Climate Zone 4 Section 9.36. of the BC Bldg Code	
Typical Heated Floors	RSI 2.32 [R-13.2]		
Typical Unheated Floors above frost line	RSI 1.96 [R-11.1]		
Typical Unheated Floors below frost line	Insulation not required		

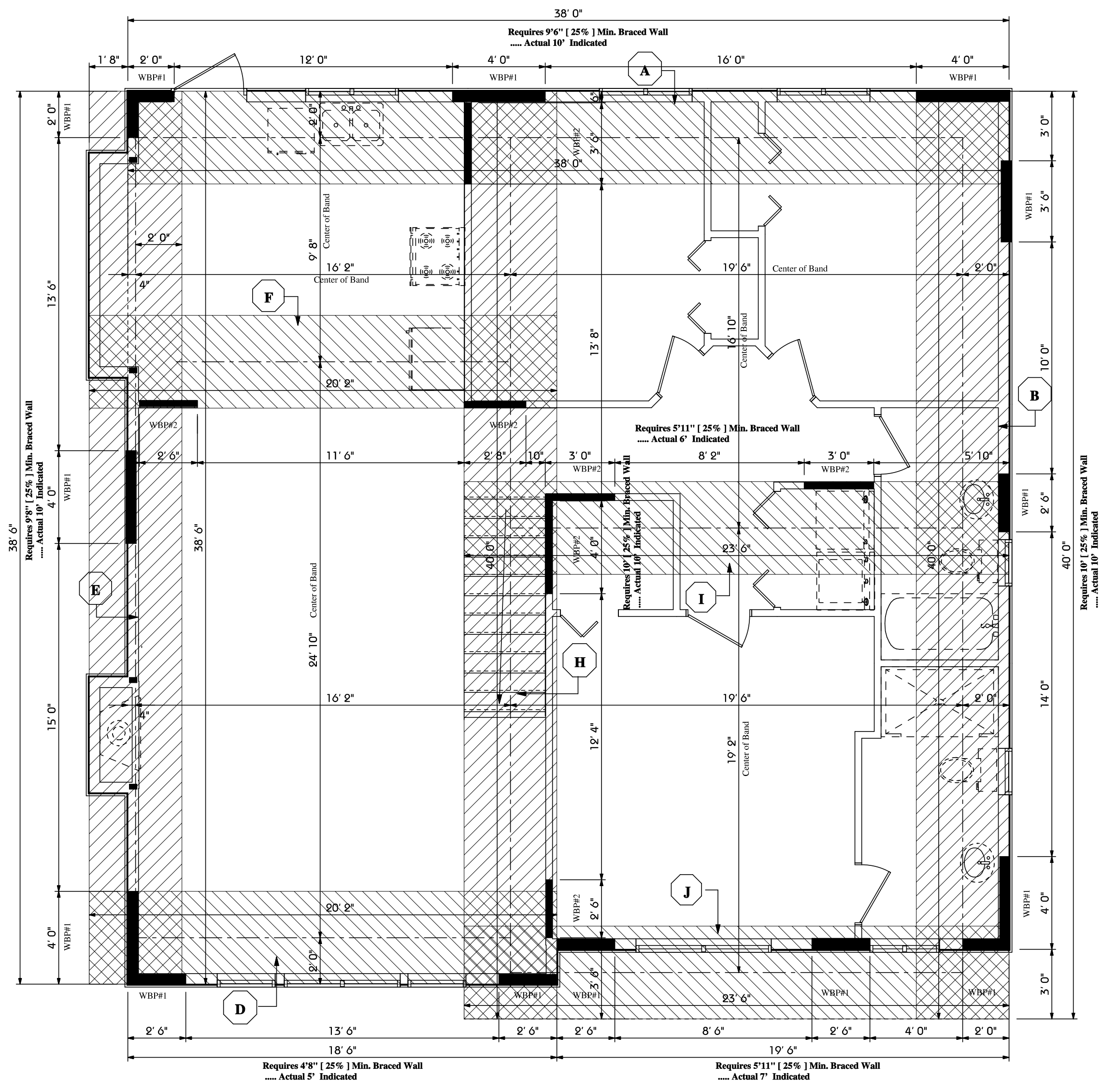
Thermal Characteristics of Building Assemblies (9.36.2.6 - 9.36.2.8)



MAIN FLOOR PLAN
9' 0 3/4" Ceilings
Main Floor : 1430 SqFt
[Excluding 37 SqFt Stairwell]
Open Deck : 120 SqFt



LOWER FLOOR PLAN
[WALL BANDING & PANELS]

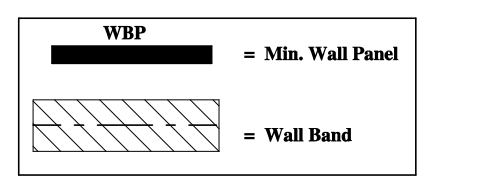


MAIN FLOOR PLAN
[WALL BANDING & PANELS]

WALL PANEL	LOCATION	MIN. LENGTH	TYPE
WBP#1	MAIN	25% AS PER PLAN	SHEATHING
WBP#2	MAIN	25% AS PER PLAN	Sheath 1 Side
			Double Fasteners
			Option: DRYWALL 2 Sides
WBP#1	LOWER	25% AS PER PLAN	SHEATHING
WBP#2	LOWER	25% AS PER PLAN	Sheath 1 Side
			Double Fasteners
			Option: DRYWALL 2 Sides

SNOW LOAD: $S_s = 2.30Pa$, $S_r = 0.40Pa$
SEISMIC: $S_e(0.2) = 1.02$
WIND: $q(150) = 0.5 kPa$
ANY CHANGES MUST BE REVIEWED BY AUTHORITIES HAVING JURISDICTION OR A P.ENG

MATERIALS & SUPPORTS
[See Table 9.23.13.16 BCBC 2012 Pg. 415]
FASTENING & WALL ANCHORING
[See 9.23.6 BCBC 2012 Pg. 406]



NOTE: THE BRACED WALL PANELS DRAWING IS BASED ON MIN. CODE STANDARDS
NOTE: AREAS INDICATED AS WALL BRACED PANEL SHEATHING MAY NOT BE DRILLED, CUT OR ALTERED OR IN ANY WAY BE COMPROMISED

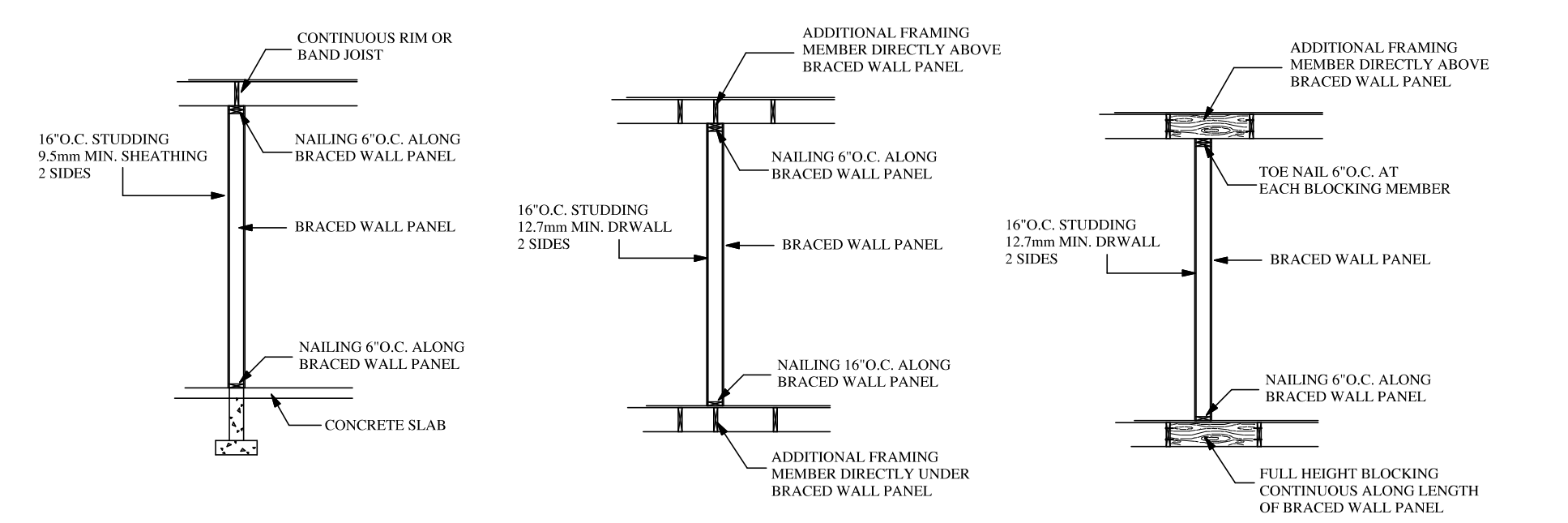
NOTE: IT IS MANDATORY THAT CONTRACTOR CO-ORDINATE WITH ALL TRADES THE LOCATION OF WALL PANELS & ADJUST IF NEEDED [THIS ONLY A GUIDE LINE TO MEET CURRENT CODE] BUT MUST ADHERE TO BE BLDG CODE 2012 REGULATIONS ON LATERAL BRACING

GENERAL SEISMIC INFORMATION

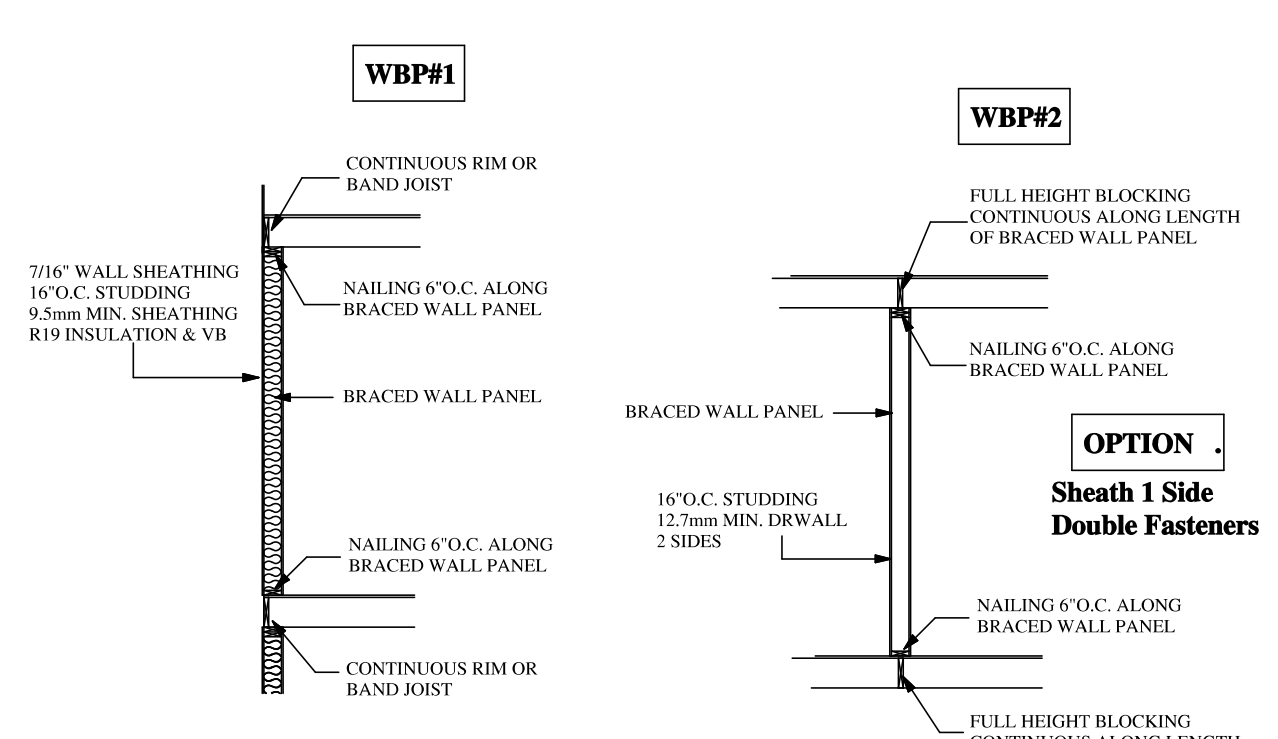
PLAN SUBMISSION	CITY OF NANAIMO
LOCATION OF CONSTRUCTION	LOT 14 EVELYN CRES.
SEISMIC REGION	1.02 < $S_e(0.2)$ < 2.0
TYP OF CONSTRUCTION	LIGHT CONSTRUCTION
DESIGN STANDARD	BCBC PART 5
TRADE OFFS	10.6m OPEN CONCEPT

SEISMIC BANDING AND PANEL LEGEND

BAND	MATERIAL	BAND LENGTH	PANEL SUM	ACTUAL
A	WOOD	39' 8"	9' 6"	10'
B	WOOD	4' 0"	10'	10'
C	EXEMPT	23' 6"	.	.
D	WOOD	18' 6"	4' 8"	5'
E	WOOD	38' 6"	9' 8"	10'
F	DRYWALL	20' 2"	5' 1"	5' 2"
G	DRYWALL	23' 6" [80%]	11' 0"	12'
H	DRYWALL	4' 0"	10'	10'
I	DRYWALL	23' 6"	5' 1"	6'
J	WOOD	23' 6"	5' 1"	7'



[See Table 9.23.13.16 BCBC 2012 Pg. 415]
[See 9.23.6 BCBC 2012 Pg. 406]



Light Construction
Minimum Thickness of Sheathing or Interior Finish for Braced Wall Panels

Panel Type: Cladding Sheathing or Interior Finish	With Supports	Min. Thickness
Gypsum board interior finish	400 mm o.c.	12.7 mm
	600 mm o.c.	15.9 mm
Sheathing [CANCSA-0325]	400 mm o.c.	W16
	600 mm o.c.	W24
OSB O-1 and O-2 grades	400 mm o.c.	11 mm
	600 mm o.c.	12.5 mm
Plywood	400 mm o.c.	11 mm
	600 mm o.c.	12.5 mm

Light Construction

Fasteners for Subflooring & Sheathing	Fasteners	Min. # or Max. Spacing	Min. Length of Fasteners, mm	
			0.7 - $S_e(0.2) \leq 1.0$	1.0 - $S_e(0.2) \leq 1.2$
Board lumber ≤ 184 mm wide	Common, spiral or Ring Nails	2 per support	63	81
	14-gauge staples		63	81
Board lumber > 184 mm wide	Common, spiral or Ring Nails	3 per support	81	97
	14-gauge staples		81	97
Plywood, OSB or Waferboard ≤ 20 mm	Common, spiral or Ring Nails	150 mm o.c. along edges and 300mm oc along intermediate supports	63	81
	14-gauge staples		63	81
Plywood, OSB or Waferboard > 20 mm	Common, spiral or Ring Nails	75 mm o.c. along edges and 300mm oc along intermediate supports	63	81
	14-gauge staples		63	81

Anchor Bolt Spacing	Number of floors Supported	Max. Spacing along Brace Wall Band
Anchor Bolt Diameter 12.7mm	1	2.4
	2	1.8
	3	1.3
Anchor Bolt Diameter 15.9mm	1	2.4
	2	1.8
	3	1.3

Number of nails each side of double plate	1	2	3
1	2	3	3
2	5	7	7
3	8	11	11