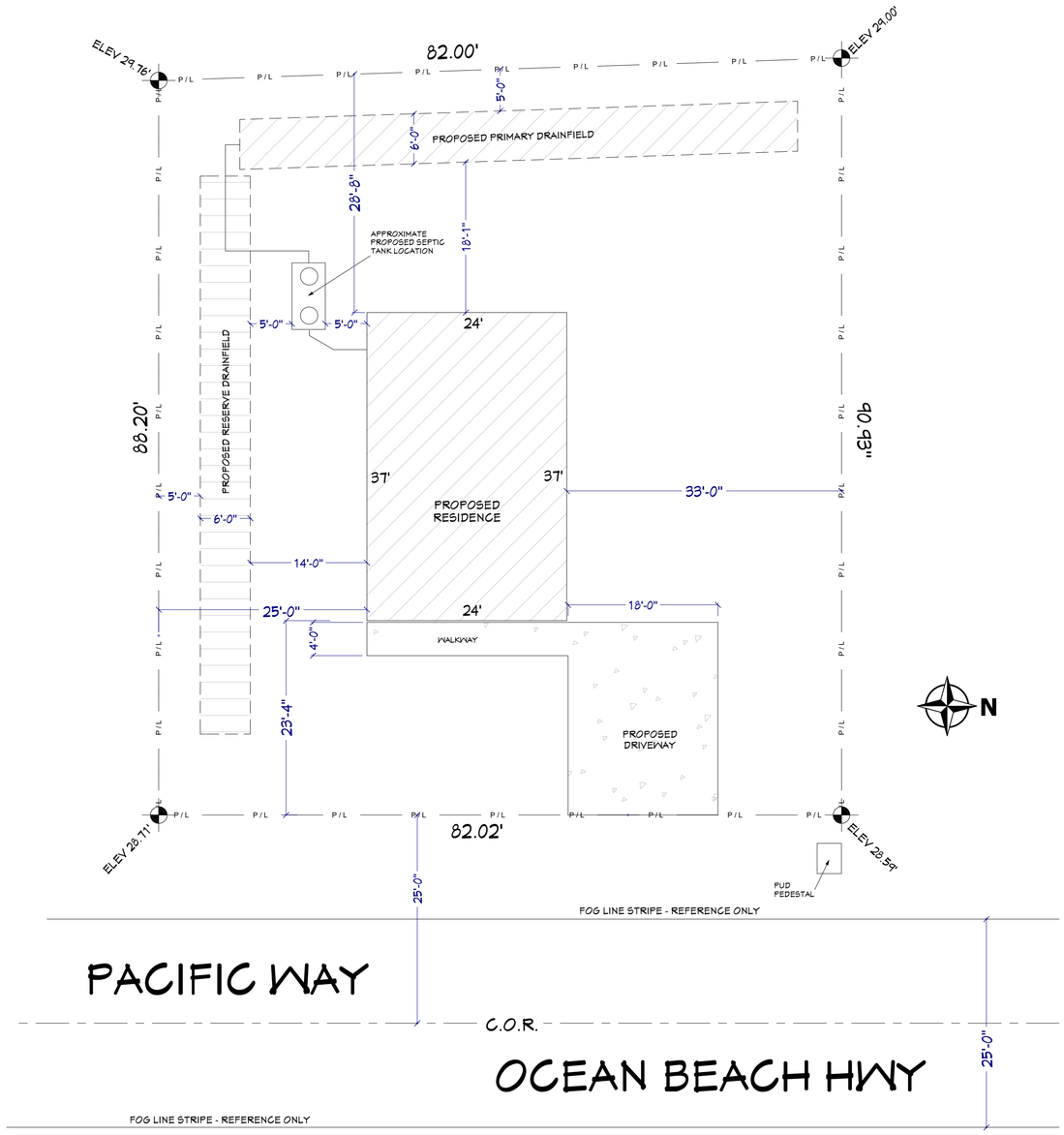


OCEAN PARK, WA

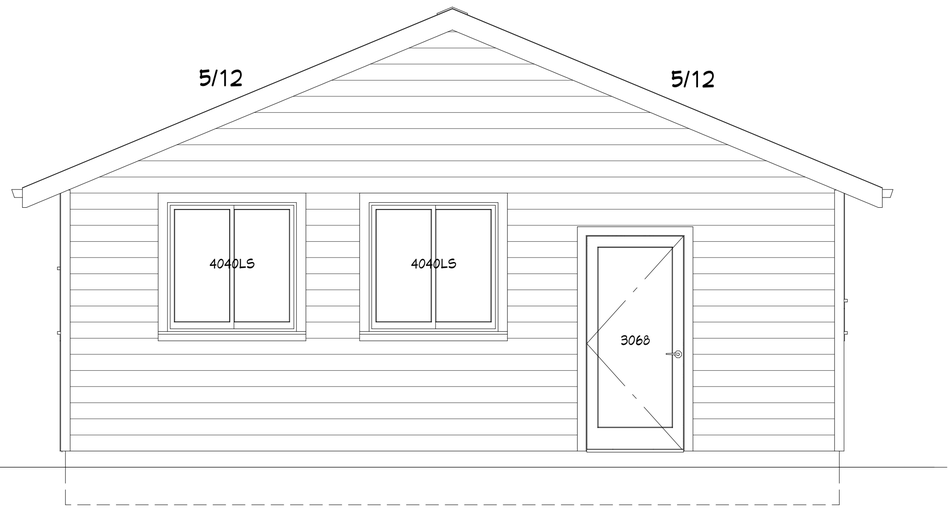
LOT AREA: 7,345 SF
RESIDENCE: 888 SF
% OF LOT COVERAGE: 12%

SITE PLAN

1" = 10'

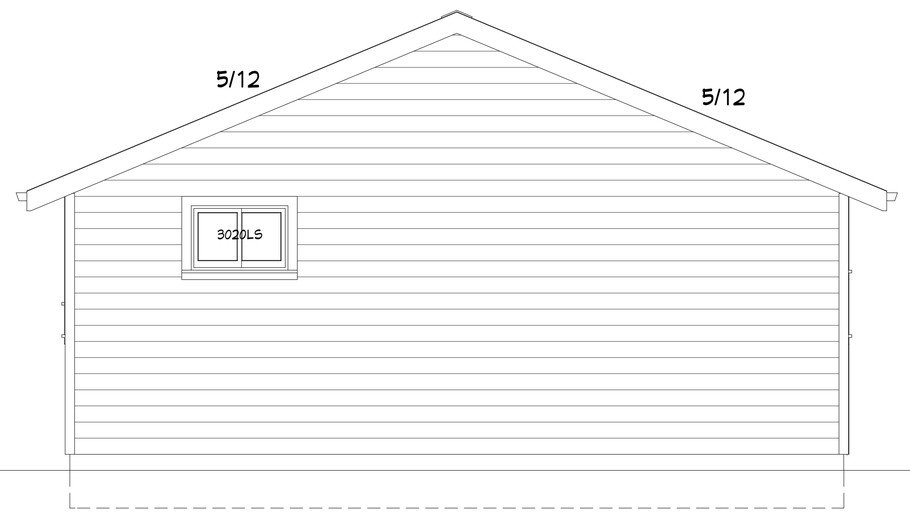
LEFT/SOUTH ELEVATION

SCALE 3/8"=1'



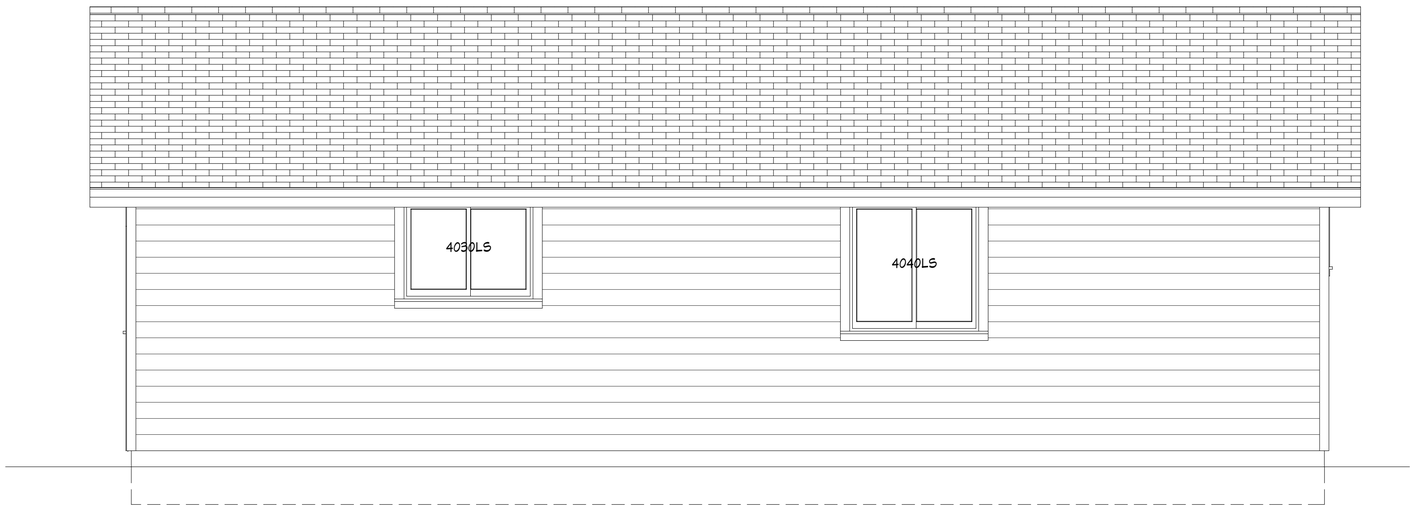
FRONT/EAST ELEVATION

SCALE 3/8"=1'



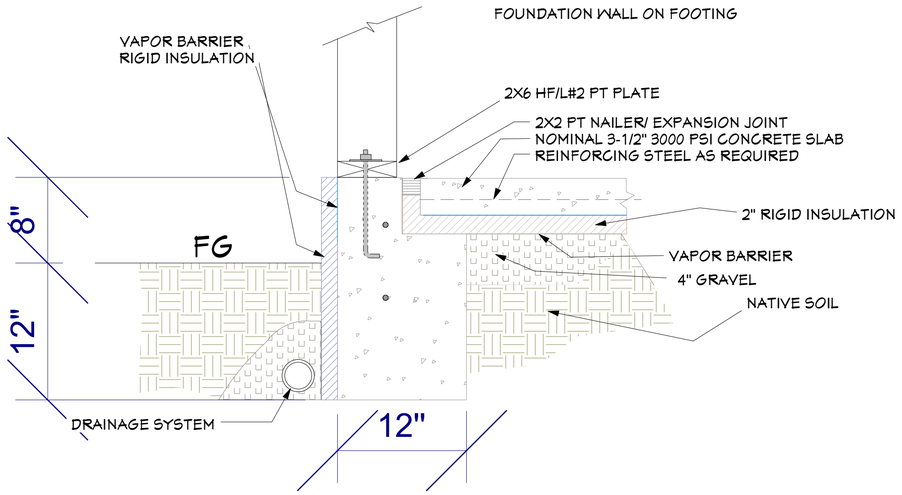
REAR/WEST ELEVATION

SCALE 3/8"=1'



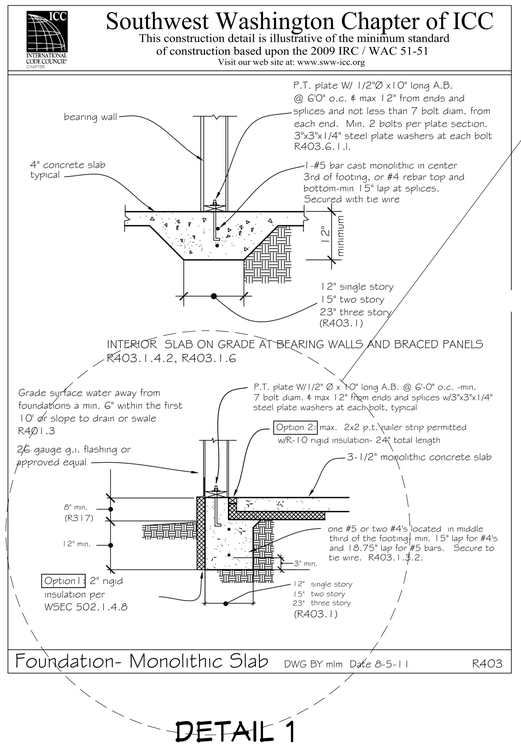
RIGHT/NORTH ELEVATION

SCALE 3/8"=1'



REINFORCED CONCRETE SLAB

SCALE 1/2" = 1'



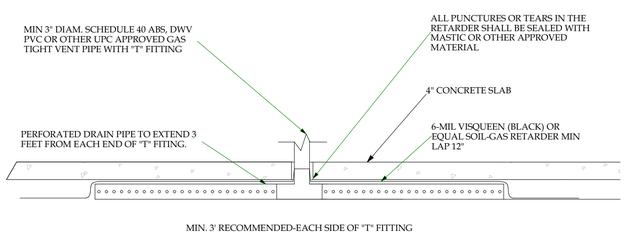
DETAIL 1

FOOTING SCHEDULE			
LABEL	LOAD CAPACITY	FOOTING SIZE	REINFORCING
F12 EXT	1500#	12"x12"x12"	NONE
F18	3000#	18"x18"x10"	(2)#4 @ 10" EW
F18 EXT	3000#	18"x18"x12"	(2)#4 @ 10" EW
F24	5000#	24"x24"x10"	(3)#4 @ 8" EW
F24 EXT	5000#	24"x24"x12"	(3)#4 @ 8" EW
F30	8500#	30"x30x10"	(3)#4 @ 7" EW
F30 EXT	8500#	30"x30x12"	(3)#4 @ 7" EW
F36	12000#	36"x36"x12"	(4)#4 @ 7" EW
F42	16000#	42"x42"x12"	(5)#4 @ 7" EW
F48	21000#	48"x48"x12"	(5)#4 @ 8" EW
F60	32000#	60"x60"x16"	(6)#4 @ 6" EW
F72	44000#	72"x72"x18"	(10)#4 @ 4" EW

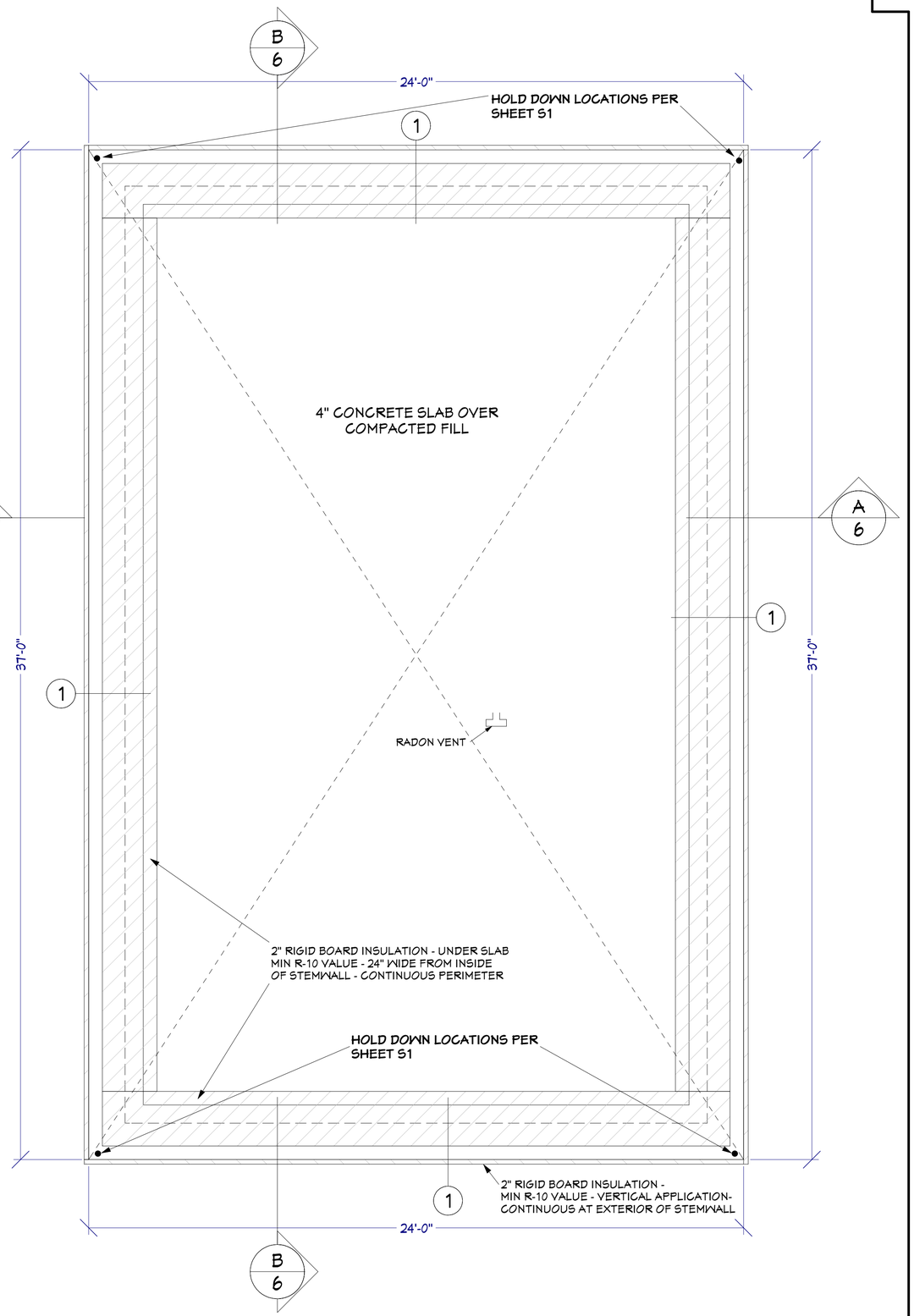
NOTES:
1) CONC STRENGTH TO BE 3000 PSI @ 28 DAYS
2) RNFC STEEL SHALL BE A-615 GRADE 40 PLACED 3" FROM BOTTOM OF FOOTING
3) SOIL BEARING PRESSURE 1500 PSF
4) BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE BELOW FROST DEPTH LISTED IN DESIGN CRITERIA.

POST LEGEND

	GANG STUDS FULL WIDTH OF BEAM
PT4	4x4 PRESSURE TREATED COLUMN
PT6	6x6 PRESSURE TREATED COLUMN
DF4	4x4 DF #2 COLUMN
DF6	6x6 DF #2 COLUMN



RADON VENT PIPE @ MONO-SLAB



FOUNDATION PLAN

SCALE: 3/8"=1'

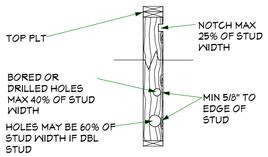
KEY NOTES

1. PROVIDE CROSS VENTILATION UNDER FLOOR OF AT LEAST 1 SF FOR EACH 150 SF OF UNDER FLOOR AREA. N/A
2. ALL FOOTINGS TO BE POURED ON UNDISTURBED SOIL, OTHERWISE A COMPACTION TEST WILL BE REQUIRED.
3. PROVIDE MINIMUM 18"X24" CRAWLSPACE ACCESS. N/A
4. FOUNDATION BOLT REQUIREMENTS
   A. MINIMUM ½" DIAMETER BOLTS
   B. MINIMUM 7" EMBEDMENT IN THE CONCRETE.
   C. PLATE WASHERS ARE TO BE 3"x3"x¼"
   D. BOLTS ARE TO BE SPACED NO MORE THAN 6'-0" ON CENTER
   E. MINIMUM 2 BOLTS ARE REQUIRED FOR EACH FOUNDATION PLATE.
   F. END BOLTS SHALL BE PLACED BETWEEN 3 1/2" AND 12" FROM THE END OF THE PLATE.

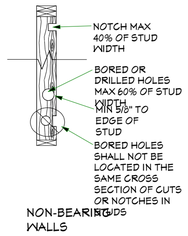
R602.6 DRILLING AND NOTCHING STUDS

ANY STUD IN AN EXT WALL OR BRG PARTITION MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF ITS WIDTH. STUDS IN NON-BRG PARTITIONS MAY BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. ANY STUD MAY BE BORED OR DRILLED, PROVIDED THAT THE DIA OF THE RESULTING HOLE IS NO GREATER THAN 40% OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NO CLOSER THAN 5/8" TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH.

EXCEPTIONS:
1. A STUD MAY BE BORED TO A DIA NOT EXCEEDING 60% OF ITS WIDTH, PROVIDED THAT SUCH STUDS LOCATED IN EXT WALLS OR BRG PARTITIONS ARE DBL & NOT MORE THAN TWO SUCESSIVE STUDS ARE BORED.
2. APPRVD STUD SHOES MAY BE USED WHEN INSTALLED IN ACORDANCE w/ THE MNFR RECOMMENDATION.



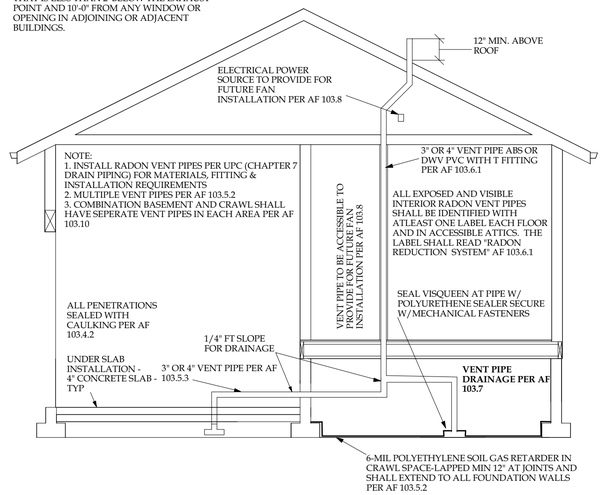
EXTERIOR WALLS AND LOAD BEARING WALLS



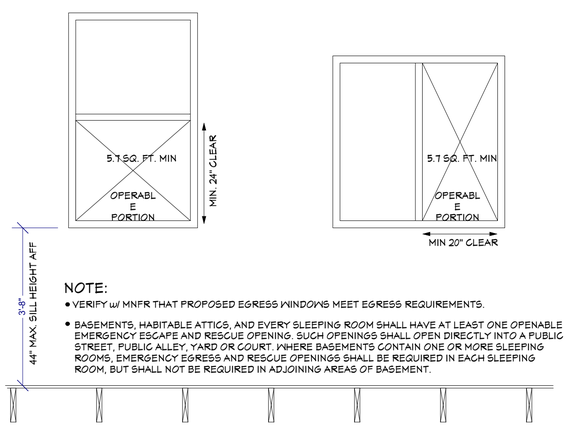
NON-BEARING WALLS

DRILLING & NOTCHING-STUDS
SCALE: 1/2"=1'

VENT PIPE MIN. 10'-0" AWAY FROM ANY WINDOW OR OTHER OPENING INTO CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2' BELOW THE EXHAUST POINT AND 10'-0" FROM ANY WINDOW OR OPENING IN ADJOINING OR ADJACENT BUILDINGS.



TYPICAL RADON SECTION -SINGLE STORY W OR W/O SLAB

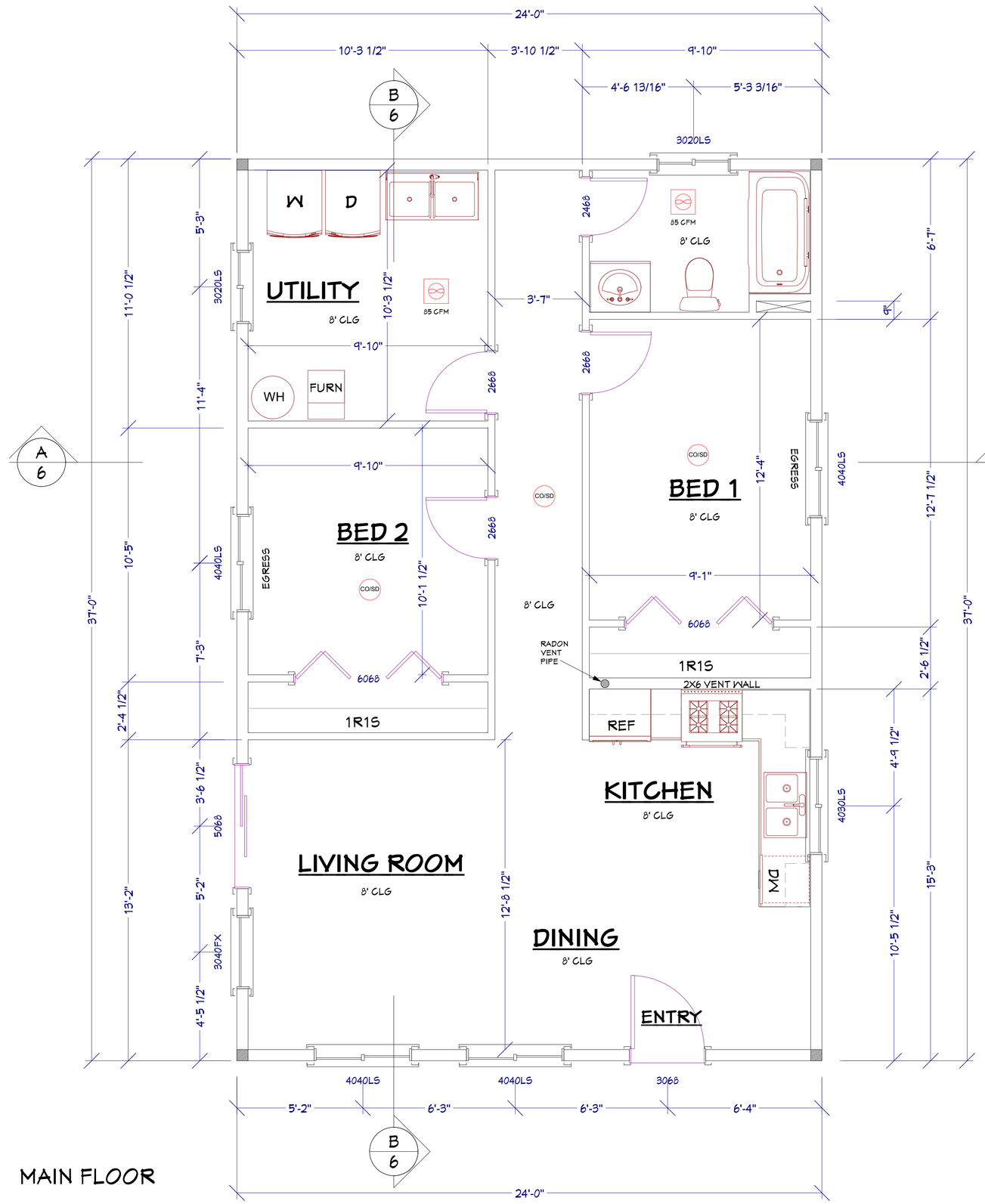


NOTE:
- VERIFY w/ MNFR THAT PROPOSED EGRESS WINDOWS MEET EGRESS REQUIREMENTS.
- BASEMENTS, HABITABLE ATTICS, AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPENABLE EMERGENCY ESCAPE AND RESCUE OPENING. SUCH OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC STREET, PUBLIC ALLEY, YARD OR COURT. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY EGRESS AND RESCUE OPENINGS SHALL BE REQUIRED IN EACH SLEEPING ROOM, BUT SHALL NOT BE REQUIRED IN ADJOINING AREAS OF BASEMENT.

EGRESS WINDOWS
SCALE: 1/2"=1'

POST LEGEND

	GANG STUDS FULL WIDTH OF BEAM
PT4	4x4 PRESSURE TREATED COLUMN
PT6	6x6 PRESSURE TREATED COLUMN
DF4	4x4 DF #2 COLUMN
DF6	6x6 DF #2 COLUMN

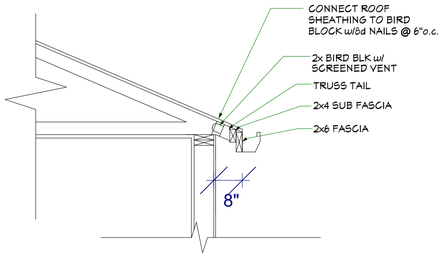


MAIN FLOOR

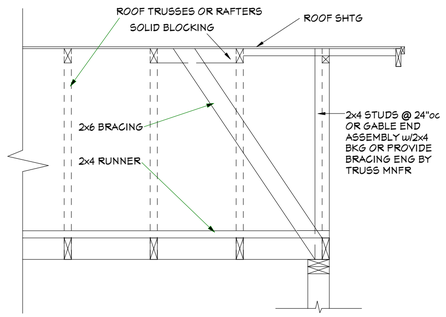
SCALE 3/8"=1'
ALL HEADERS TO BE 4x10 DF #2 UNLESS NOTED OTHERWISE

KEY NOTES

1. PROVIDE MINIMUM 22x30 ATTIC ACCESS.
2. TEMPERED GLAZING IS REQUIRED IN THE AREAS LISTED BELOW:
   A. WITHIN 2' OF DOORWAY.
   B. IN TUB AND SHOWER ENCLOSURES WHEN THE BOTTOM EDGE IS LESS THAN 60" ABOVE THE DRAIN INLET.
   C. IN INDIVIDUAL PANES GREATER THAN 9 SF, WHEN THE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR.
   D. IN STAIRWAYS OR WITHIN 5' OF THE BOTTOM TREAD OR WITHIN 3' OF THE TOP OF THE STAIRWAY WHEN THE BOTTOM EDGE IS LESS THAN 60" ABOVE THE WALKING SURFACE.
3. GARAGE SEPARATION: THE GARAGE SHALL BE SEPARATED FROM THE ADJOINING HOUSE AND ITS ATTIC SPACE BY ½" GYPSUM WALLBOARD APPLIED TO THE GARAGE SIDE OF THE SEPARATION. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM THESE ROOMS BY 5/8" 'TYPE X' GYPSUM BOARD. WALLS SUPPORTING 5/8" CEILING SEPARATIONS SHALL BE PROTECTED WITH ½" GYPSUM BOARD.
4. PROVIDE A MINIMUM OF 1 3/8" SOLID CORE OR 20 MINUTE FIRE RATED DOOR BETWEEN HOUSE AND GARAGE.
5. PROVIDE SEISMIC RESTRAINTS ON WATER HEATER.
6. PROVIDE AN R-10 RIGID INSULATION PAD UNDER WATER HEATER.
7. APPLIANCES LOCATED IN GARAGES WHICH GENERATE A GLOW, SPARK OR FLAME CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE INSTALLED WITH SOURCES OF IGNITION AT LEAST 18" ABOVE FLOOR LEVEL.
8. APPLIANCES IN GARAGES SHALL BE INSTALLED BEHIND PROTECTIVE BARRIERS OR ELEVATED OUT OF THE NORMAL PATH OF VEHICLES.
9. PROVIDE POSITIVE CONNECTION AT ALL POSTS/BEAM CONNECTIONS AND POST/FOUNDATION CONNECTIONS.
10. WOOD EXPOSED TO MOISTURE SHALL BE TREATED BY AN APPROVED AGENCY OR SHALL BE OF NATURAL RESISTANCE TO DECAY.

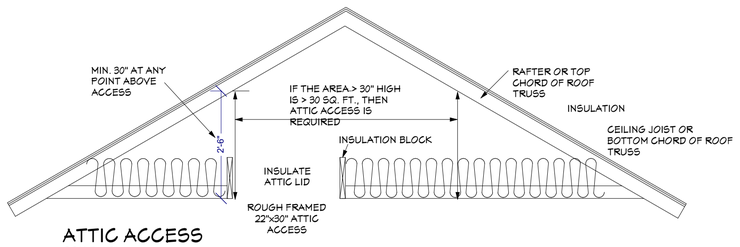


TYP OPEN EAVE
SCALE: 1/2"=1'

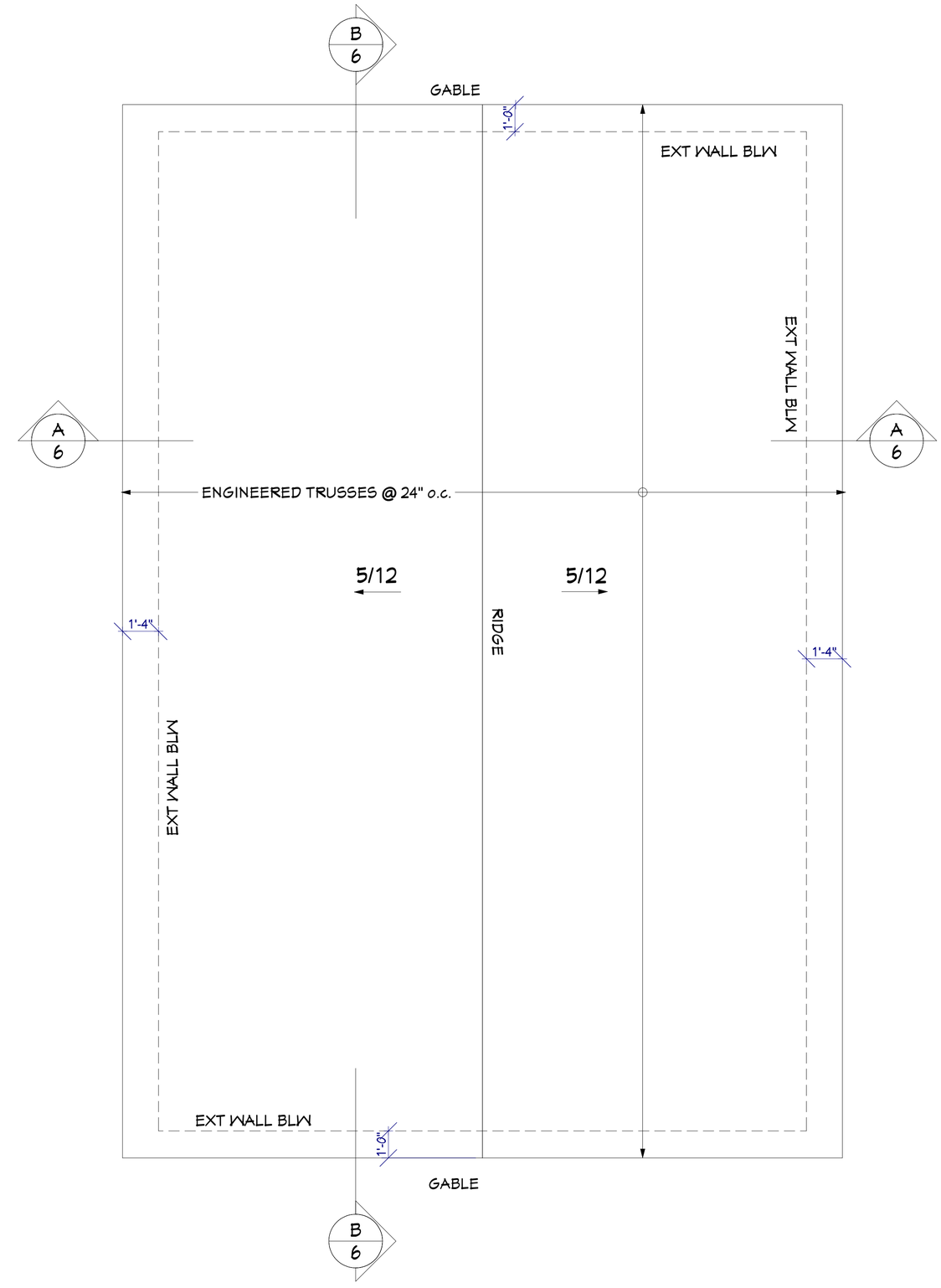


GABLE END BRACING
SCALE: 1/2"=1'

TYP OPEN RAKE
SCALE: 1/2"=1'



ATTIC ACCESS
SCALE: 1/2"=
1'

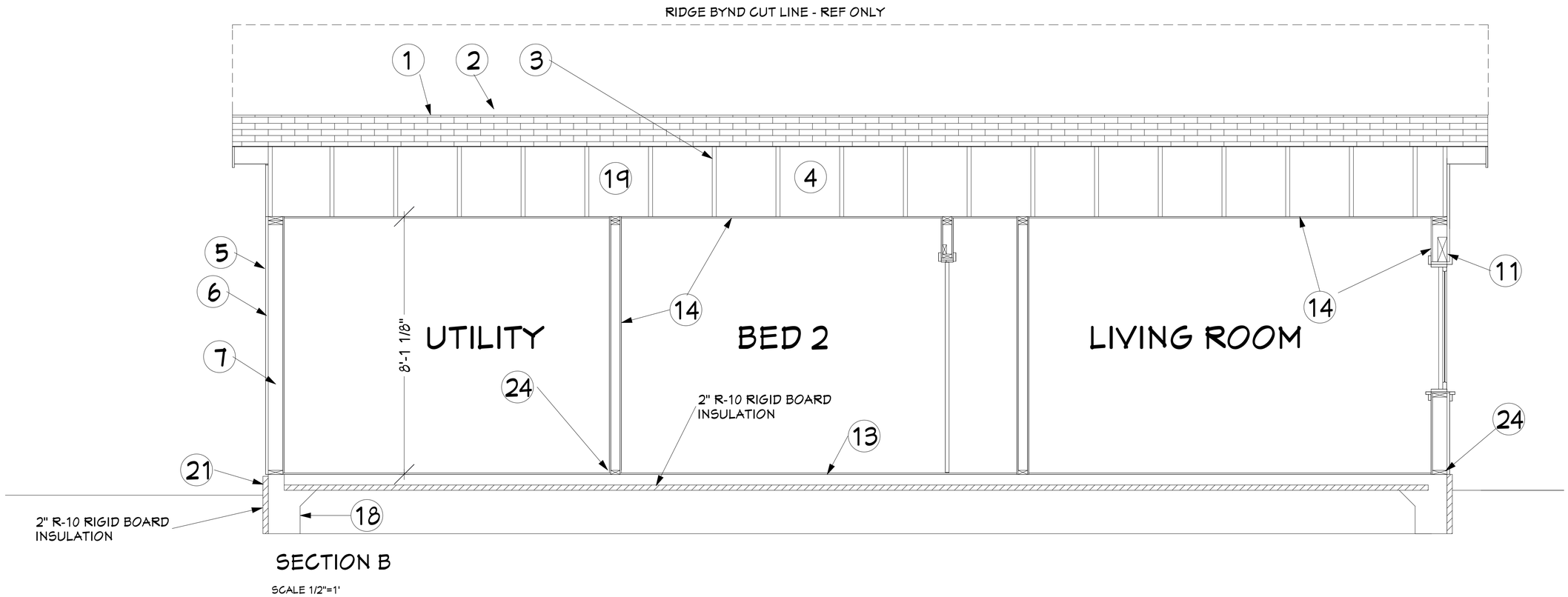


ROOF OVERVIEW
SCALE 3/8"=1'

KEY NOTES

1. IF TRUSS MNFR LAYOUT VARIES FROM THIS PLAN, IT IS THE MNFR RESPONSIBILITY TO SUBMIT NEW LAYOUT & ENGINEERING TO 3D DESIGN NW IMMEDIATELY & PRIOR TO SUBMITTAL TO LOCAL BUILDING DEPT.

2. OVERFRAME AREAS TO HAVE DIRECT BRG. TO TRUSS/RAFTER BELOW VIA PURLIN WALLS FRAMED w/ 2x4 @24"oc TYP.

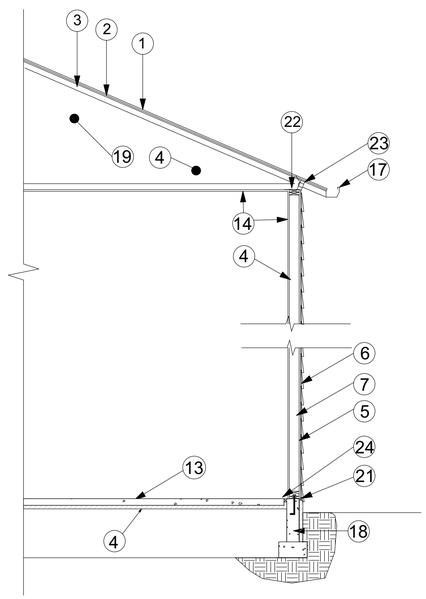


SECTION B

SCALE 1/2"=1'

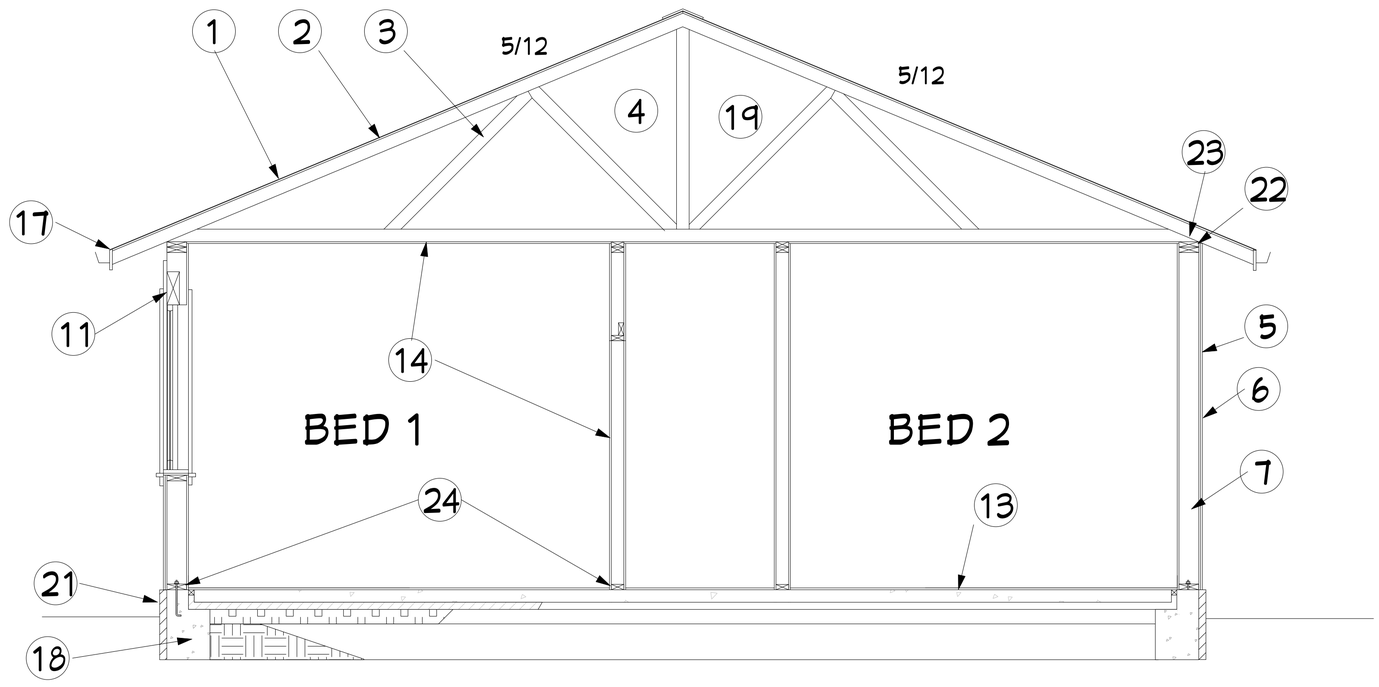
KEY NOTES

1. COMPOSITION ROOFING OR STANDING SEAM METAL OVER 30# ASPH FELT.
2. 1/2" CDX PLYWOOD SHEATHING.
3. ENGINEERED TRUSSES AT 24"oc TRUSS MNFR TO SUPPLY LAYOUT AND ENGINEERING.
4. WASHINGTON INSULATION: R38-CEILING w/12" RAISED TRUSS HEEL (IF STANDARD HEEL DEPTH -USE R49), R30-FLOORS & VAULTED CEILINGS, R21-WALLS
5. 7/16" OSB SHEATHING.
6. HARDIE PLANK LAP SIDING, OR EQUAL
7. 2x6 STUDS 16"oc
8. N/A
9. N/A
10. N/A
11. TYP 4x10 DF#2 HEADER UNLESS OTHERWISE NOTED.
12. N/A.
13. 4" CONC SLAB. - 3000 PSI CONCRETE OVER COMPACTED FILL
14. APPLY 1/2" SHEETROCK TO WALLS AND CEILING.
15. N/A
16. N/A
17. GUTTER- TRUSS/RAFTERS @ EAVES PER DETAIL p.5- VERIFY EAVE & SOFFIT DETAIL w/ CONTRACTOR. IF REMODEL, MATCH EAVE & SOFFIT TO EXTG STRUCTURE.
18. CONCRETE FOUNDATION WALL & FOOTING: REFER TO FOUNDATION PLAN p.2 FOR SPECIFIC FOUNDATION DETAILS. FOOTING TO BEAR ON UNDISTURBED SOIL. BOTTOM OF FOOTING TO BE BELOW FROST DEPTH LISTED IN DESIGN CRITERIA.
19. PROVIDE ATTIC VENTILATION AT A RATE OF 1 SF FOR EVERY 150 SF OF VENTILATED AREA. VENTILATION MAY BE REDUCED TO 1 SF FOR EVERY 300 SF WHEN 50% TO 80% OF THE VENT OPENINGS ARE PROVIDED IN THE UPPER HALF OF THE AREA TO BE VENTILATED
20. PROVIDE FIRE STOPPING AT THE FOLLOWING LOCATIONS:
    A. EACH 10' VERTICALLY AND EACH 10' HORIZONTALLY
    B. ALL CEILING AND FLOOR LEVELS
    C. ALL INTERSECTIONS OF VERTICAL AND HORIZONTAL FRAMING
21. WOOD SIDING, SHEATHING AND WALL FRAMING SHALL BE A MINIMUM OF 6" ABOVE GRADE @ ALL POINTS.
22. TRUSSES SHALL BE CONNECTED TO WALL PLATES w/ APPROVED CONNECTORS HAVING AN UPLIFT RESISTANCE NOT LESS THAN 175 LBS. (SIMPSON H2.5)
23. 2x BIRD BLOCK w/ SCREENED VENT
24. PRESSURE TREATED PLATE @ CONCRETE - TYP.
25. 3/4" T&G EDGE GOLD FLOOR DECKING OR EQUAL.
26. 5/8" TYPE X GYPSUM BOARD



TYPICAL WALL DETAIL

SCALE 1/4"=1'



SECTION A

SCALE 1/2"=1'

2015 WASHINGTON STATE ENERGY CODE

ENERGY EFFICIENCY CREDITS

EACH DWELLING UNIT, IN A RESIDENTIAL BLDG, SHALL COMPLY WITH SUFFICIENT OPTIONS FROM TABLE R406.2 SO AS TO ACHIEVE THE FOLLOWING NUMBER OF CREDITS

- ☐ SMALL DWELLING UNIT 1.5 CREDITS
  DWELLING UNITS LESS THAN 1500 S.F. IN CONDITIONED FLOOR AREA WITH LESS THAN 300 S.F. OF FENESTRATION AREA. ADDITIONS OF 500 S.F. BUT LESS THAN 1500 SF HEATED FLOOR AREA TO EXISTING BUILDING.
- ☐ MEDIUM DWELLING UNIT 3.5 CREDITS
  ALL DWELLING UNITS NOT INCLUDED IN #1 OR #3. EXCEPTIONS: DWELLING UNITS SERVING R-2 OCCUPANCIES SHALL REQUIRE 2.5 CREDITS
- ☐ LARGE DWELLING UNIT 4.5 CREDITS
  DWELLING UNITS EXCEEDING 5000 SF OF CONDITIONED FLOOR AREA.
- ☐ ADDITIONS LESS THAN 500 SF 0.5 CREDITS

ENERGY CREDITS

TABLE 406.2 ENERGY CREDITS (2015 CODE)

CIRCLE OPTION TO BE USED AND FILL IN THE APPLICABLE CREDITS. SHOW TOTAL NUMBER OF CREDITS.

CREDITS

☐ 1A EFFICIENT BUILDING ENVELOPE 1A: — 0.5
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS: FENESTRATION U =0.28, FLOOR R-38, SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB, BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB, OR COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL UA BY 5%

☐ 1B EFFICIENT BUILDING ENVELOPE 1B: — 1.0
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U = 0.25, WALL R-21 PLUS R-4, FLOOR R-38,BASEMENT WALL R-21 INT PLUS R-5 CI, SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB,BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB, OR COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL UA BY 15%

☐ 1C EFFICIENT BUILDING ENVELOPE 1C: — 2.0
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U = 0.22, CEILING AND SINGLE-RAFTER OR JOISTVAULTEDR-49 ADVANCED, WOOD FRAME WALL R-21 INT PLUS R-12 CI, FLOOR R-38, BASEMENT WALL R-21 INT PLUS R-12 CI, SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB, BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB, OR COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOTAL UA BY 30%

☐ 1D EFFICIENT BUILDING ENVELOPE 1D: — 0.5
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS: VERTICAL FENESTRATION U = 0.24

☐ 2A AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2A: — 0.5
COMPLIANCE BASED ON R402.4.1.2:REDUCE THE TESTED AIR LEAKAGE TO 3.0 AIR CHANGES PER HOUR MAXIMUM AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF THE INTERNATIONAL RESIDENTIAL CODE SHALL BE MET WITH A HIGH EFFICIENCY FAN (MAXIMUM 0.35 WATTS/CFM), NOT INTERLOCKED WITH THE FURNACE FAN. VENTILATION SYSTEMS USING A FURNACE INCLUDING ANECM MOTOR ARE ALLOWED, PROVIDED THAT THEY ARE CONTROLLED TO OPERATE AT LOW SPEED IN VENTILATION ONLY MODE.TO QUALIFY TO CLAIM THIS CREDIT THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE MAXIMUM TESTED BUILDING AIR LEAKAGE AND SHALL SHOW THE QUALIFYING VENTILATION SYSTEM.

☐ 2B AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2B — 1.0
COMPLIANCE BASED ON R402.4.1.2:
REDUCE THE TESTED AIR LEAKAGE TO 2.0 AIR CHANGES PER HOUR MAXIMUM AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF THE IRC SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.70.TO QUALIFY TO CLAIM THIS CREDIT THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE MAXIMUM TESTED BUILDING AIR LEAKAGE AND SHALL SHOW THE HEAT RECOVERY VENTILATION SYSTEM.

☐ 2C AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2C: — 1.5
COMPLIANCE BASED ON R402.4.1.2:
REDUCE THE TESTED AIR LEAKAGE TO 1.5 AIR CHANGES PER HOUR MAXIMUM AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1507.3 OF THE IRC SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.85.TO QUALIFY TO CLAIM THIS CREDIT THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE MAXIMUM TESTED BUILDING AIR LEAKAGE AND SHALL SHOW THE HEAT RECOVERY VENTILATION SYSTEM.

☐ 3A HIGH EFFICIENCY HVAC EQUIPMENT 3A: — 1.0
GAS, PROPANE OR OIL-FIRED FURNACE WITH MINIMUM AFUE OF 94% , OR GAS, PROPANE OR OILED-FIRED BOILER WITH MINIMUM AFUE OF 92% TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE HEATING EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY.

☐ 3B HIGH EFFICIENCY HVAC EQUIPMENT 3B — 1.0
AIR-SOURCE HEAT PUMP WITH MINIMUM HSPF OF 9.0TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE HEATING EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY

☐ 3C HIGH EFFICIENCY HVAC EQUIPMENT 3C: — 1.5
CLOSED-LOOP GROUND SOURCE HEAT PUMP, WITH A MINIMUM OF 3.3OR OPEN LOOP WATER SOURCE HEAT PUMP WITH A MAXIMUM PUMPING HYDRAULIC HEAD OF 150 FEED AND MINIMUM COP OF 3.6 TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE HEATING EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY.

☐ 3D HIGH EFFICIENCY HVAC EQUIPMENT 3D: DUCTLESS SPLIT SYSTEM HEAT PUMPS, ZONAL CONTROL: — 1.0
DUCTLESS SPLIT SYSTEM HEAT PUMPS, ZONAL CONTROL: IN HOMES WHERE THE PRIMARY SPACE HEATING SYSTEM IS ZONAL ELECTRIC HEATING, A DUCTLESS HEAT PUMP SYSTEM SHALL BE INSTALLED AND PROVIDE HEATING TO THE LARGEST ZONE OF THE HOUSING UNIT. TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE HEATING EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY.

☐ 4 HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM: — 1.0
ALL HEATING AND COOLING SYSTEM COMPONENTS INSTALLED INSIDE THE CONDITIONED SPACE. THIS INCLUDES ALL EQUIPMENT AND DISTRIBUTION SYSTEM COMPONENTS SUCH AS FORCED AIR DUCTS, HYDRONIC PIPING, HYDRONIC FLOOR HEATING LOOP, CONVECTORS AND RADIATORS. ALL COMBUSTION EQUIPMENT SHALL BE DIRECT VENT OR SEALED COMBUSTION. FOR FORCED AIR DUCTS: A MAXIMUM OF 10 LINEAR FEET OF RETURN DUCTS AND 5 LINEAR FEET OF SUPPLY DUCTS MAY BE LOCATED OUTSIDE THE CONDITIONED SPACE. ALL METALLIC DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE MUST HAVE BOTH TRANSVERSE AND LONGITUDINAL JOINTS SEALED WITH MASTIC. IF FLEX DUCTS ARE USED, THEY CANNOT CONTAIN SPLICES. FLEX DUCT CONNECTIONS MUST BE MADE WITH NYLON STRAPS AND INSTALLED USING A PLASTIC STRAPPING TENSIONING TOOL. DUCTS LOCATED OUTSIDE THE CONDITIONED SPACE MUST BE INSULATED TO A MINIMUM OF R-8. LOCATING SYSTEM COMPONENTS IN CONDITIONED CRAWL SPACES IS NOT PERMITTED UNDER THIS OPTION. ELECTRIC RESISTANCE HEAT AND DUCTLESS HEAT PUMPS ARE NOT PERMITTED UNDER THIS OPTION. DIRECT COMBUSTION HEATING EQUIPMENT WITH AFUE LESS THAN 80% IS NOT PERMITTED UNDER THIS OPTION. TO QUALIFY TO CLAIM THIS CREDIT THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE MAXIMUM TESTED BUILDING AIR LEAKAGE AND SHALL SHOW THE HEAT RECOVERY VENTILATION SYSTEM.

☐ 5A EFFICIENT WATER HEATING 5A: — 0.5
ALL SHOWERHEAD AND KITCHEN SINK FAUCETS INSTALLED IN THE HOUSE SHALL BE RATED AT 1.75 GPM OR LESS. ALL OTHER LAVATORY FAUCETS SHALL BE RATED AT 1.0 GPM OR LESS. TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE MAXIMUM FLOW RATES FOR ALL SHOWERHEADS, KITCHEN SINK FAUCETS, AND OTHER LAVATORY FAUCETS.

☐ 5B EFFICIENT WATER HEATING 5B: — 1.0
WATER HEATING SYSTEM SHALL INCLUDE THE FOLLOWING: GAS, PROPANE OR OIL WATER HEATER WITH A MINIMUM EF OF 0.74 OR WATER HEATER HEATED BY GROUND SOURCE HEAT PUMP MEETING THE REQUIREMENTS OF OPTION 3C. OR FOR R-2 OCCUPANCY, A CENTRAL HEAT PUMP WATER HEATER WITH AN EF GREATER THAN 2.0 THAT WOULD SUPPLY DHW TO ALL THE UNITS THROUGH A CENTRAL WATER LOOP INSULATED WITH R-3 MINIMUM PIPE INSULATION. TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE WATER HEATER EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY.

☐ 5C EFFICIENT WATER HEATING 5C: — 1.5
WATER HEATING SYSTEM SHALL INCLUDE THE FOLLOWING: GAS, PROPANE OR OIL WATER HEATER WITH A MINIMUM EF OF 0.91OR SOLAR WATER HEATING SUFFLEMENTING A MINIMUM STANDARD WATER HEATER. SOLAR WATER HEATING WILL PROVIDE A RATED MINIMUM SAVINGS OF 55 THERMS OR 2000 KWH BASED ON THE SOLAR RATING AND CERTIFICATION CORPORATION (SRCC) ANNUAL PERFORMANCE OF OG-300 CERTIFIED SOLAR WATER HEATING SYSTEMS OR ELECTRIC HEAT PUMP WATER HEATER WITH A MINIMUM EF OF 2.0 AND MEETING THE STANDARDS OF NEEA'S NORTHERN CLIMATE SPECIFICATIONS FOR HEAT PUMP WATER HEATERS. TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SPECIFY THE WATER HEATER EQUIPMENT TYPE AND THE MINIMUM EQUIPMENT EFFICIENCY AND, FOR SOLAR WATER HEATING SYSTEMS, THE CALCULATION OF THE MINIMUM ENERGY SAVINGS.

☐ 5D EFFICIENT WATER HEATING 5D: — 1.5
A DRAIN WATER HEAT RECOVERY UNIT(S) SHALL BE INSTALLED, WHICH CAPTURES WASTE WATER HEATER FROM ALL THE SHOWERS, AND HAS A MINIMUM EFFICIENCY OF 40% IF INSTALLED FOR EQUAL FLOW OR A MINIMUM EFFICIENCY OF 52% IF INSTALLED FOR UNEQUAL FLOW. SUCH UNITS SHALL BE RATED IN ACCORDANCE CSA B55.1 AND BE SO LABELED. TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL INCLUDE A PLUMBING DIAGRAM THAT SPECIFIED THE DRAIN WATER HEAT RECOVERY UNITS AND THE PLUMBING LAYOUT NEEDED TO INSTALL IT AND LABELS OR OTHER DOCUMENTATION SHALL BE PROVIDED THAT DEMONSTRATES THAT THE UNIT COMPLIES WITH THE STANDARD.

☐ 6 RENEWABLE ELECTRIC ENERGY: — 0.5
FOR EACH 1200 KWH OF ELECTRICAL GENERATION PER EACH HOUSING UNIT PROVIDED ANNUALLY BY ON-SITE WIND OR SOLAR EQUIPMENT A 0.5 CREDIT SHALL BE ALLOWED, UP TO 3 CREDITS. GENERATION SHALL BE CALCULATED AS FOLLOWS:FOR SOLAR ELECTRIC SYSTEMS, THE DESIGN SHALL BE DEMONSTRATED TO MEET THIS REQUIREMENT USINGTHE NATIONAL RENEWABLE ENERGY LABORATORY CALCULATOR PVWATTS. DOCUMENTATION NOTING SOLAR ACCESS SHALL BE INCLUDED ON THE PLANS. FOR WIND GENERATION PROJECTS DESIGNS SHALL DOCUMENT ANNUAL POWER GENERATION BASED ON THE FOLLOWING FACTORS: THE WIND TURBINE POWER CURVE; AVERAGE ANNUAL WIND SPEED AT THE SITE; FREQUENCY DISTRIBUTION OF THE WIND SPEED AT THE SITE AND HEIGHT OF THE TOWER. TO QUALIFY TO CLAIM THIS CREDIT, THE BUILDING PERMIT DRAWINGS SHALL SPECIFY THE OPTION BEING SELECTED AND SHALL SHOW THE PHOTOVOLTAIC OR WIND TURBINE EQUIPMENT TYPE, PROVIDE DOCUMENTATION OF SOLAR AND WIND ACCESS, AND INCLUDE A CALCULATION OF THE MINIMUM ANNUAL ENERGY POWER PRODUCTION.

WASHINGTON ENERGY CODE

2015 PRESCRIPTIVE REQUIREMENTS ADJUSTED FOR SELECTED CREDITS

WALLS	CEILING	FLOOR	BASEMENT WALL	SLAB	MASS WALL	GLAZING	SKYLIGHT	SHGC
R21	R49	R38	R10/15/21 INT	R10	21/21	U.28	U.50	N/A

HVAC SUMMARY

ALL HVAC SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S&J

MODEL	CFM	BTUs	EFFICIENCY RATING	HRV YES/NO	OSA	OSA DUCT SIZE	NOTES

HVAC DUCT SIZING

TRUNK SIZE	BEDROOM BRANCHES	LIVING ROOM	UTILITY	BATHROOMS	OTHER

EXHAUST AND WHOLE HOUSE VENTILATION

WHOLE HOUSE VENTILATION (PRESCRIPTIVE) PLEASE CHECK THE APPROPRIATE BOX TO DESCRIBE WHICH OF THE FOUR PRESCRIPTIVE WHOLE HOUSE VENTILATION SYSTEMS YOU WILL BE USING.

- ☐ 1. INTERMITTENT WHOLE HOUSE VENTILATION USING EXHAUST FANS & FRESH AIR INLETS. MAC, IRC M1507.3.4 AND TABLE IRC M1507.3.3(2)
  OR
- ☐ 1A. CONTINUOUS WHOLE HOUSE MECHANICAL VENTILATION MAC, IRC M1507.3.3(1) AND TABLE IRC M1507.3.3(1)
- ☐ 2. INTERMITTENT WHOLE HOUSE VENTILATION INTEGRATED WITH A FORCED AIR SYSTEM. MAC, IRC M1507.3.5
- ☐ 3. INTERMITTENT WHOLE HOUSE VENTILATION USING A SUPPLY FAN. MAC, IRC M1507.3.6
- ☐ 4. INTERMITTENT WHOLE HOUSE VENTILATION USING A HEAT RECOVERY VENTILATION SYSTEM. MAC, IRC M1507.3.7

LOCATION	CFM	DUCT SIZE	TIMER	WHOLE HOUSE VENTILATION TYPE

GENERAL RESIDENTIAL CONSTRUCTION REQUIREMENTS

General: These requirements do not imply approval of any construction, which does not comply with the International Residential Code. This is a partial list of common code items.

Footing:

- Assumed soil bearing pressure is 1500 (Table R401.4.1)
- Frost protection is 12 inches for footings. (Section R403)
- Spread footings shall be at least 6 inches and footing projections shall be at least 2" and shall not exceed the thickness of the footing. (R403.1.1)
- Footing sizes shall be minimum width and depth per R403 and Table 403.1.1:
  1-story: 12" wide x 6" thick, 2-story: 15" wide x 6" thick, 3-story: 23" wide x 8-1/2" thick

Foundation:

- Stem wall within Seismic Design Category D1 shall comply with the following:
  1. Minimum reinforcement shall consist of one #4 horizontal bar located in the upper 12 inches of the wall
  2. Height of unbalanced backfill shall not exceed 4 feet
  3. Foundation walls supporting more than 4 feet of unbalanced backfill shall be constructed in accordance with Table R404.1.1 (2), R404.1.1 (@) or R404.1.1 (4) and shall have two # 4 horizontal bars located in the upper 12 inches of the wall. (Section 404)
- Seismic reinforcing in Design Category D1 where a construction joint is created between the footing and stem wall shall be provided one #4 vertically four feet on-center extending 14" into stem wall and within 3" of bottom of footing. (Section R403.1.3)
- Anchor bolts shall be 1/2 x 10" maximum 6 ft. on-center and within 12 inches from the end of plates and a minimum of 2 bolts per plate. Washers shall be 3x3x1/4. Interior bearing walls mall be anchored to a footing. (Section R403)
- Foundation ventilation shall be 1 square foot of vent per 150 square feet of under floor area. (Section R408 & INSEC Section 502.1.2)
- Provisions shall be made for the control and drainage of surface water away from the building. The grade shall slope a minimum of 6-inches in 10 feet away from the building.
- Drains shall be provided all around foundations that retain earth and enclose habitable or usable spaces located below grade. (R405.1)
- Crawl spaces shall be provided with subsoil drains (low point) (UPC Section 1101.5)
- Provide ground cover of 6-mil black polyethylene or equivalent in crawl space. (Energy Code Section 502.1.6.1)

Floors:

- Wood in contact with concrete shall be pressure treated. (Section R319.1)
- Minimum clearance of 12 inches under beams, 18 inches under joists, required in crawl space. (Section R319.1)
- Joists, beams, or girders shall bear 1.5 inches on wood and 3 inches on masonry or concrete (R502.6)
- Decks shall be positively anchored to structures with lags. (Section R502.2.1)
- Joists shall be laterally supported at intermediate bearing. (Section R502.7)
- Joists permitted to be notched to width of D/3 max x D/6 on end thirds only; joist end cuts permitted to depth of D/4 max.; and borings permitted D/3 within 2 inches to edges. (Section R502.8) (See detail page 3)
- Joists, beams or girders entering into concrete shall be P.T. or provided with a moisture barrier between the beam and a half-inch air space around ends, sides, and tops. (R319.1)
- Crawl access shall be provided at a minimum of 18 inches x 24 inches. (Section R408.3)

Roof Framing:

- Rafters shall be provided full bearing on the ridge board the depth of the cut rafter.(Section R802.3)
- Rafters permitted to be notched to width of D/3 max x D/6 on end thirds only; rafter end cuts permitted to depth of D/14 max.; and borings permitted D/13 within 2 inches to edges. (Section R802.7)
- Hips and valley rafters shall be supported at the ridge by a brace to a bearing partition or designed to carry the specified loads. (Section R802.3)
- Rafters and ceiling joist exceeding a ratio of 5:1 (2x10) shall be laterally supported (blocked) at bearing points. (Section R802.8)
- Rafters and truss shall be provided with approved connectors to resist uplift. (Section R802.10.5)
- A continuous load path shall be provided to transmit the uplift forces from the rafter or truss ties to the foundation. (Section R802.11.1)

Roofs:

- Composition roof shingles must be a minimum of 25-year life shingles manufactured to ASTM 3462 and installed per the manufacturer's installation specifications.
- Attic ventilation must be 1/150th of the attic area or 1/300th of attic area if at least 50 percent but not more than 80 percent of the required ventilation is 3 feet above the eave or cornice vents or provide a moisture barrier on the warm side of the ceiling. (R806.2)
- Provide a readily accessible attic opening to all areas with 30 square feet or more and has 30 inches or more of vertical height. The rough framed opening shall be not less than 22 by 30 inches with a minimum of 30 inch of headroom provided at some point above the opening. (R807)

Walls:

- Wood framing subject to water splash shall be protected by approved methods (elevated 1 inch above concrete or 6 inches above grade) or approved materials (P.T. wood or natural decay resistant wood). (Section R319.1 & R319.1.2)
- Interior load bearing walls shall be framed as exterior walls. (Section R602.4)
- Bearing wall stud permitted to be bored 40% max. of stud depth, unless doubled, then not more than 2 successive studs shall be bored; studs permitted to be notched 25% max. of stud depth and there shall not be bored in same cross section. (Section R602.6) (See detail page 3)
- Non-bearing wall studs permitted to be bored 60% max. of stud depth, unless doubled, then not more than 2 successive studs shall be bored; studs permitted to be notched 40% max. of stud depth and there shall not be boring in same cross section. (Section R602.6) (See detail page 3)
- Top plates permitted to be notched 50% max, then shall be strapped with a 1 112" steel strap (16ga) with (8) 16d's each side of notch. (Section R602.6.1)
- All exterior walls within Seismic Design Category DI shall be braced 25 feet on-center with interior brace panels at 35 feet on-center. (Section R602.10)
- Wall studs laterally unsupported (without a floor diaphragm) shall be a maximum of ten feet. (Section R602.3) See engineering for tall wall design.
- Fire blocking shall be provided to cut off all concealed draft openings and to form an effective fire barrier between stories and between a top story and the roof space.
  1. Vertically at the ceiling and floor level s and horizontally at intervals not exceeding 10 feet.
  2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
  3. At openings around vents, pipes, and ducts at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion.

  See Section R602.8 for additional requirements.

Light/Ventilation:

- Natural light shall be provided to the habitable spaces not less than 8% of which 1/2 shall be operable for ventilation. (Section R303)
- Mechanical provisions may be provided to substitute the natural ventilation requirements.
- Artificial light can be substituted for glazed area provided it is capable of producing an average illumination of 6 foot candles over the area of the room at a height of 30" above the floor level. (R303)
- Provide mechanical ventilation in bathroom, and laundry rooms (50 cfm at .25 WG) and kitchens (100 cfm at .25 WG.) See the Washington State Indoor Air Quality Code.
- Outside air is required to be supplied to each habitable room, at a min. of 15 cfm for each area.(WAC51-13 302.6.2).
- Whole house ventilation system required per WAC51-13 section 302.5 and Table 3-2 with a sone rating of 1.5 (302.4) or integrated force-air ventilation system option per WAC 51-13 (303.1.2).

Dryer Venting:

- Maximum length of a vent shall be 25 feet and reduced 2.5 feet for each 450 fittings and 5 feet for each 900 fittings. (Section M1501.3)

Emergency Egress:

- Emergency egress shall be provided from basements and sleeping rooms. The minimum net clear opening shall be 5.7sq.ft. and the sill shall be not more than 44 inches above the finished floor. (Section R310)
- Emergency egress below grade shall be provided with window well. (Section R310.2)

Safety Glazing:

- Safety glazing shall be required in hazardous locations (refer to list of hazardous location). (Section R308.4)
  1. Glazing in swinging doors.
  2. Glazing in fixed and sliding panels of sliding door assem blies and panels in sliding and bi-fold closet door assemblies.
  3. Glazing in storm doors.
  4. Glazing in all unframed swinging doors.
  5. Glazing in doors and'enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface.
  6. Glazing, in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch (610mm)arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface.
  7. Glazing in an individual fixed or operable panel, other than those locations described in Items 5 and 6 above, that meets all of the following conditions:
     7.1. Exposed area of an individual pane greater than 9 square feet
     7.2. Bottom edge less than 18 inches above the floor.
     7.3. Top edge greater than 36 inches above the floor.
     7.4. One or more walking surfaces within 36 inches horizontally of the glazing.
  8. All glazing in railings regardless of an area or height above a walking surface. Included are structural baluster panels and nonstructural in-fill panels.
  9. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas bottom edge of the glazing is less than 60 inches above a walking where the surface and within 60 inches horizontally of the water's edge. This shall apply to single glazing and all panes in multiple glazing.
  10. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glass is less than 60 inches above the plane of the adjacent walking surface.
  11. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches (1524 mm) above the nose of the tread.

Handrails:

- Handrails are required on one side of every stairway with four or more risers. (Section 311.6)
- Handrails shall be installed at a height of not less 34 inches nor more than 38 inches. (Section R311.5.6.1)
- Handrail grip size shall be not less than 1 ¼ inches nor more than 2 inches. If the handrail is not circular it shall have a perimeter of not less than 4 inches nor more than 6-1/4 inches with a maximum cross section of 2-1/4 inches. (Section R311.5.6.3)
- Handrails shall not project more than 4.5 inches on either side. (Section R311.5)
- When a handrail is installed on one side, the stairway clear width shall not be less than 31 inches at and below the handrail. (Section R311.5)
- When handrails are installed on both sides, the stairway clear width shall not be less than 27 inches at and below the handrails. (Section R311.5)\
- Handrail height shall be not less than 34inches, and not more than 38-inches, from top of rail to the nosing of the stair treads per (R11.5.6.1).
- Openings for required guards on the sides of stair treads shall not allow a sphere 43/8 inches to pass through. (R312.2)

Guardrails:

- Guardrails are required at every stairway, floor, landing, or decks greater than 30 inches above the grade or floor. (Section R312.1)
- Guardrails on elevated floors, balconies, decks, and porches shall have intermediate rails, which do not allow passage of a 4-inch sphere. (Section R312.2)
- The minimum height of guardrails on elevated floors shall be 36 inches and not less than 34 inches on sides of stairs. (Section R312.1)

Doors:

- One exit door required for each dwelling unit per section (R311.4.1.) Exit door shall be side-hinged, not less than 3 feet wide and 6-feet 8-inches high. (R311.4.2)

Smoke Alarms:

- Smoke alarms shall be installed within each sleeping area; outside in the immediate vicinity of the sleeping rooms; and on each story. (Section R313)
- Smoke alarms shall be provided with electrical power and be interconnected and be provided with battery back-up. (Section R313.2)
- When interior alterations, addition, or repairs require a permit, smoke alarms shall be installed as for new dwellings and were there is an attic, crawl, or basement, which provides access to existing alarms, they shall be hard wired and interconnected. (Section R313.1.1)

Stairways:

- Minimum stair width shall be 36 inches.(Section R311.5)
- Headroom shall be 6 feet 8 inches minimum. (Section R311.5.2)
- Risers shall not exceed 7 3/4 inches and the run shall not be less than 10 inches. Treads shall be a minimum of 10". (Section R311.5.3)
- The riser height or tread depth shall not exceed the smallest by more than 3/8 inch.
- Winder treads shall have a minimum tread depth of la-inches measured at 12-inches from the narrowest side which shall be a minimum of 6-inches in depth.
- Enclosed accessible space under stairs shall be protected by V2 inch gypsum board installed on the enclosed side of walls and soffits.
- All stairs shall be provided with illumination. (Section R311.5.7)

Landings:

- Landings at the required exit door shall be not more than 1.5 inches lower than the top of the threshold. (Section R311.4.3)
- Landings at exterior doorways shall not be more than 7 3/4 inches below the top of the threshold provided the door, other than storm doors and screens does not swing over the landing. (Section R311.4.3)
- Stairways of two or fewer risers located on the exterior side of a door, other than the required exit door, a landing is not required for the exterior side of the door. (Section R311.4.3)

Hallways:

- Hallways minimum clear width is 36 inches.

Garages:

- Openings from garage into sleeping rooms shall not be permitted. (Section R309.1)
- Other openings between the garage and the residence shall be equipped with solid wood doors not less 1-3/8 inches in thickness, solid or honeycomb core steel doors not less than 1-3/8 inches thick or a 20-minute fire door. (Section R309.1)
- The garage shall be separated from the dwelling by 1/2 inch gypsum applied to the garage side, unless a habitable space is above the garage, then 5/8 inch Type X gypsum shall be installed on the ceiling and the structure supporting the separation shall also be protected with not less than 1/2 inch gypsum. (Section R309.2)
- Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved material and shall have no openings into the garage. (309.1.1)

Miscellaneous:

- Appliances located within garages shall be protected from impact. (Section M1307.3.1)
- Appliances having ignition sources shall be elevated 18 inches above garage floors. (Section M1307.3 & G2408.2)
- Water heaters and fired appliances shall be anchored or strapped. (See UPC 510.5 / M1307.2.)
- Water closets shall have a minimum of 30 inches of net clearance, sidewall to sidewall, and at least 24 inches of clearance in front. (UPC 408.6)