

SCHEDULE A-4

Permit Application

I / We hereby apply under Part 14 of the *Local Government Act* for a;

☒ Development Variance Permit

☐ Temporary Use Permit

☐ Development Permit

An Application Fee in the amount of \$ 1300.00 as stipulated in FVRD Application Fees Bylaw No. 1231, 2013 must be paid upon submission of this application.

Civic Address 43836 Loch Road, Lake Errock BC PID 006-668-054

Legal Description Lot 127 Block _____ Section 22 Township 24 Range _____ Plan NWP31743

The property described above is the subject of this application and is referred to herein as the 'subject property.' This application is made with my full knowledge and consent. I declare that the information submitted in support of the application is true and correct in all respects.

Owner's
Declaration

Name of Owner (print) Denise M Rempel	Signature of Owner 	Date 5/18/2020
Name of Owner (print) Jeffrey A Rempel	Signature of Owner 	Date 5/18/2020

Owner's
Contact
Information

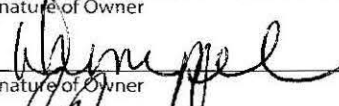
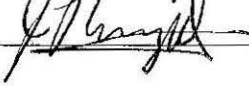
Address 43830 Loch Road		City Lake Errock
Email		Postal Code V0M 1N0
Phone	Cell	Fax

Office Use Only	Date	File No.
	Received By	Folio No.
	Receipt No.	
	Fees Paid: \$	

Agent

I hereby give permission to CLAIRE SEMOUR to act as my/our agent in all matters relating to this application.


Only complete this section if the applicant is NOT the owner.

Signature of Owner 	Date 5/20/20
Signature of Owner 	Date 5/20/20

Agent's contact information and declaration

Name of Agent <u>CLAIRE SEMOUR</u>		Company <u>LAKY DEVELOPMENTS</u>
Address <u>Box 113</u>		City <u>DELOCHE</u>
Email		Postal Code <u>V0M 1G0</u>
Phone	Cell	Fax

I declare that the information submitted in support of this application is true and correct in all respects.

Signature of Agent 	Date <u>MAY 28, 2020</u>
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Development Details

Property Size 8150 sqft Present Zoning RS-1

Existing Use Residential

Proposed Development to add a raised hallway between two houses

Proposed Variation / Supplement existing application approved is construction of new residence next to another residence without any connecting structure, the variation is to add a connecting hallway on the 2nd floor

(use separate sheet if necessary)

Reasons in Support of Application - With the hallway emergency egress from one house will be increased by 100%. Emergency egress from the upper floor of the second house will also be increased by 100%

- Our elderly parents will be at less risk of falling due to a reduced amount of stairs and doors and exterior elements to contend with while making their way between the dining room and their bedrooms

- My wife Denise is in remission from cancer after two years of chemo (see additional page) **PAGE 2B**

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Page 2B

Reasons in support of application (continued)

Treatments which has severely weakened her. Our hope is that with easy access to our new gym, she will be able to re-strengthen herself and enjoy her senior years after some 50 years of hard work.

After three hip replacements and five hip surgeries, not climbing the many stairs would give her a very welcomed relief.

**Riparian
Areas
Regulation**

Please indicate whether the development proposal involves residential, commercial, or including vegetation removal or alteration; soil disturbance; construction of buildings and structures; creation of impervious or semi-pervious surfaces; trails, roads, docks, wharves, bridges and, infrastructure and works of any kind – within:

yes
☐

no
☒

30 metres of the high water mark of any water body

yes
☐

no
☒

a ravine or within 30 metres of the top of a ravine bank

“Water body” includes; 1) a watercourse, whether it usually contains water or not; 2) a pond, lake, river, creek, or brook; 3) a ditch, spring, or wetland that is connected by surface flow to 1 or 2 above.

Under the *Riparian Areas Regulation* and the *Fish Protection Act*, a riparian area assessment report may be required before this application can be approved.

**Contaminated
Sites Profile**

Pursuant to the *Environmental Management Act*, an applicant is required to submit a completed “Site Profile” for properties that are or were used for purposes indicated in Schedule 2 of the *Contaminated Sites Regulations*. Please indicate if:

yes
☐

no
☒

the property has been used for commercial or industrial purposes.

If you responded ‘yes,’ you may be required to submit a Site Profile. Please contact FVRD Planning or the Ministry of Environment for further information.

**Archaeological
Resources**

Are there archaeological sites or resources on the subject property?

yes
☐

no
☒

I don't know
☐

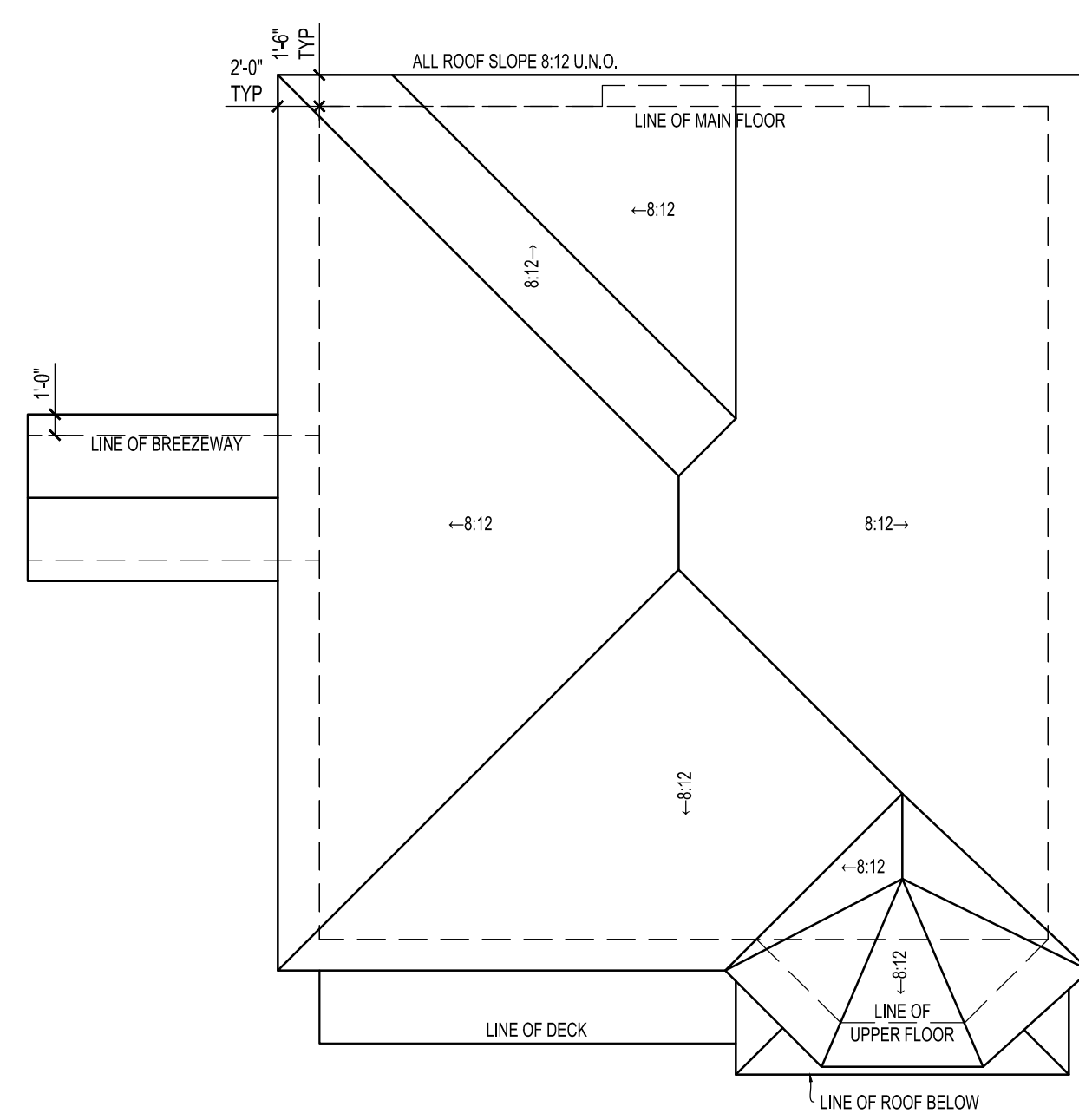
If you responded ‘yes’ or ‘I don’t know’ you may be advised to contact the Archaeology Branch of the Ministry of Tourism, Sport and the Arts for further information.

Required Information

When providing Application Forms to the applicant, Regional District staff shall indicate which of the following attachments are required for this application. **Additional information may also be required at a later date.**

	Required	Received	Details
Location Map			Showing the parcel (s) to which this application pertains and uses on adjacent parcels
Site Plan			Reduced sets of metric plans
At a scale of:			North arrow and scale
1: _____			Dimensions of property lines, rights-of-ways, easements
			Location and dimensions of existing buildings & setbacks to lot lines, rights-of-ways, easements
			Location and dimensions of proposed buildings & setbacks to lot lines, rights-of-ways, easements
			Location of all water features, including streams, wetlands, ponds, ditches, lakes on or adjacent to the property
			Location of all existing & proposed water lines, wells, septic fields, sanitary sewer & storm drain, including sizes
			Location, numbering & dimensions of all vehicle and bicycle parking, disabled persons' parking, vehicle stops & loading
			Natural & finished grades of site, at buildings & retaining walls
			Location of existing & proposed access, pathways
			Above ground services, equipment and exterior lighting details
			Location & dimensions of free-standing signs
			Storm water management infrastructure and impermeable surfaces
			Other:
Floor Plans			Uses of spaces & building dimensions
			Other:
Landscape Plan			Location, quantity, size & species of existing & proposed plants, trees & turf
Same scale as site plan			Contour information (_____ metre contour intervals)
			Major topographical features (water course, rocks, etc.)
			All screening, paving, retaining walls & other details
			Traffic circulation (pedestrian, automobile, etc.)
			Other:
Reports			Geotechnical Report
			Environmental Assessment
			Archaeological Assessment
			Other:

The personal information on this form is being collected in accordance with Section 26 of the *Freedom of Information and Protection of Privacy Act*, RSBC 1996 Ch. 165 and the *Local Government Act*, RSBC 2015 Ch. 1. It will only be collected, used and disclosed for the purpose of administering matters with respect to planning, land use management and related services delivered, or proposed to be delivered, by the FVRD. Questions about the use of personal information and the protection of privacy may be directed to the FVRD Privacy Officer at 45950 Cheam Avenue, Chilliwack, BC V2P 1N6, Tel: 1-800-528-0061 FOI@fvrd.ca.



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

ZONING ANALYSIS REVIEW		
LEGAL DESCRIPTION: LOT 127, PLAN NWP31743, SEC 22, TOWNSHIP 24, NEW WESTMINSTER LAND DISTRICT		
ZONING BYLAW:	RS-1	
CIVIC ADDRESS:	43836 LOCH RD. LAKE ERROCK, B.C.	
FRONT SETBACK:	REQUIRED 6.00M	PROPOSED 6.88M
REAR SETBACK:	6.00M	23.13M
SIDE SETBACK: (right)	1.50M	2.61M
SIDE SETBACK: (left)	1.50M	2.29M
MAXIMUM HEIGHT	11.00M @ EAVE 9.00M @ EAVE	10.57M 6.60M @ EAVE
LOT COVERAGE:	40.00%	19.33%
BUILDING AREA:	1,575 SQ.FT.	
LOT AREA:	8150 SQ.FT.	

- PROPOSED FINISHED GRADE (M)
- EXISTING GRADE (M)

NOTE:
BUILDER AND/OR OWNER IS TO VERIFY ALL ON SITE CONDITIONS, DIMENSIONS AND STRUCTURE PRIOR TO CONSTRUCTION. 4TH DIMENSION DESIGN & DRAFTING SERVICES DOES NOT ACCEPT ANY RESPONSIBILITY FOR DISCREPANCIES BETWEEN THESE DRAWINGS AND ON SITE CONDITIONS.

PROJECT TITLE:
43836 LOCH RD.
LAKE ERROCK, BC



4TH DIMENSION DESIGN + DRAFTING

33082 1ST AVE. MISSION, BC, V2V 1G2
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CLIENT:
REMPEL RESIDENCE

SHEET TITLE:
SITE PLAN
ROOF PLAN
ZONING ANALYSIS REVIEW

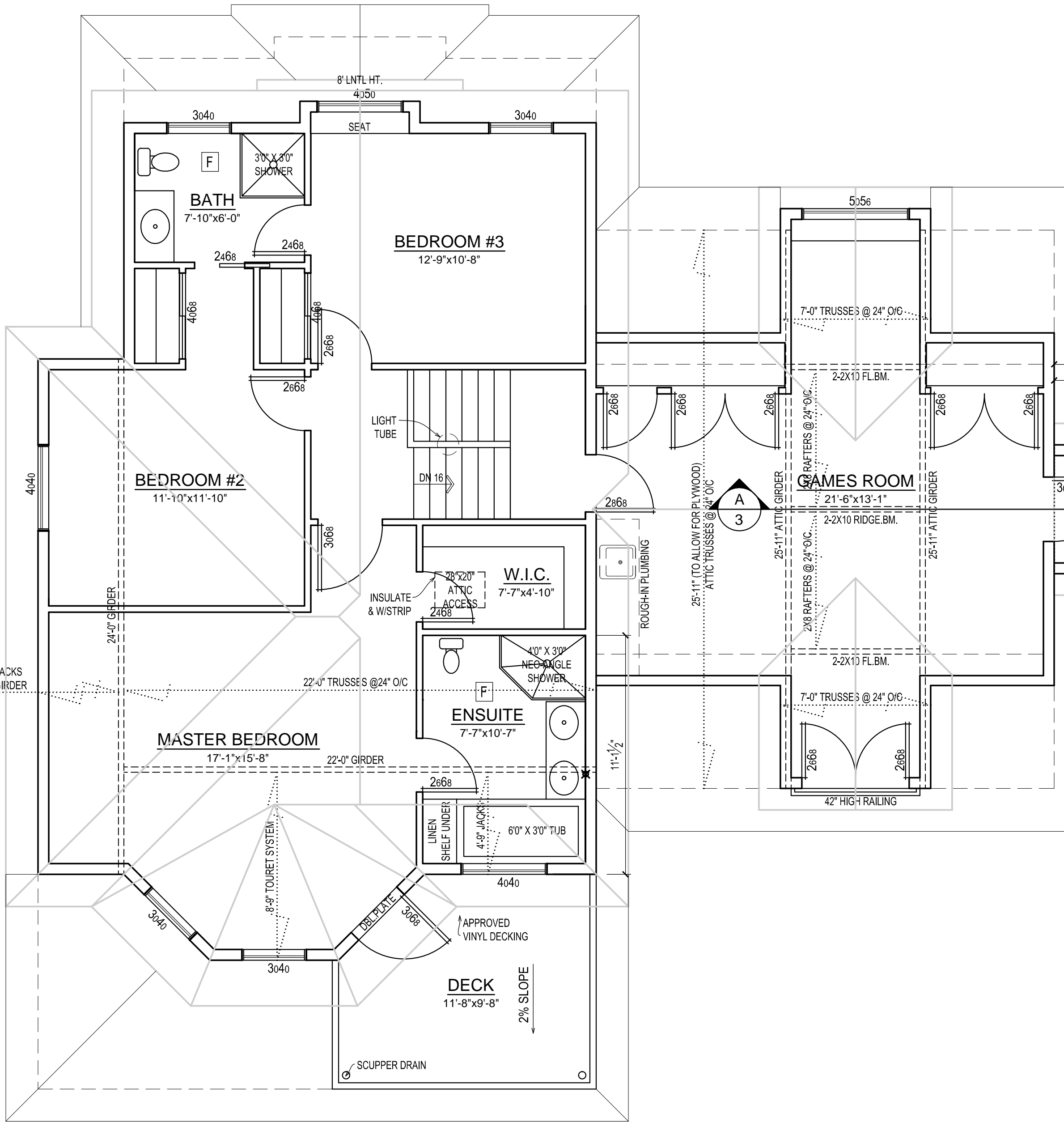
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02.19.2020
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RN-19-119
DESIGNED/CHECKED:
JM
DRAWN:
MJ

SITE PLAN
979,516 SQ.FT.
SCALE: 1/128"=1'-0"

EXISTING RESIDENCE PLAN

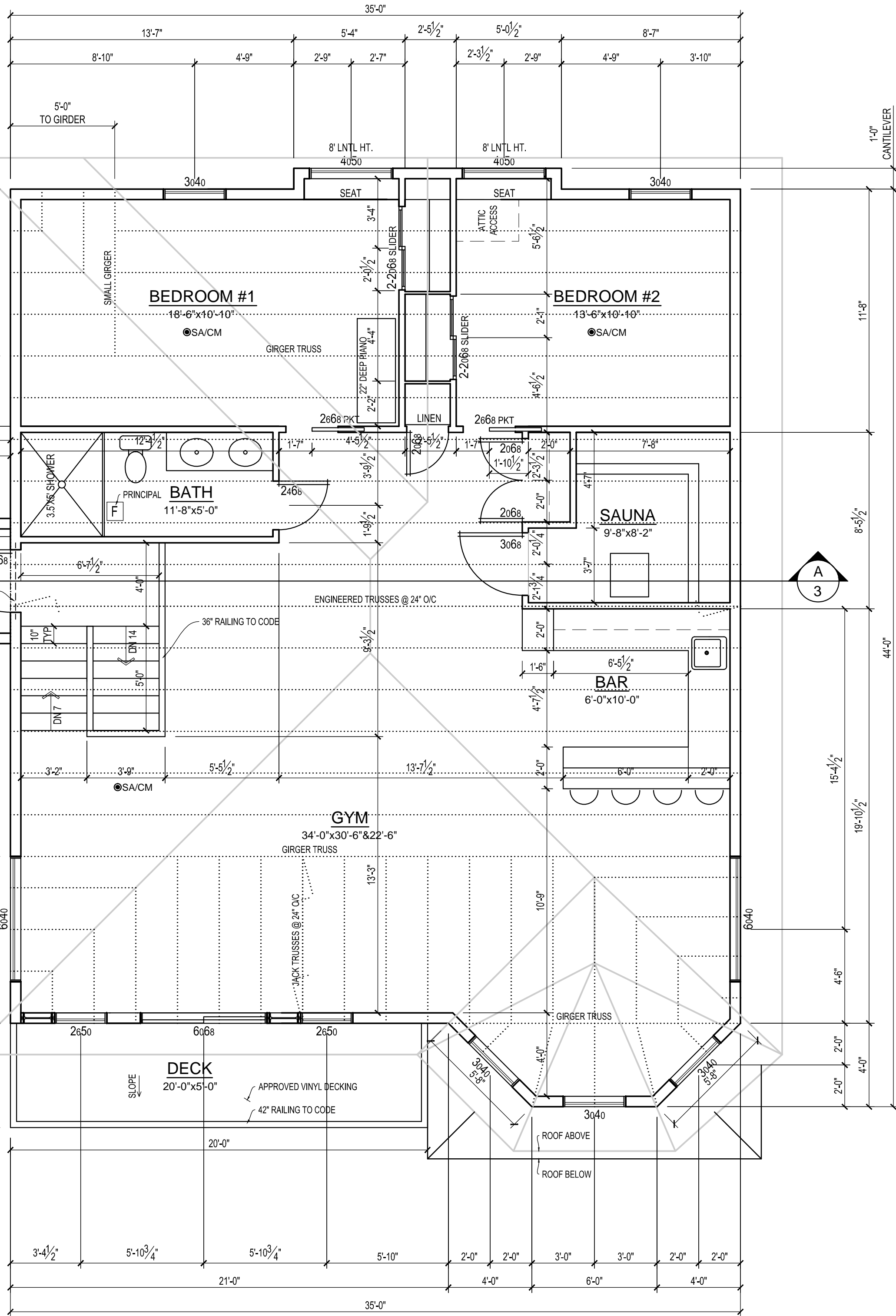
SCALE: 1/4"=1'-0"



NOTE:
ALL EXTERIOR WINDOW HEADERS
TO BE 2"PLY 2x10 #2 SPF
HEADER HEIGHT 6-11" ABOVE SUBFLOOR
(UNLESS NOTED OTHERWISE)
UPPER FLOOR CEILING HEIGHT TO BE 8'-0" 3/4"
(TO MATCH EXISTING)

UPPER FLOOR PLAN

SCALE: 1/4"=1'-0"



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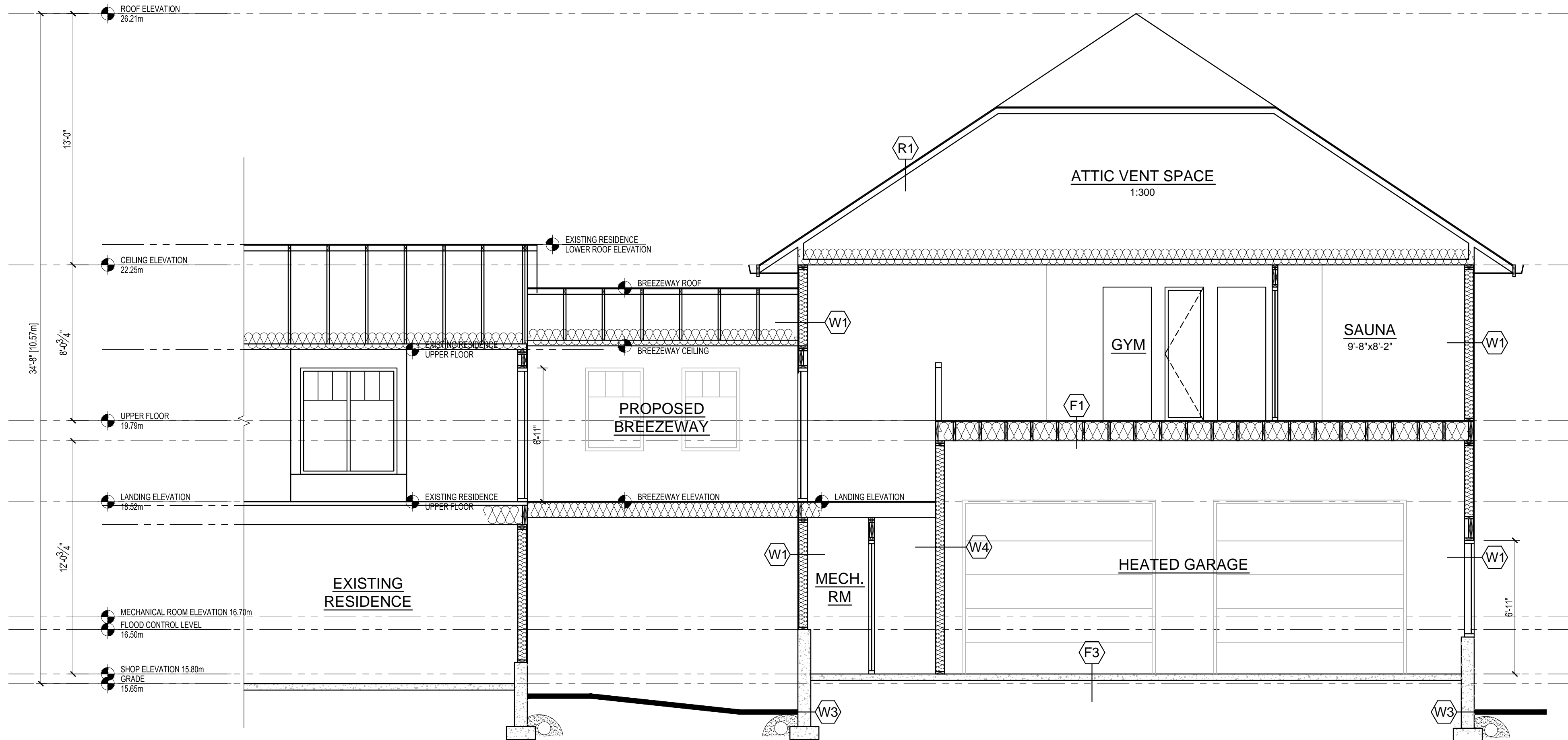
REV.	DATE	DESCRIPTION

REMPER RESIDENCE

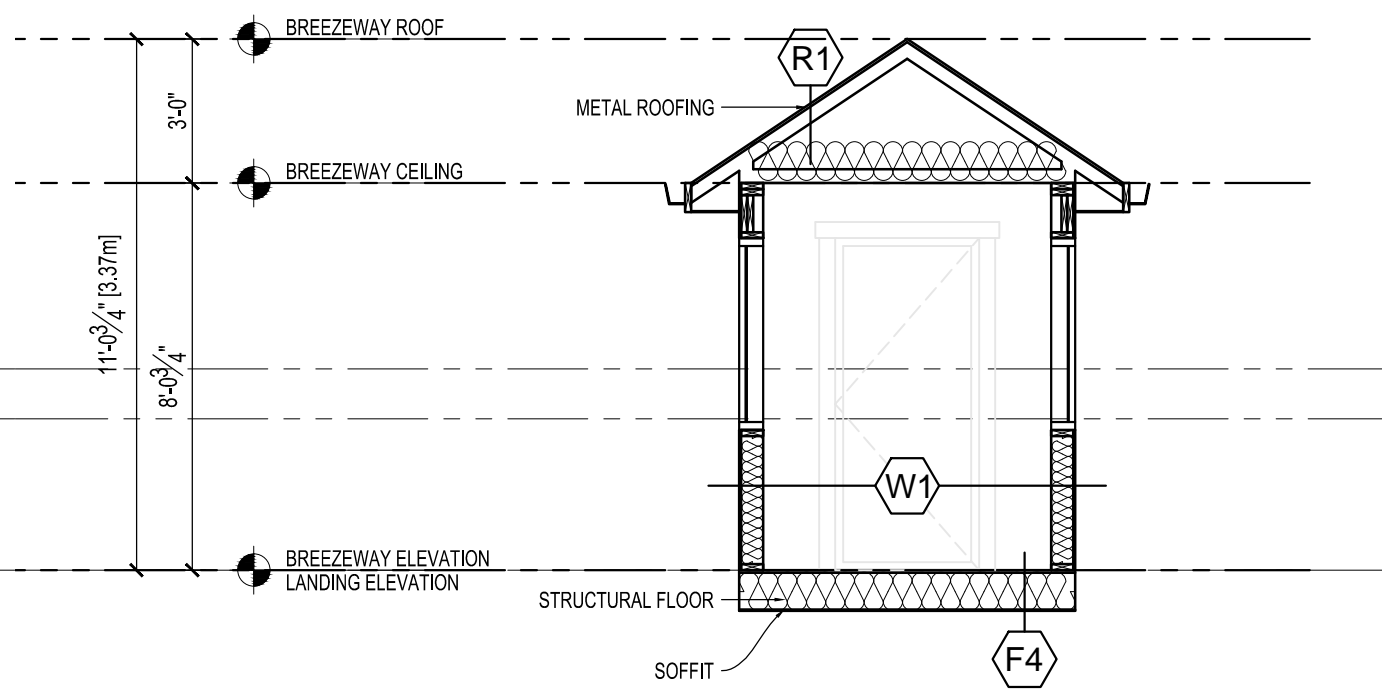
MAIN FLOOR PLAN
UPPER FLOOR PLAN

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SECTION A
SCALE: 1/4"=1'-0"



SECTION B
SCALE: 1/4"=1'-0"

SPECIFICATIONS

WALL ASSEMBLIES

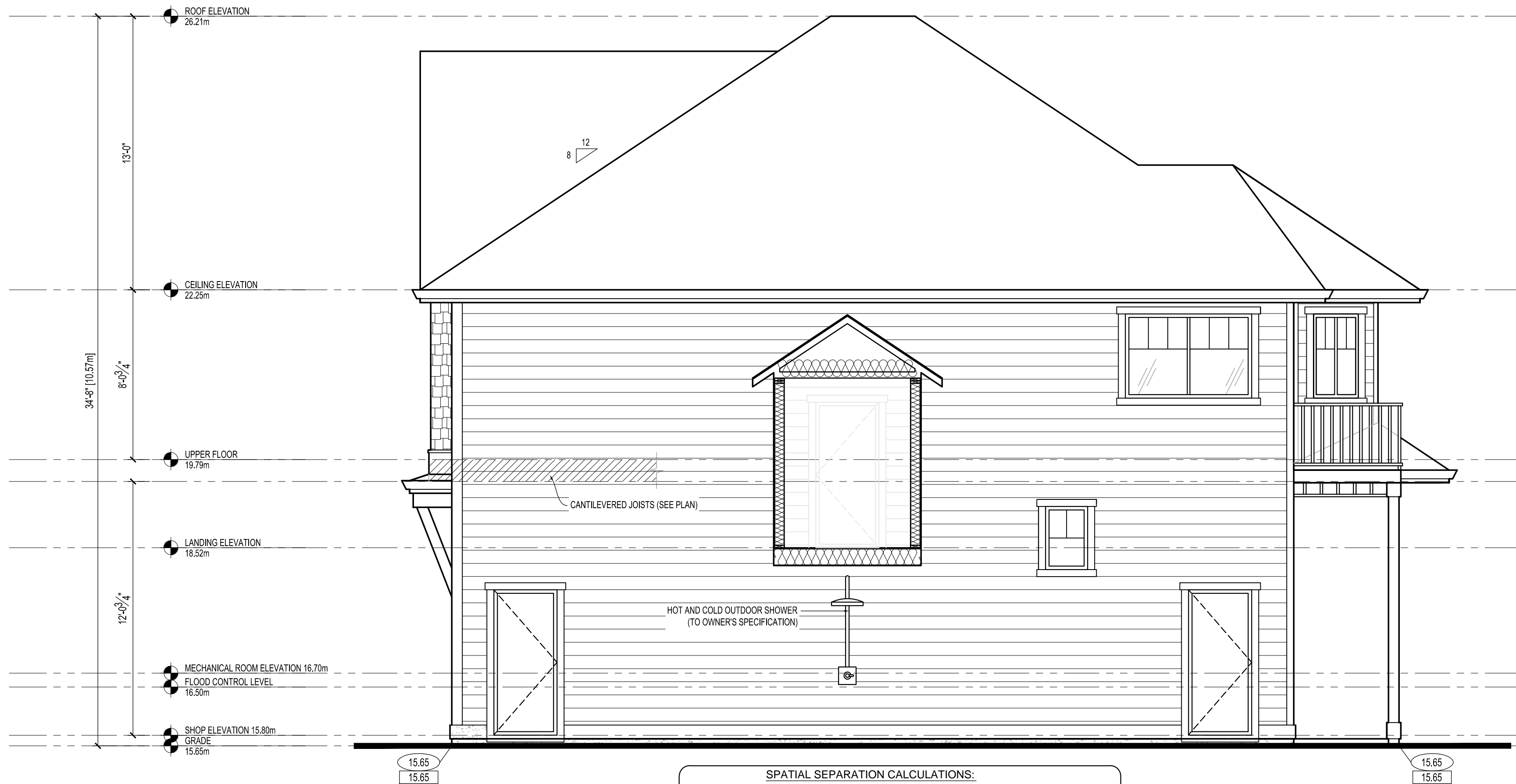
- W1** HARDIE BOARD
RAINSCREEN (SEE DETAILS)
15LB. BUILDING PAPER
1/2" PLYWOOD SHEATHING
2x6 STUDS @ 16" O.C.
R-20 BATT INSULATION
6 MIL POLY V.B.
1/2" PAINTED GYPROC
- W2** 2x4 STUD PARTITION WALL
1/2" PAINTED GYPROC BIS
- W3** 8" CONC. WALL
15M REINF. @24" O.C E.W. ON
18x18x8 CONC STRIP FOOTING
ASPHALT WATERPROOFING BIS
- W4** 2x4/6 STUD PARTITION WALL
R-20 BATT INSULATION
1/2" PAINTED GYPROC BIS
(5/8" @ GARAGE)

FLOOR ASSEMBLIES

- F1** 5/8" T&G PLY SHEATHING
(GLUED AND SCREWED)
11 7/8" TJI FLOOR JOISTS
R-40 BATT INSULATION
1/2" GYPROC
- F2** APPROVED VINYL DECKING
5/8" T&G PLY DECKING
(GLUED AND SCREWED)
2X10 P.T. FLOOR JOISTS
- F3** 4" CONCRETE GARAGE SLAB
REINFORCED W/ W.W.M.
1% MIN. SLOPE TO ENTRY
6 MIL POLY V.B.
MIN. 5" GRAVEL BASE
- F4** 5/8" T&G PLY SHEATHING
(GLUED AND SCREWED)
2X10 FLOOR JOISTS
R-32 BATT INSULATION
SOFFIT

ROOF ASSEMBLIES

- R1** ASPHALT SHINGLE ROOFING
15LB. BUILDING PAPER
1/2" PLYWOOD SHEATHING
ENG. TRUSSES @ 24" O.C.
14.35" BLOWN-IN INSULATION
6 MIL POLY V.B.
5/8" GYPROC



LEFT SIDE ELEVATION
SCALE: 1/4"=1'-0"

SPATIAL SEPARATION CALCULATIONS:
WALL AREA = 866.17 SQ. FT.
MAX. ALLOWABLE UNPROTECTED OPENINGS @ 7.73% = 66.98 SQ. FT.
PROPOSED UNPROTECTED OPENINGS = 26.00 SQ. FT. (3.00%)

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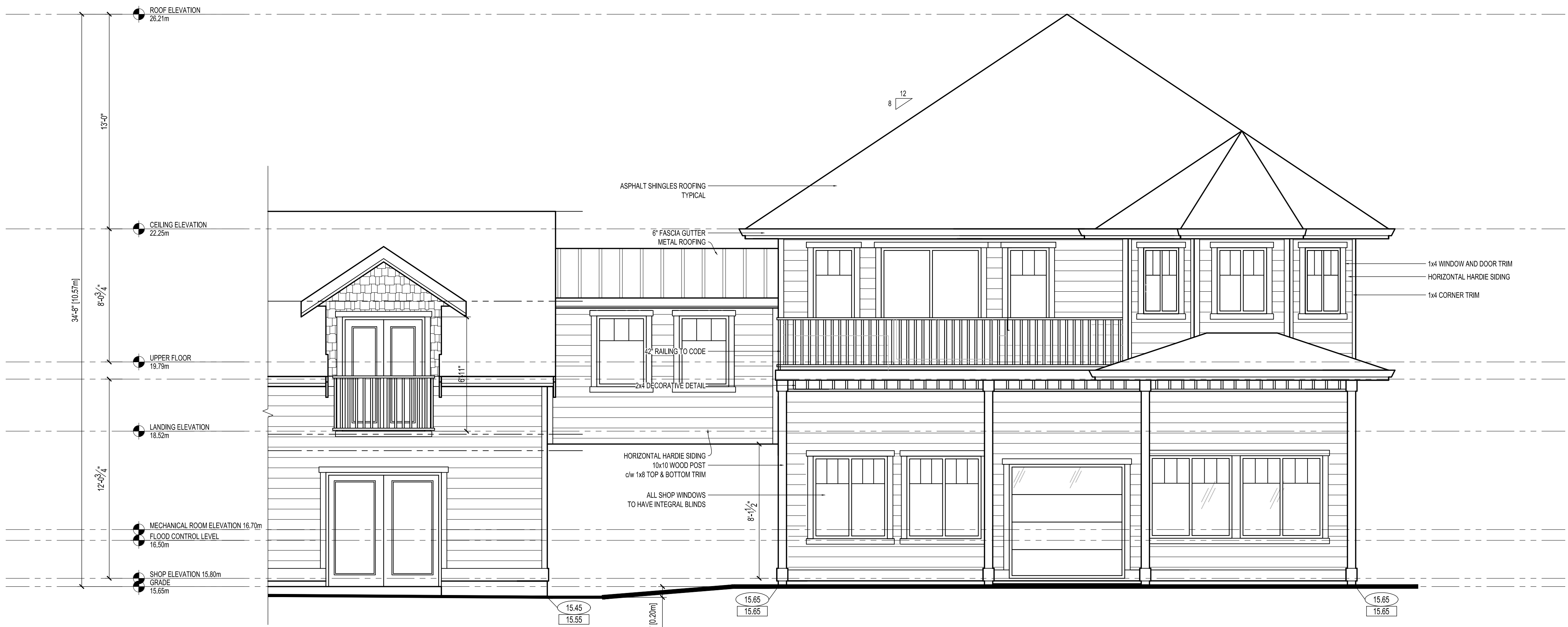
SECTION A
SECTION B
LEFT SIDE ELEVATION

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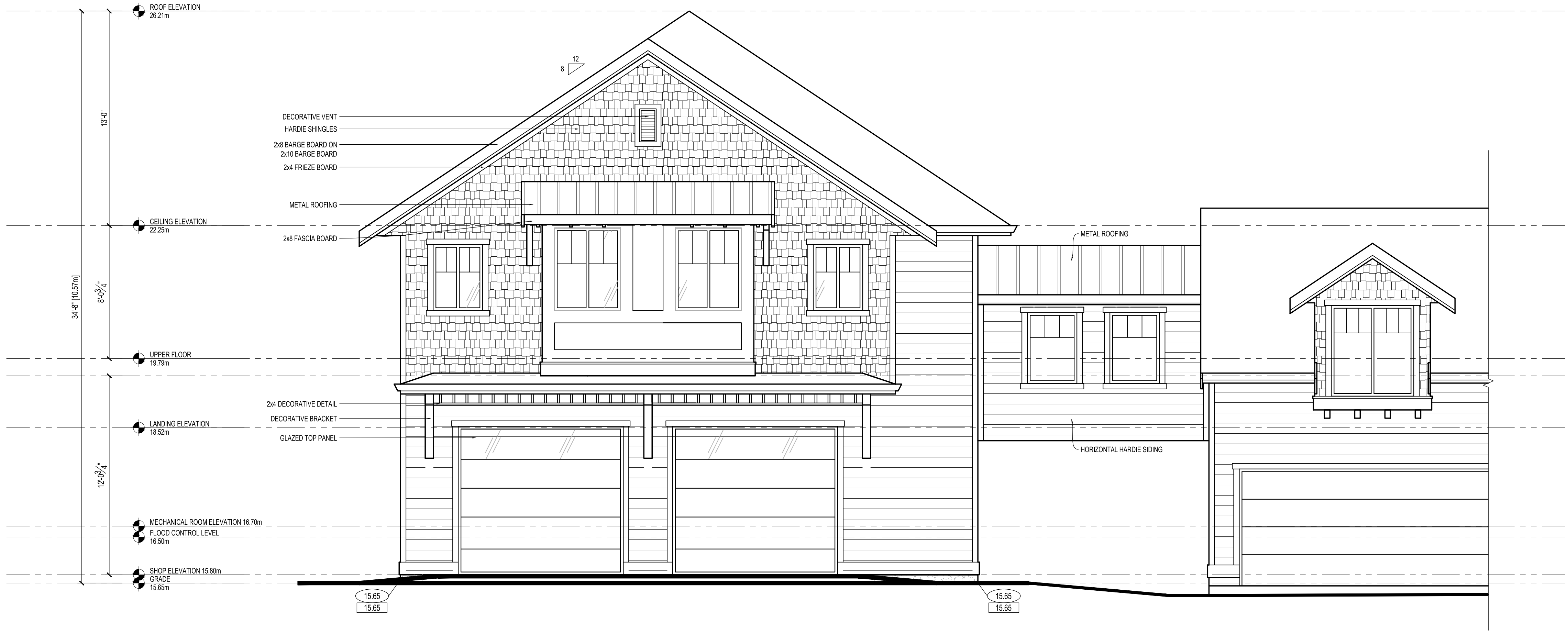
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FRONT ELEVATION

SCALE: 1/4"=1'-0"



REAR ELEVATION

SCALE: 1/4"=1'-0"

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SHEET TITLE:
ELEVATIONS

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DATE:
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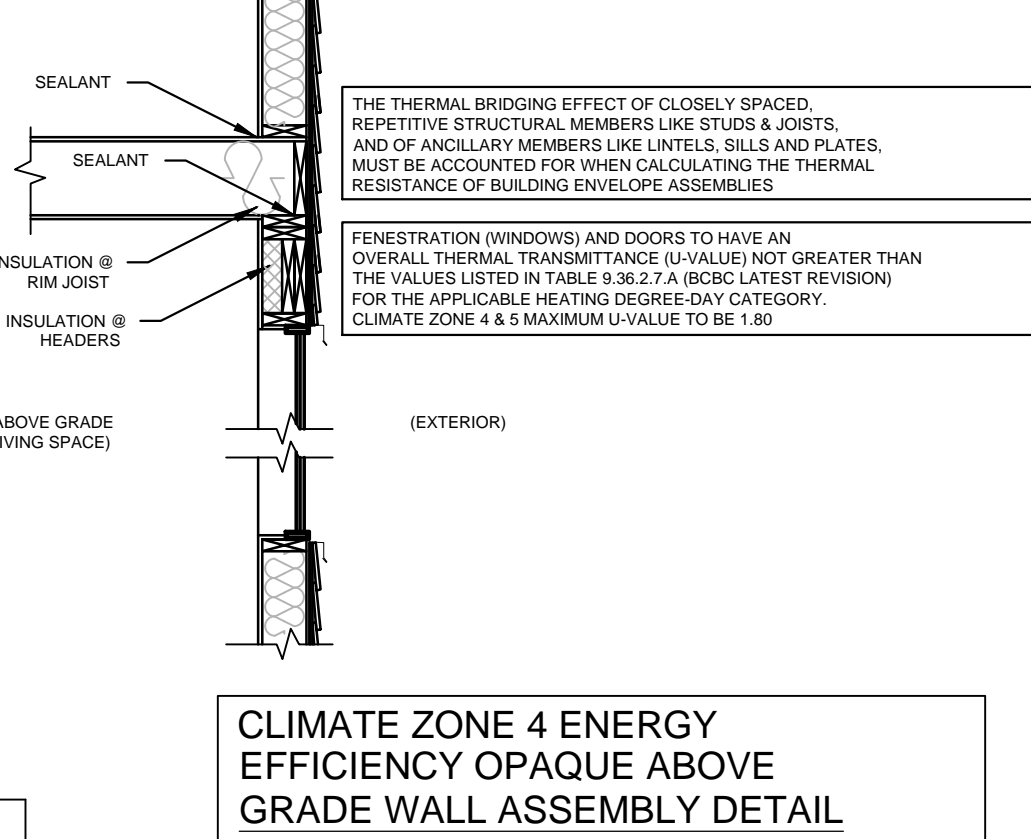
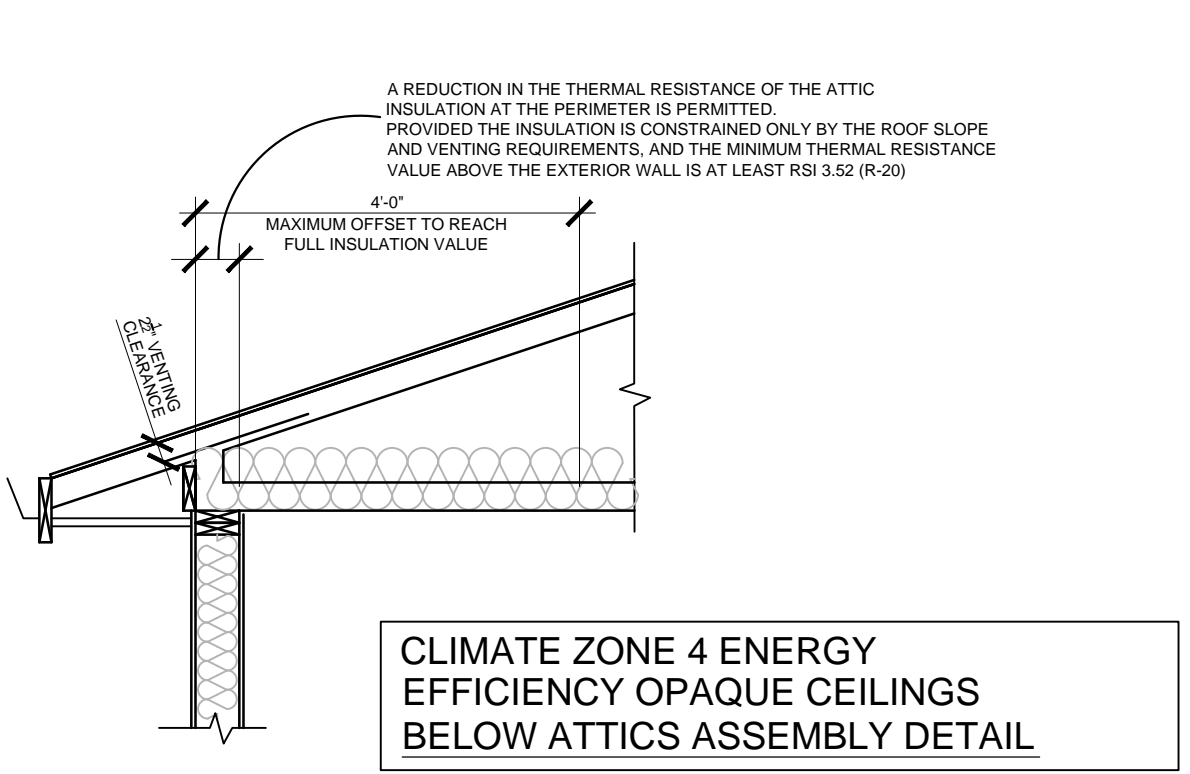
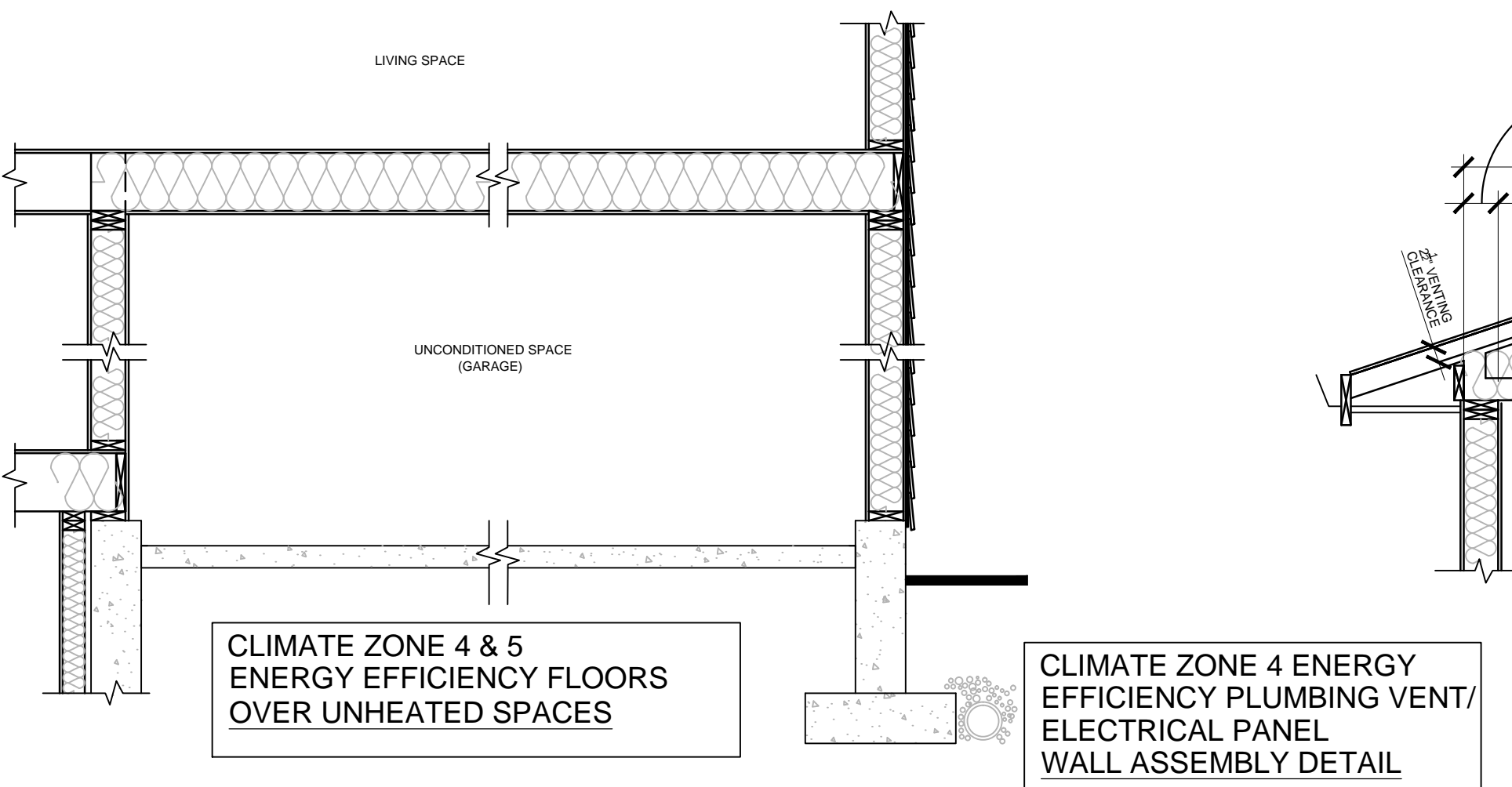
FLOORS OVER UNHEATED SPACES (HARDWOOD FLOORING)		
DESCRIPTION	NOMINAL	EFFECTIVE
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 12" O/C	RSI 4.93 (R-28)	RSI 4.06 (R-23.0)
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.93 (R-28)	RSI 4.14 (R-23.5)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. FLOORING MATERIAL- HARDWOOD	0.12	
3. 5/8" PLYWOOD SUBFLOOR	0.14	
4. 3/4" AIR BARRIER	0.18	
5. POLYETHYLENE	0.10	
6. 5/8" GYPSUM CEILING BOARD	0.03	
7. EXTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE (12" O/C FRAMING)		RSI 4.75 (R-27.0)
TOTAL EFFECTIVE INSULATION VALUE (16" O/C FRAMING)		RSI 4.83 (R-27.4)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

FLOORS OVER UNHEATED SPACES (CARPET FLOORING)		
DESCRIPTION	NOMINAL	EFFECTIVE
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 12" O/C	RSI 4.93 (R-28)	RSI 4.06 (R-23.0)
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.93 (R-28)	RSI 4.14 (R-23.5)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. FLOORING MATERIAL- CARPET & RUBBER PAD	0.22	
3. 5/8" PLYWOOD SUBFLOOR	0.14	
4. 3/4" AIR BARRIER	0.18	
5. POLYETHYLENE	0.10	
6. 5/8" GYPSUM CEILING BOARD	0.03	
7. EXTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE (12" O/C FRAMING)		RSI 4.85 (R-27.5)
TOTAL EFFECTIVE INSULATION VALUE (16" O/C FRAMING)		RSI 4.93 (R-28.0)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

FLOORS OVER UNHEATED SPACES (CERAMIC TILE FLOORING)		
DESCRIPTION	NOMINAL	EFFECTIVE
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 12" O/C	RSI 4.93 (R-28)	RSI 4.06 (R-23.0)
R-28 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.93 (R-28)	RSI 4.14 (R-23.5)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. FLOORING MATERIAL- CERAMIC TILE	0.005	
3. 1/4" PLYWOOD SUBFLOOR	0.05	
4. 5/8" PLYWOOD SUBFLOOR	0.14	
5. 3/4" AIR BARRIER	0.18	
6. POLYETHYLENE	0.10	
7. 5/8" GYPSUM CEILING BOARD	0.03	
8. EXTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE (12" O/C FRAMING)		RSI 4.685 (R-26.55)
TOTAL EFFECTIVE INSULATION VALUE (16" O/C FRAMING)		RSI 4.765 (R-27.05)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

ABOVE GRADE WALL ASSEMBLY (6.35MM FIBRE-CEMENT BOARD SIDING)		
DESCRIPTION	NOMINAL	EFFECTIVE
3" XPS INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 2.64 (R-15)	RSI 2.52 (R-14.3)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. 6.35MM FIBRE-CEMENT BOARD SIDING	0.003	
3. 1/2" AIR SPACE FOR RAIN SCREEN	0.16	
4. SHEATHING MEMBRANE	0.11	
5. 1/2" PLYWOOD SHEATHING	0.11	
6. 2 1/2" AIR CAVITY	0.16	
7. POLYETHYLENE	0.10	
8. 1/2" GYPSUM WALL BOARD	0.08	
9. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.203 (R-18.18)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.78 (R-15.8)

SPECIFIC REQUIREMENTS	
●	EFFECTIVE INSULATION OF CEILINGS, WALLS, AND FLOORS MEET THE REQUIREMENTS OF TABLE 9.36.2.6.A AND TABLE 9.36.2.6.B FOR THE CORRECT CLIMATE ZONE
●	THE THERMAL CHARACTERISTICS OF WINDOWS, DOOR AND SKYLIGHTS MEET THE REQUIREMENTS OF TABLE 9.36.2.7.A, B AND C FOR CORRECT CLIMATE ZONE
●	EFFECTIVE INSULATION OF FOUNDATIONS MEET THE REQUIREMENTS OF TABLE 9.36.2.8.A OR B FOR THE CORRECT CLIMATE ZONE
●	DUCTS LOCATED OUTSIDE THE THERMAL ENCLOSURE ARE SEALED AND INSULATED TO THE EXTERIOR WALL INSULATION REQUIREMENTS
●	DAMPERS ARE INSTALLED AT AIR INLETS AND EXHAUSTS WHERE REQUIRED
●	PIPING FOR HEATING OR COOLING SYSTEMS IS LOCATED WITHIN THE THERMAL ENCLOSURE OR ARE FULLY INSULATED
●	HVAC EQUIPMENT IS LOCATED WITHIN THERMAL ENCLOSURE OR DESIGNATED TO BE INSTALLED OUTSIDE OF THERMAL ENCLOSURE
●	TEMPERATURE CONTROLS ARE INSTALLED ON HEATING AND COOLING EQUIPMENT
●	INDOOR POOLS ARE COVERED OR HAVE AN HRV/DEHUMIDIFIER
●	HVAC & SWH EQUIPMENT MEET MINIMUM PERFORMANCE REQUIREMENTS DETERMINED IN TABLES 9.36.3.10 AND 9.36.4.2
●	SERVICE WATER HEATING PIPES ARE INSULATED AT THE INLET AND OUTLET OF STORAGE TANKS
●	SERVICE WATER HEATERS HAVE TEMPERATURE CONTROLS
●	THE AIR BARRIER DETAILS, AND LOCATIONS HAVE BEEN IDENTIFIED
TEMPERATURE CONTROLS AS PER SECTION 9.36.3.6	
●	TEMPERATURE CONTROLS ARE GENERALLY REQUIRED FOR HEATING AND COOLING EQUIPMENT. THE ACCURACY OF THE CONTROL MUST BE BETTER THAN PLUS OR MINUS 0.5 DEGREES CELSIUS
ENERGY EFFECIENCY REQUIREMENTS	
●	THIS HOME IS DESIGNED TO COMPLY WITH ENERGY EFFICIENCY REQUIREMENTS AND VALUES USING THE PRESCRIPTIVE METHOD FOR CLIMATE 4-LOWER MAINLAND AND SOUTHERN VANCOUVER ISLAND WITH NO H.R.V. (BCBC 2018 LATEST EDITION)



CEILING BELOW ATTICS		
DESCRIPTION	NOMINAL	EFFECTIVE
35MM (1 1/4") GLASS FIBRE LOOSE FILL INSULATION FOR ATTICS 2x4 BOTTOM CHORD @ 24" O/C	RSI 7.04 (R-40)	RSI 6.67 (R-37.9)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. POLYETHYLENE	0.10	
3. 5/8" GYPSUM CEILING BOARD	0.11	
4. INTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE		RSI 6.91 (R-39.2)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR CEILINGS BELOW ATTICS		RSI 6.91 (R-39.2)

BELOW GRADE WALL ASSEMBLY		
DESCRIPTION	NOMINAL	EFFECTIVE
2" XPS INSULATION OVER 8" POURED-IN-PLACE CONCRETE WALL	RSI 1.76 (R-10)	RSI 1.82 (R-10.3)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. DAMPROOFING	0.21	
2. 1/2" GYPSUM WALL BOARD	0.08	
3. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.23 (R-12.53)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR BELOW GRADE WALLS		RSI 1.99 (R-11.3)

AS PER SECTION 9.36.2.10.-NOTES PERTAINING TO LEAKAGE PATHS IN PROBLEMATIC AREAS	
●	FOUNDATION TO SILL PLATE AND RIM JOISTS
●	ALL JOINTS AT THE TRANSITION BETWEEN THE FOUNDATION WALL AND THE ABOVE GRADE WALL MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS, OR COVERING THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL
●	INTERIOR WALL INTERFACE
●	INTERIOR WALLS THAT MEET EXTERIOR WALLS OR CEILINGS WITH AN INTERIOR PLANE OF AIR TIGHTNESS MUST BE MADE AIR TIGHT BY EITHER SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS, COVERING THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL, OR MAINTAINING THE CONTINUITY OF THE AIR BARRIER SYSTEM THROUGH THE INTERIOR WALL
●	RIM JOIST
●	ALL JOINTS AT THE RIM JOIST ASSEMBLY MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL
●	CANTILEVERED FLOOR
●	CANTILEVERED FLOORS AND FLOORS OVER UNHEATED SPACES /EXTERIOR SPACE MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS AND/OR COVERING THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL
●	WINDOW HEAD
●	THE INTERFACE BETWEEN WINDOW HEAD/JAMB AND WALL ASSEMBLY MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE AIR BARRIER IN THE WALL AND WINDOW. THE REQUIREMENT ALSO APPLIES TO DOORS AND SKYLIGHTS
●	WINDOW SILL
●	THE INTERFACE BETWEEN WINDOW SILL AND WALL ASSEMBLY MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE AIR BARRIER MATERIAL IN THE WALL AND WINDOW. THE REQUIREMENT ALSO APPLIES TO DOORS AND SKYLIGHTS
●	MECHANICAL FLUES AND CHIMNEYS
●	STEEL-LINED CHIMNEYS THAT PENETRATE THE BUILDING ENVELOPE MUST BE MADE AIR TIGHT BY BLOCKING THE VOID BETWEEN REQUIRED CLEARANCES FOR METAL CHIMNEYS AND SURROUNDING CONSTRUCTION WITH SHEET METAL AND SEALANT CAPABLE OF WITHSTANDING HIGH TEMPERATURE
●	PLUMBING STACKS
●	PLUMBING VENT STACK PIPES THAT PENETRATE THE BUILDING ENVELOPE MUST BE MADE AIR TIGHT BY EITHER SEALING THE AIR BARRIER MATERIAL TO THE VENT STACK PIPE WITH A COMPATIBLE MATERIAL OR SHEATHING TAP OR INSTALLING A RUBBER GASKET OR PREFABRICATED ROOF FLASHING AT THE PENETRATION OF THE PLANE OF AIR TIGHTNESS AND SEALING IT TO THE TOP PLATE
●	SKYLIGHTS
●	THE INTERFACE BETWEEN THE SKYLIGHT AND WALL ASSEMBLY MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE AIR BARRIER MATERIAL IN THE WALL AND THE SKYLIGHT
●	WALL TO CEILING
●	ALL JOINTS AT THE TRANSITION BETWEEN THE ABOVE GRADE WALL AND CEILING MUST BE MADE AIR TIGHT BY SEALING ALL JOINTS AND JUNCTIONS BETWEEN THE STRUCTURAL COMPONENTS AND/OR COVERING THE STRUCTURAL COMPONENTS WITH AN AIR BARRIER MATERIAL
●	WALL VENTED DUCTS
●	DUCT PENETRATIONS THROUGH THE BUILDING ENVELOPE MUST HAVE AN AIR TIGHT SEAL
●	ELECTRICAL PENETRATION IN WALLS
●	ELECTRICAL PENETRATIONS IN WALLS, INCLUDING ELECTRICAL OUTLETS, SWITCHES, AND RECESSED FIXTURES THROUGH THE PLANE OF AIR TIGHTNESS MUST BE AIR TIGHT, OPTIONS INCLUDE USING A COMPONENT THAT IS DESIGNED TO BE AIR TIGHT AND SEALING IT TO THE ADJACENT AIR BARRIER MATERIAL, OR BY COVERING THE COMPONENT WITH AN AIR BARRIER MATERIAL AND SEALING IT TO THE ADJACENT AIR BARRIER MATERIAL

WALLS ADJOINING ENCLOSED UN-CONDITIONED SPACE		
DESCRIPTION	NOMINAL	EFFECTIVE
R-20 BATT INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 3.51 (R-20)	RSI 2.36 (R-13.4)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. VINYL CLADDING HOLLOW BACKED	0.11	
3. SHEATHING MEMBRANE	0.11	
4. 1/2" PLYWOOD SHEATHING	0.16	
5. 2 1/2" AIR CAVITY	0.16	
6. POLYETHYLENE	0.08	
7. 1/2" GYPSUM WALL BOARD	0.12	
8. INTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.67 (R-15.17)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.62 (R-14.9)

BELOW GRADE HEATED FLOOR		
DESCRIPTION	NOMINAL	EFFECTIVE
3.5" POURED IN-PLACE CONCRETE SLAB	RSI 2.36 (R-13.4)	RSI 2.42 (R-13.74)
2.5" EXTRUDED POLYSTYRENE INSULATION		
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.16	
2. 3.5" CONCRETE SLAB		
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.58 (R-14.64)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR BELOW GRADE HEATED FLOORS		RSI 2.32 (R-13.2)

BONUS ROOM WALLS ATTIC TRUSS WEB WALLS @ 24" O.C.		
DESCRIPTION	NOMINAL	EFFECTIVE
R-20 BATT INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 3.51 (R-20)	RSI 2.68 (R-15.2)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. INTERIOR AIR FILM	0.12	
2. 12.7MM GYPSUM BOARD INT. FINISH	0.08	
3. 6 MILL POLY SEAL PLASTIC - NEGLIGABLE	0.00	
4. 11MM ORIENTED STRAND BOARD	0.00	
5. AIR CAVITY	0.00	
6. 20MM OR 40MM AIR CAVITIES	0.00	
7. EXTERIOR AIR FILM	0.00	
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.88 (R-16.37)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.78 (R-15.80)

ABOVE GRADE WALL ASSEMBLY (6.35MM FIBRE-CEMENT BOARD SIDING)		
DESCRIPTION	NOMINAL	EFFECTIVE
3" XPS INSULATION IN 2X6 WOOD FRAMING @ 16" O/C	RSI 2.64 (R-15)	RSI 2.52 (R-14.3)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. 6.35MM FIBRE-CEMENT BOARD SIDING	0.003	
3. 1/2" AIR SPACE FOR RAIN SCREEN	0.16	
4. SHEATHING MEMBRANE	0.11	
5. 1/2" PLYWOOD SHEATHING	0.11	
6. 2 1/2" AIR CAVITY	0.16	
7. POLYETHYLENE	0.08	
8. 1/2" GYPSUM WALL BOARD	0.12	
9. INTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE		RSI 3.203 (R-18.18)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR ABOVE GRADE WALLS		RSI 2.78 (R-15.8)

BELOW GRADE WALL ASSEMBLY		
DESCRIPTION	NOMINAL	EFFECTIVE
8" POURED-IN-PLACE CONCRETE WALL	RSI 2.46 (R-14)	RSI 1.91 (R-10.85)
R-14 BATT INSULATION IN 2x4 WOOD FRAMING @ 24" O/C		
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. DAMPROOFING	0.21	
2. 1" AIR SPACE	0.16	
3. 5/8" GYPSUM WALL BOARD	0.08	
4. INTERIOR AIR FILM	0.12	
TOTAL EFFECTIVE INSULATION VALUE		RSI 2.48 (R-14.08)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR BELOW GRADE WALLS		RSI 1.99 (R-11.3)

CEILINGS BELOW CATHEDRAL & FLAT ROOFS		
DESCRIPTION	NOMINAL	EFFECTIVE
R-31 BATT INSULATION IN 2X12 WOOD FRAMING @ 24" O/C	RSI 4.66 (R-31)	RSI 4.62 (R-26.3)
R-31 BATT INSULATION IN 2X10 WOOD FRAMING @ 16" O/C	RSI 4.66 (R-31)	RSI 4.46 (R-25.4)
OTHER BUILDING ENCLOSURE LAYERS THAT CONTRIBUTE TO EFFECTIVE INSULATION:		
1. EXTERIOR AIR FILM	0.03	
2. POLYETHYLENE	0.10	
3. 5/8" GYPSUM CEILING BOARD	0.11	
4. INTERIOR AIR FILM		
TOTAL EFFECTIVE INSULATION VALUE		RSI 4.86 (R-31)
MINIMUM EFFECTIVE THERMAL RESISTANCE FOR FLOORS ABOVE UNHEATED SPACES		RSI 4.67 (R-26.5)

HVAC PERFORMANCE REQUIREMENTS		
EQUIPMENT TYPE	SIZE	PERFORMANCE REQUIREMENT
SPACE HEATING EQUIPMENT		
GAS FIRED FURNACE	LESS THAN 220,000 BTU/Hr (66 kW)	ANNUAL FUEL EFFICIENCY (AFUE) MUST BE GREATER OR EQUAL TO 92%
GAS FIRED BOILER	LESS THAN OR EQUAL TO 300,000 BTU/Hr (66 kW)	ANNUAL FUEL EFFICIENCY (AFUE) MUST BE GREATER OR EQUAL TO 90%
AIR COOLED UNITARY AIR CONDITIONER AND HEAT PUMP SPLIT SYSTEM	LESS THAN OR EQUAL TO 65,000 BTU/Hr (19 kW)	SEASONAL ENERGY EFFICIENCY RATING (SEER) OF 14.5 OR ENERGY EFFICIENCY RATING (EER) OF 11.5
GAS FIRED TANKLESS	LESS THAN 220,000 BTU/Hr (66 kW)	ENERGY FACTOR (EF) MUST BE GREATER THAN OR EQUAL TO 0.8
SERVICE WATER HEATING EQUIPMENT		
ELECTRIC STORAGE	13-71 GAL (50 TO 270L)	STANBY LOSS LESS THAN OR EQUAL TO: 25+ 0.20V (TOP INLET) 45+ 0.20V (BOTTOM INLET) WHERE V=THE TANK VOLUME (IN LITRES)
GAS FIRED STORAGE	LESS THAN 75,000 BTU/Hr (22 kW)	ENERGY FACTOR (EF) MUST BE GREATER THAN OR EQUAL TO 0.67-0.0065V WHERE V=THE TANK VOLUME (IN LITRES)
GAS FIRED TANKLESS	LESS THAN OR EQUAL TO 250,000 BTU/Hr (73.2 kW)	ENERGY FACTOR MUST BE GREATER THAN OR EQUAL TO 0.8

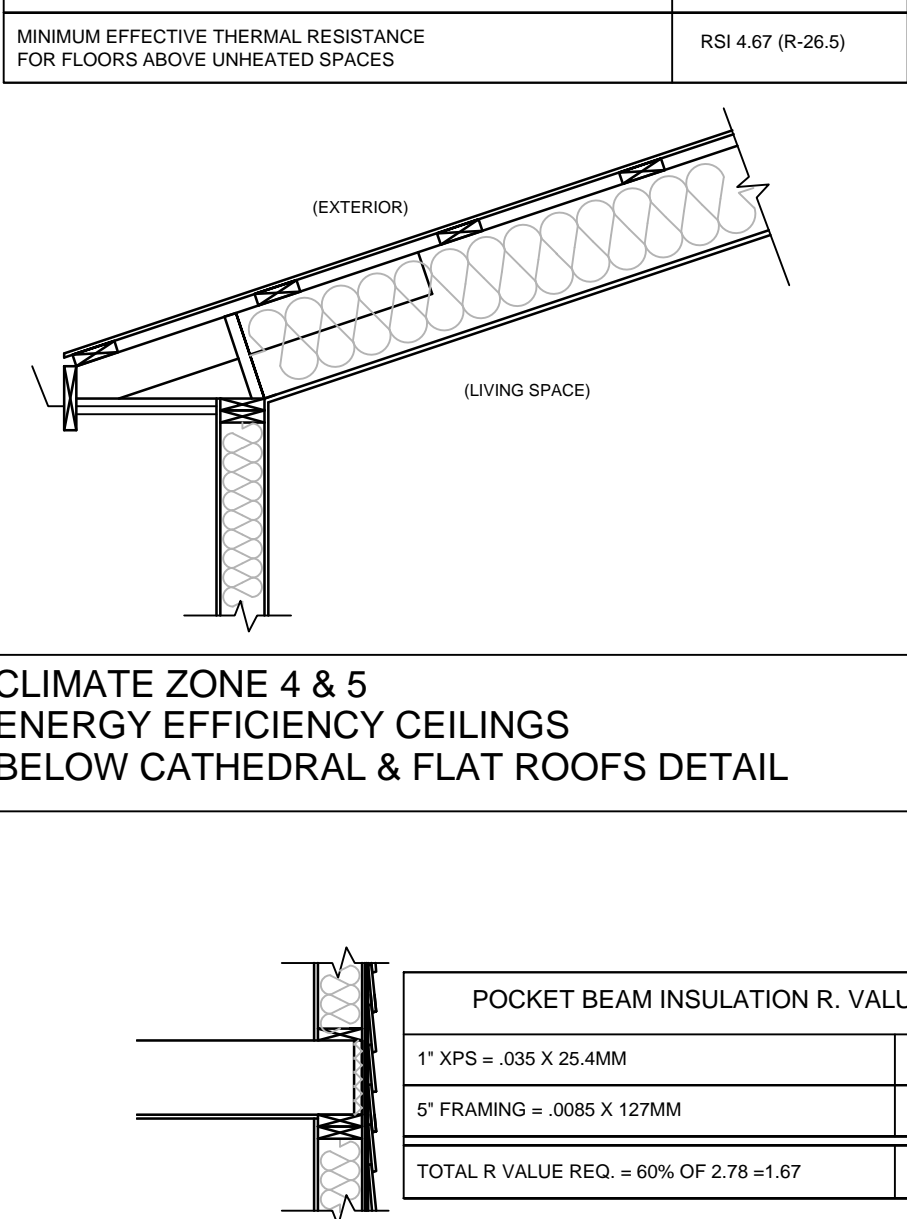
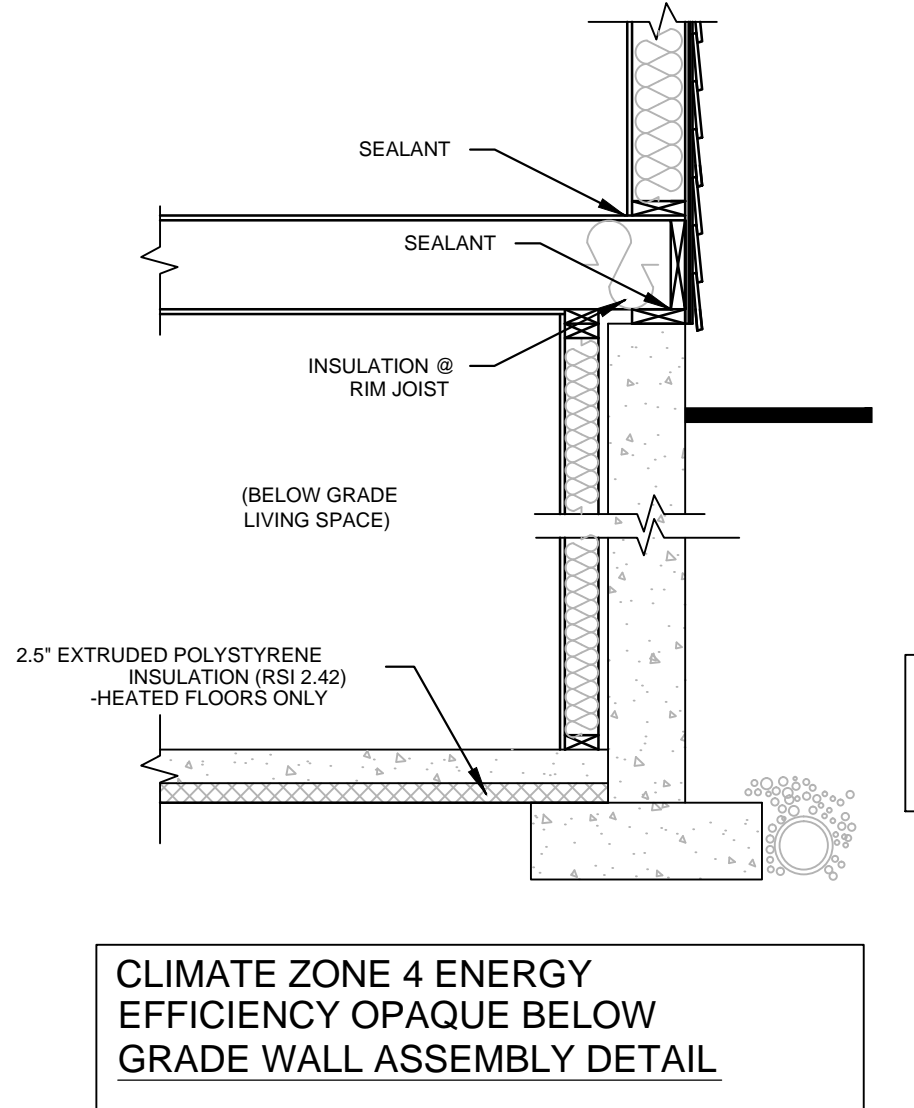
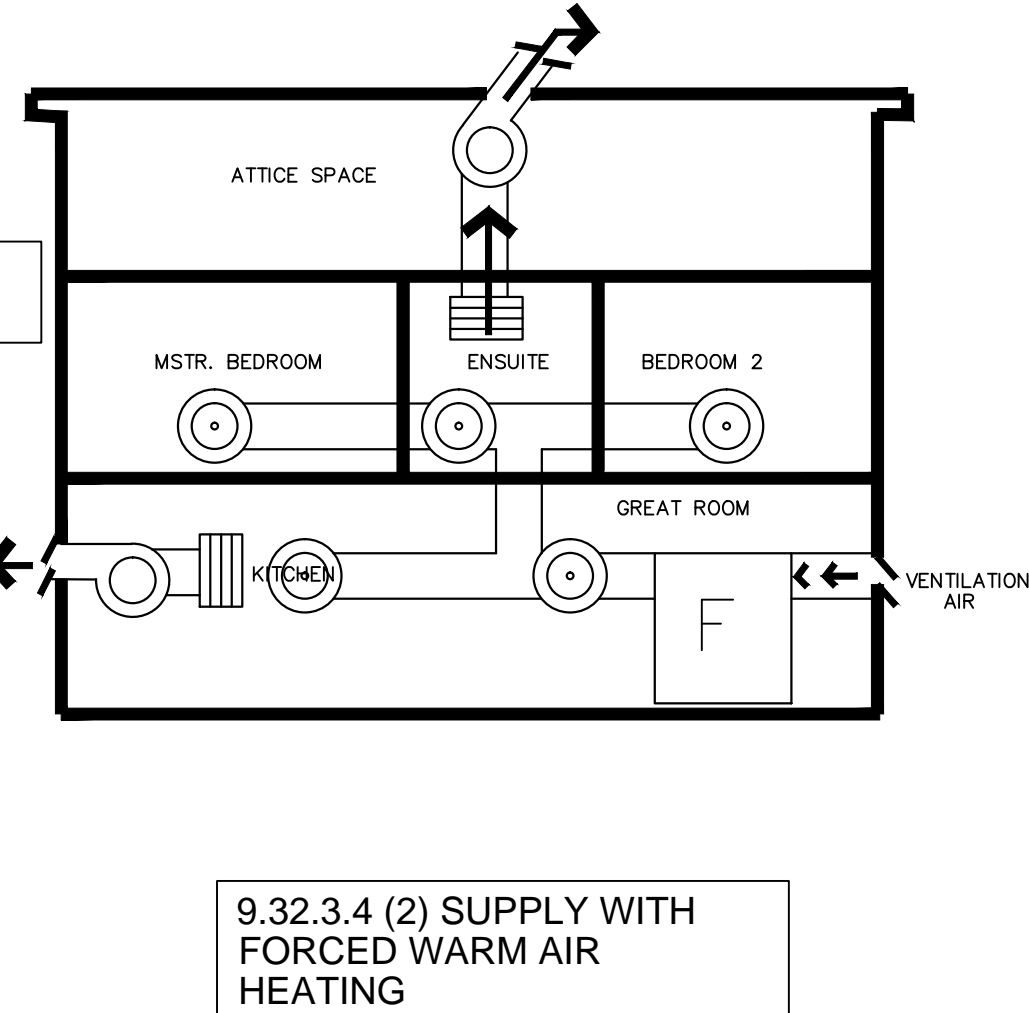
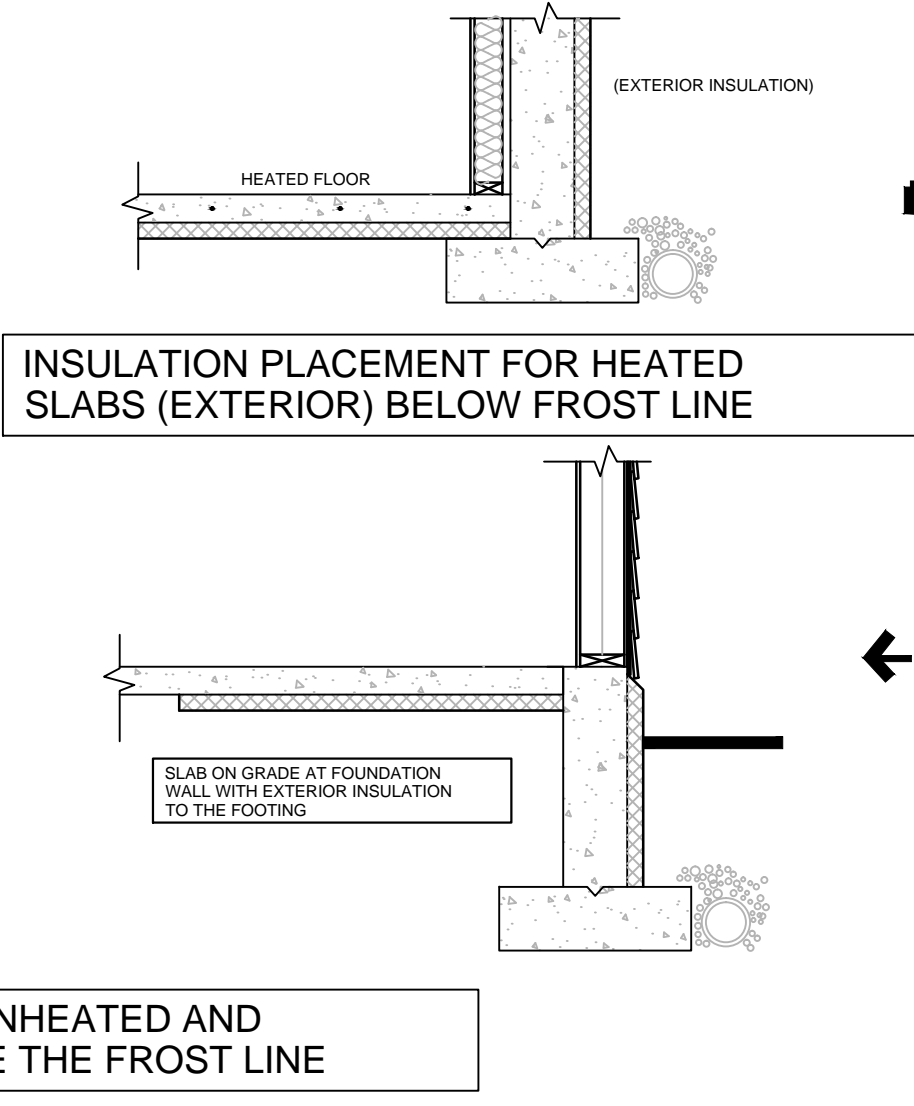
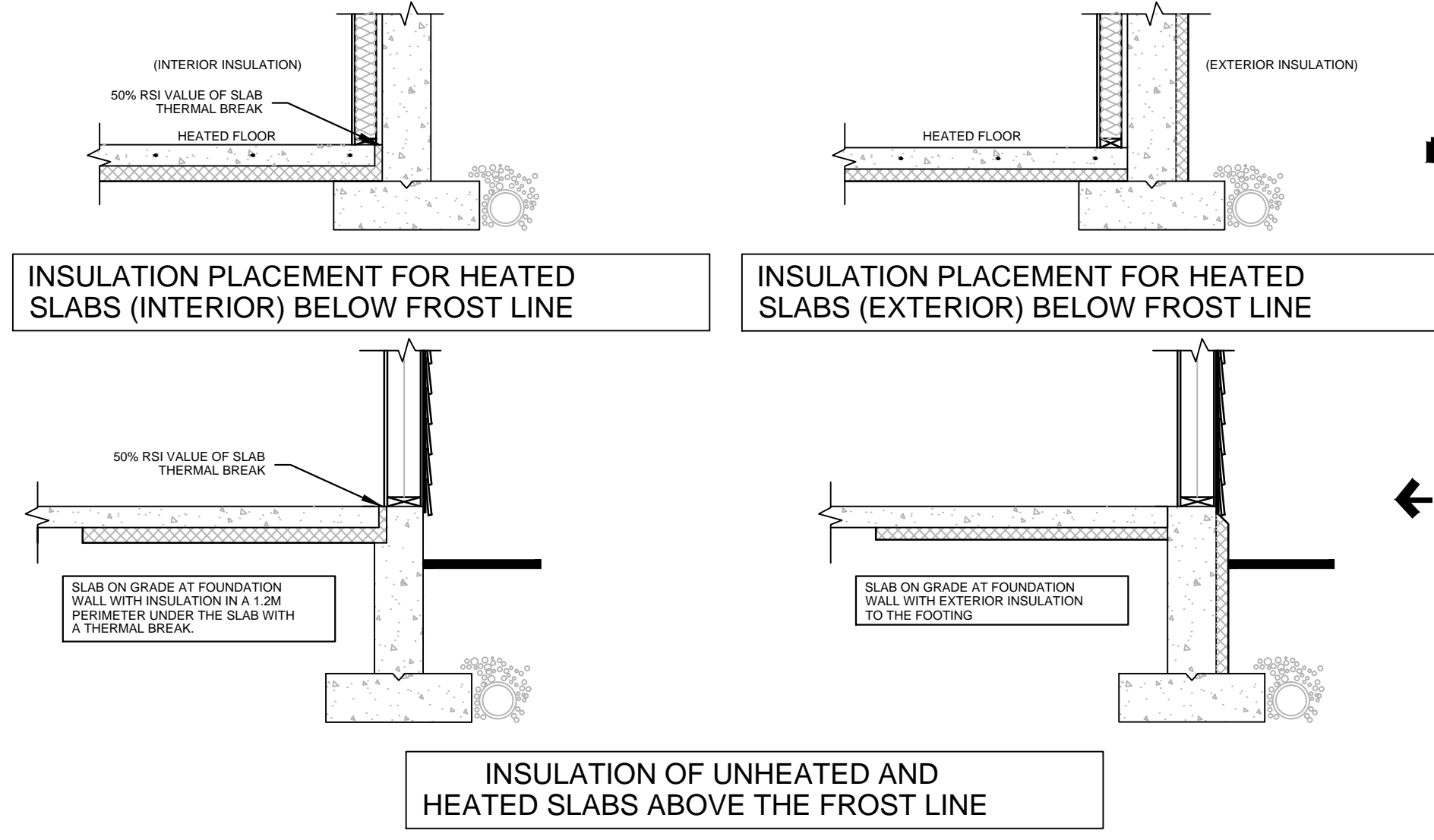


TABLE 9.32.3.5. PRINCIPAL VENTILATION SYSTEM SYSTEM EXHAUST FAN MINIMUM AIR-FLOW RATE FORMING PART OF CLAUSE 9.32.3.5.(1)					
FLOOR AREA, m2	MINIMUM AIR-FLOW RATE, L/s				
	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	> 7
140	14	21	28	35	42
140-280	21	28	35	42	49
281-420	28	35	42	49	56
421-560	35	42	49	56	64
561-700	42	49	56	64	71
> 700	49	56	64	71	78















BC Cancer Agency

CARE & RESEARCH

Fraser Valley Cancer Centre

Urgent after hours instructions

Call 604-581-2211 (Surrey Memorial Hospital)

State:

I am a FVC patient

I need to speak to a FVC oncologist

Please turn over →

My BCCA chart number is [REDACTED]

My Oncologist is Dr. [REDACTED]

protocol: [REDACTED]

Please note:

If you report to SMH, please take a number and report directly to the triage nurse. Tell them you are a FVC patient.

WT: [REDACTED]