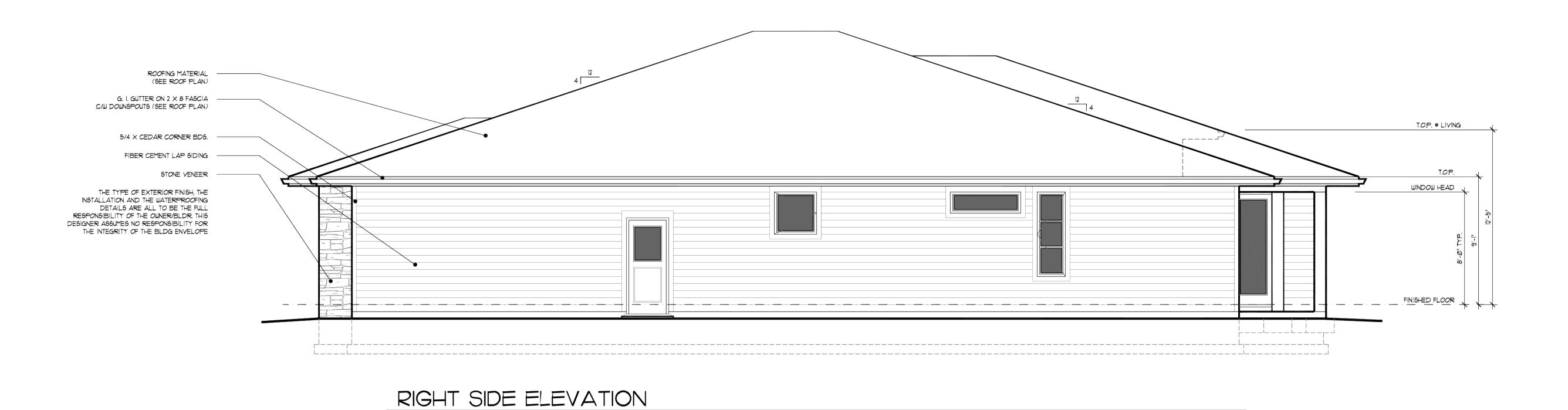
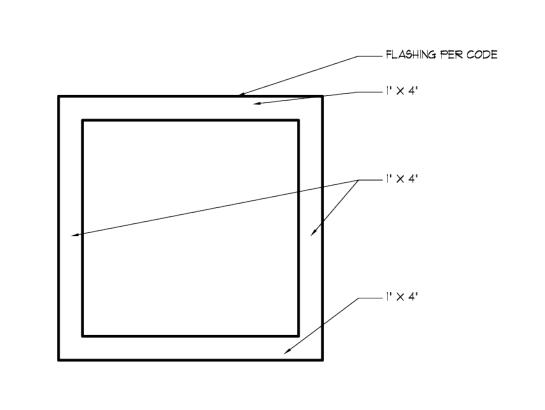
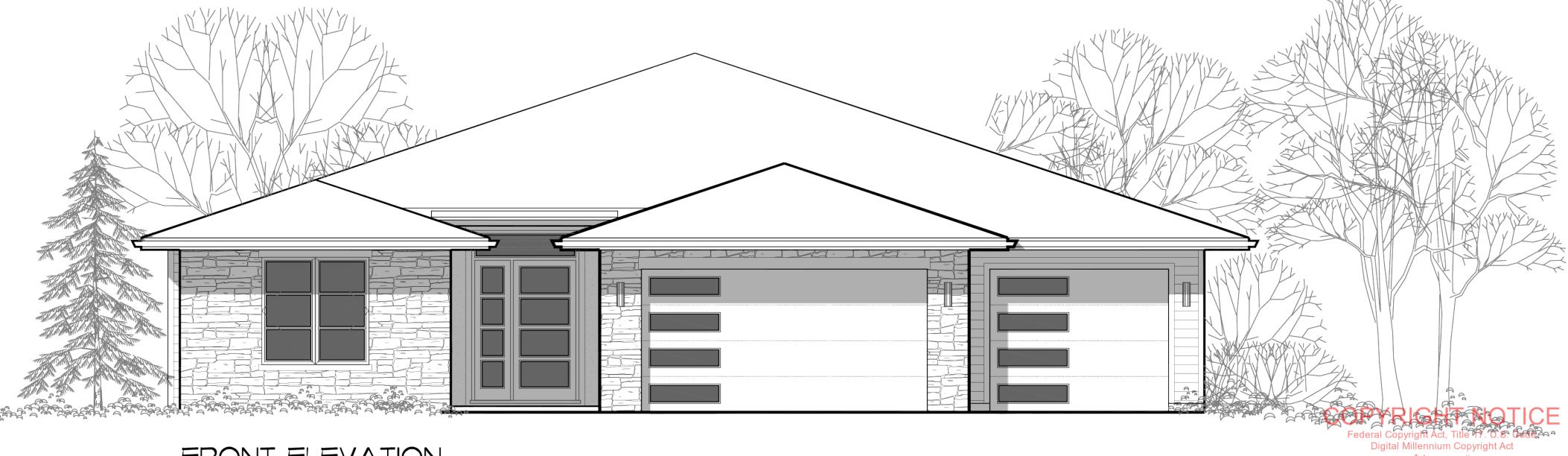
1168ES

THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR THE CORRECT INSTALLATION OF ALL EXTERIOR FINISHES AND WEATHERPROOFING.





TYPICAL EXTERIOR WINDOW TRIM



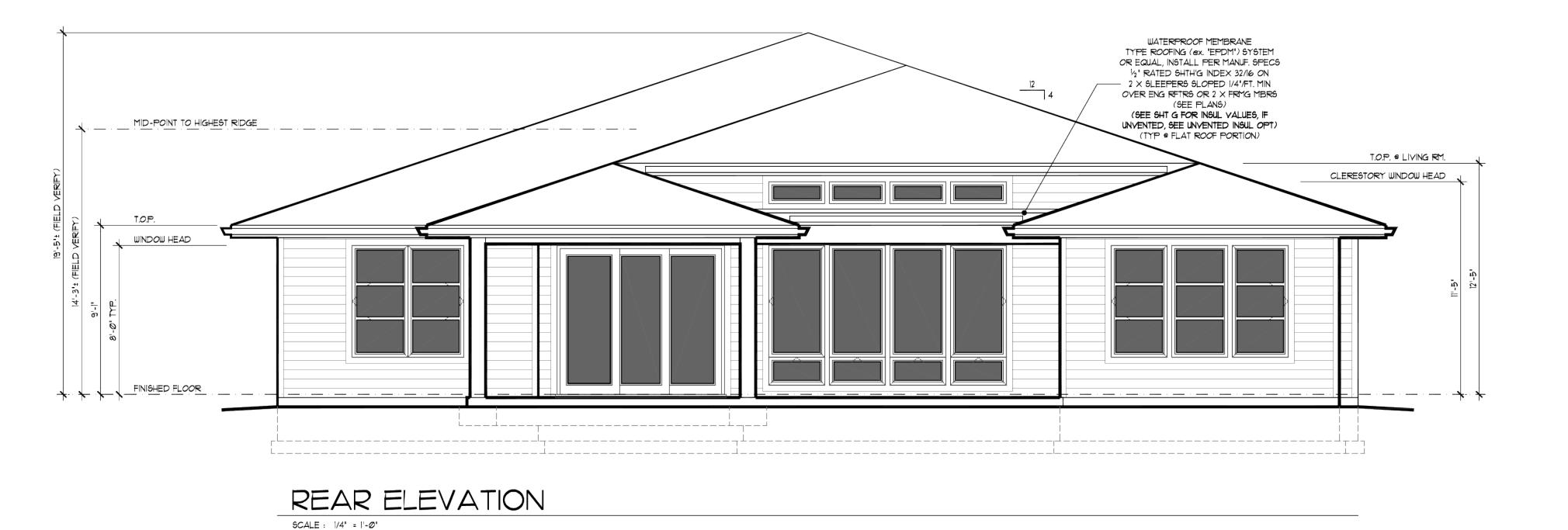
FRONT ELEVATION 9CALE: 1/4' = 1'-0'

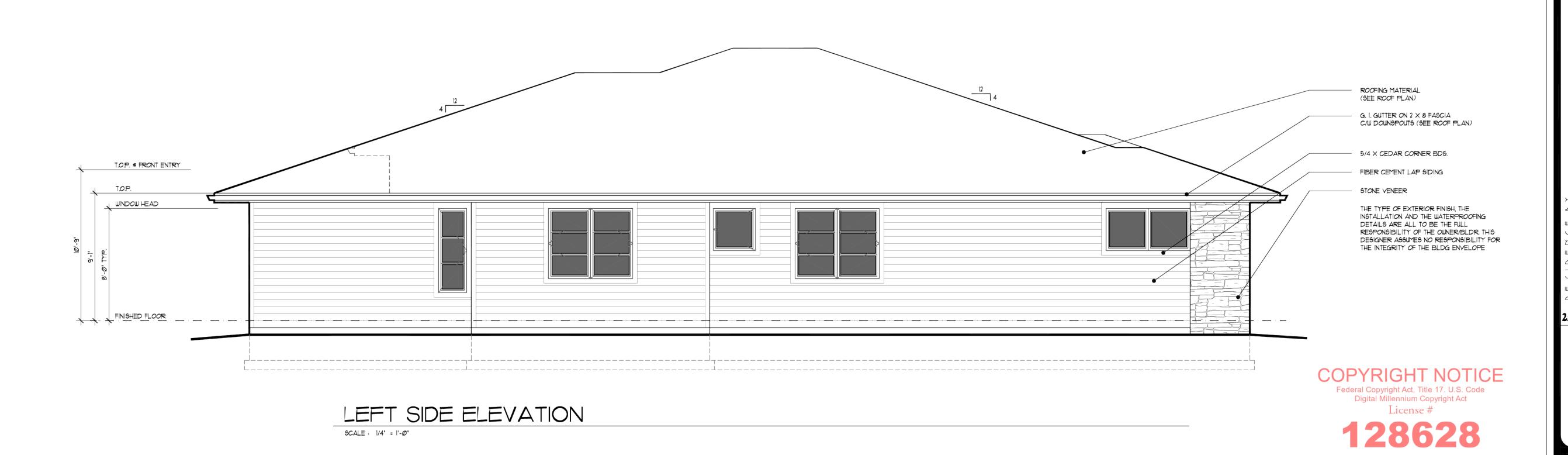
IN AN EFFORT TO DELIVER A BETTER HOME, QUAIL HOMES, LLC RESERVES THE RIGHT TO CHANGE ELEVATIONS, SPECIFICATIONS, MATERIALS AND PRICES WITHOUT PRIOR NOTICE.

ANY STATEMENTS MADE HEREIN OR OTHERWISE BY QUAIL HOMES, LLC, WHETHER ORALLY OR IN WRITING, REGARDING THE SPECIFICATIONS, QUALITY, COMPONENTS AND PERFORMANCE OF ITS HOMES, INCLUDING, BUT NOT LIMITED TO, THE ENERGY PERFORMANCE (WATER USAGE, ENERGY EFFICIENCY), ARE INFORMATIONAL ONLY AND SHALL NOT BE RELIED ON AS GUARANTEES OR WARRANTIES AS TO THE ACCURACY, COMPLETENESS, RELIABILITY OR SUITABILITY OF SUCH INFORMATION.

COPYRIGHT © 2024 ALAN MASCORD DESIGN ASSOCIATES, INC

CONSTRUCTION OF A SINGLE RESIDENCE. THIS LICENSE CANNOT BE TRANSFERRED - UNAUTHORIZED REPRODUCTION OR USAGE OF THESE DOCUMENTS OR REMOVAL OF THIS NOTIFICATION IS SUBJECT TO PROSECUTION





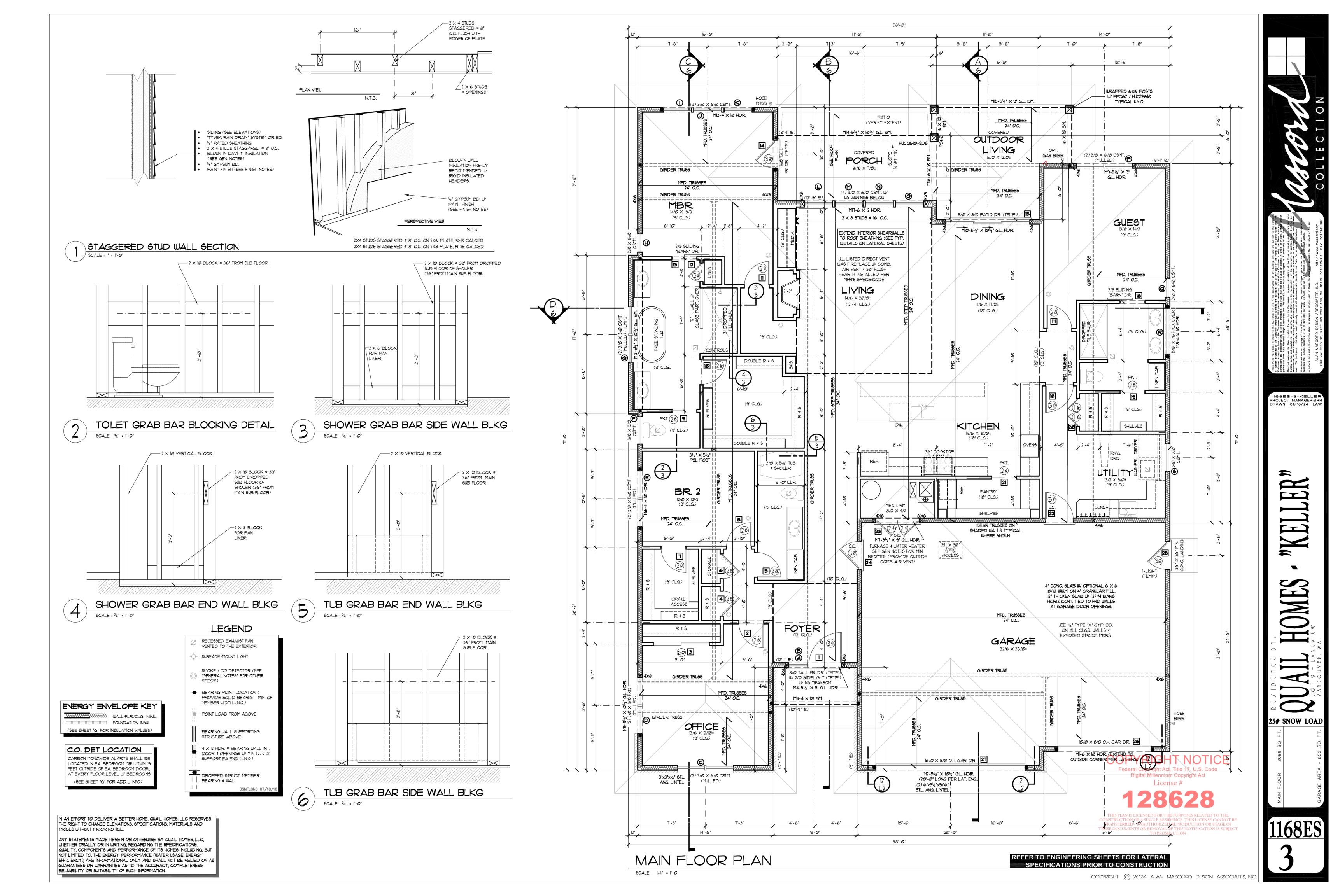
IN AN EFFORT TO DELIVER A BETTER HOME, QUAIL HOMES, LLC RESERVES THE RIGHT TO CHANGE ELEVATIONS, SPECIFICATIONS, MATERIALS AND PRICES WITHOUT PRIOR NOTICE.

ANY STATEMENTS MADE HEREIN OR OTHERWISE BY QUAIL HOMES, LLC, WHETHER ORALLY OR IN WRITING, REGARDING THE SPECIFICATIONS, QUALITY, COMPONENTS AND PERFORMANCE OF ITS HOMES, INCLUDING, BUT NOT LIMITED TO, THE ENERGY PERFORMANCE (WATER USAGE, ENERGY EFFICIENCY), ARE INFORMATIONAL ONLY AND SHALL NOT BE RELIED ON AS GUARANTEES OR WARRANTIES AS TO THE ACCURACY, COMPLETENESS, RELIABILITY OR SUITABILITY OF SUCH INFORMATION.

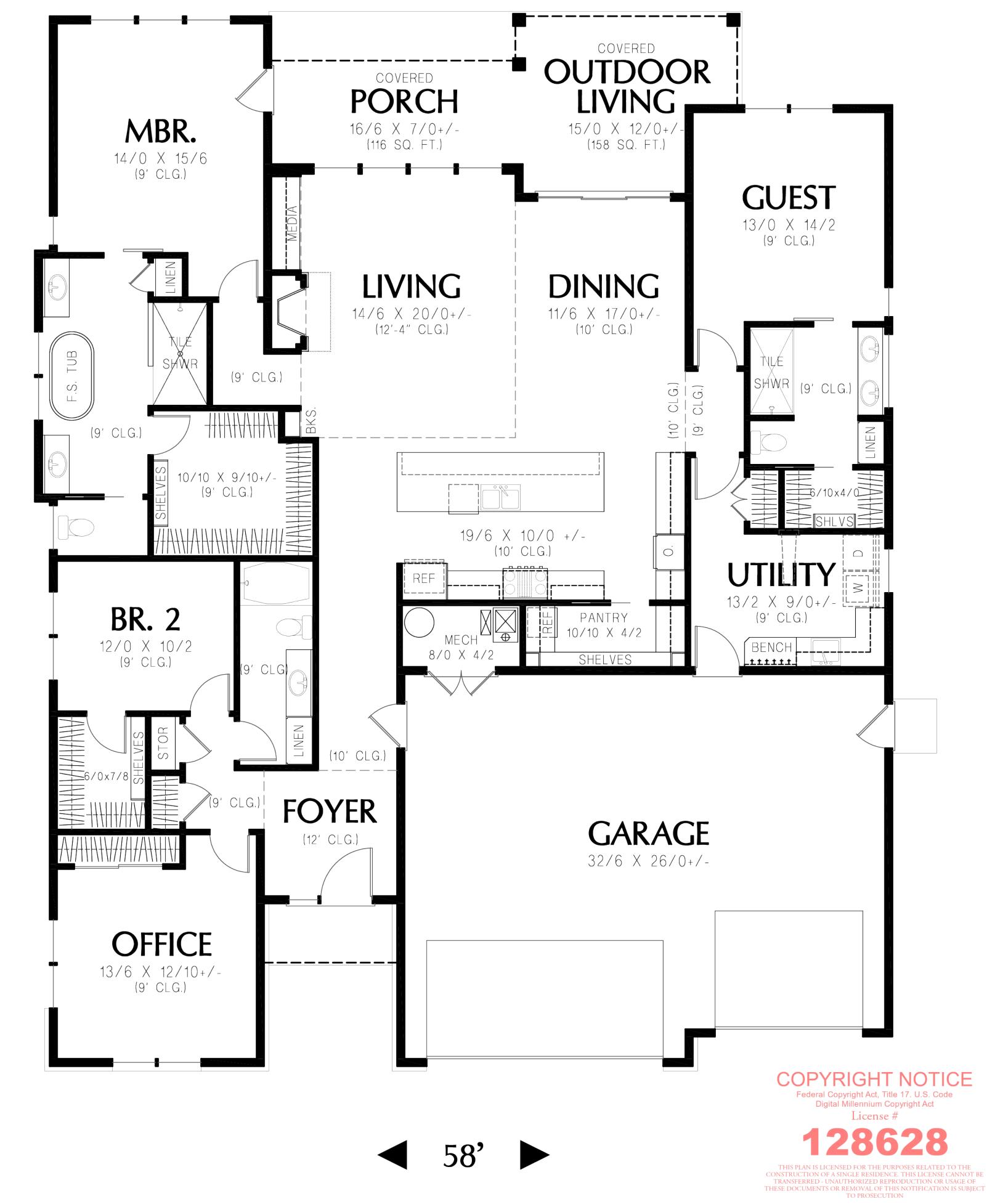
THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR THE CORRECT INSTALLATION OF ALL EXTERIOR FINISHES AND WEATHERPROOFING. COPYRIGHT © 2024 ALAN MASCORD DESIGN ASSOCIATES, INC

CONSTRUCTION OF A SINGLE RESIDENCE. THIS LICENSE CANNOT BE TRANSFERRED - UNAUTHORIZED REPRODUCTION OR USAGE OF THESE DOCUMENTS OR REMOVAL OF THIS NOTIFICATION IS SUBJECT

TO PROSECUTION

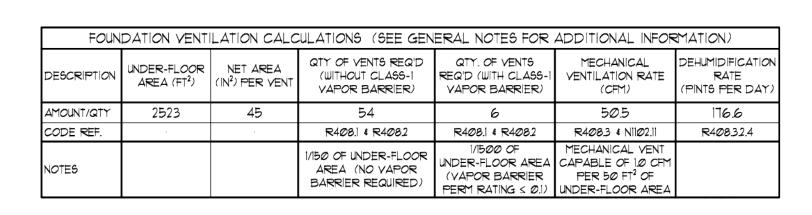


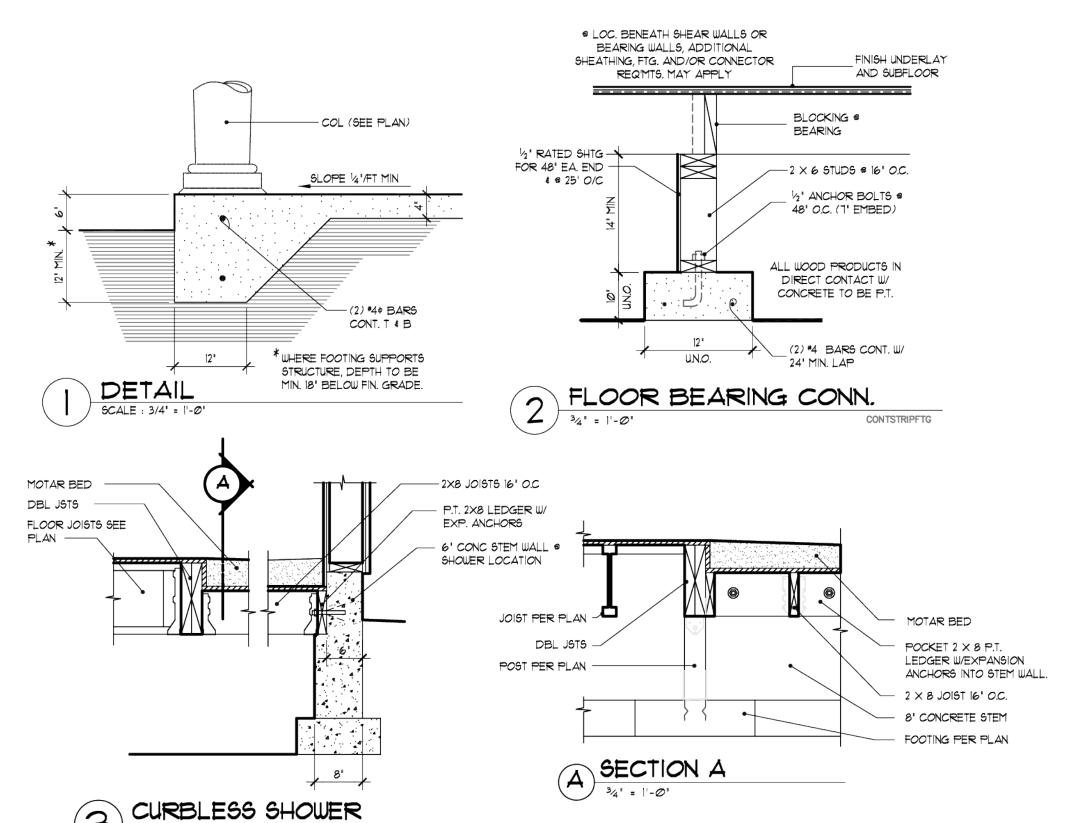
▲ 71 ▼

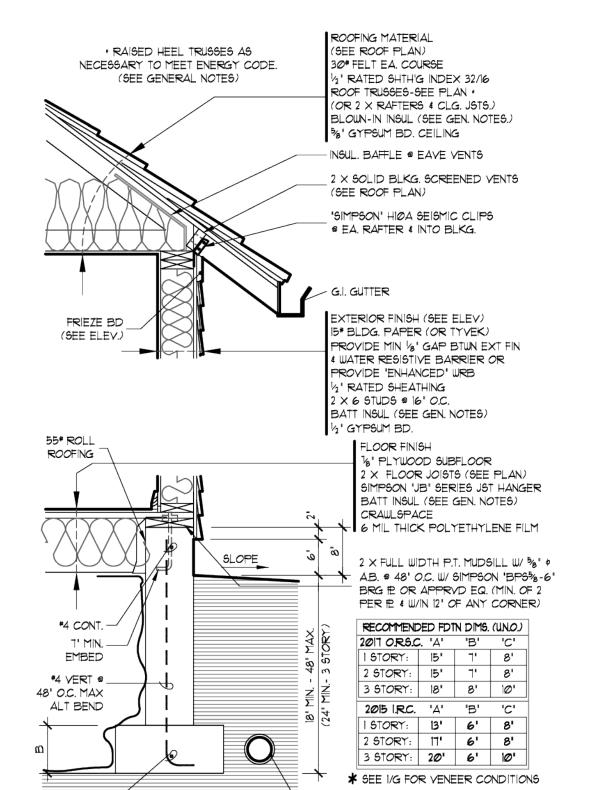


IN AN EFFORT TO DELIVER A BETTER HOME, QUAIL HOMES, LLC RESERVES
THE RIGHT TO CHANGE ELEVATIONS, SPECIFICATIONS, MATERIALS AND
PRICES WITHOUT PRIOR NOTICE.

ANY STATEMENTS MADE HEREIN OR OTHERWISE BY QUAIL HOMES, LLC, WHETHER ORALLY OR IN WRITING, REGARDING THE SPECIFICATIONS, QUALITY, COMPONENTS AND PERFORMANCE OF ITS HOMES, INCLUDING, BUT NOT LIMITED TO, THE ENERGY PERFORMANCE (WATER USAGE, ENERGY EFFICIENCY), ARE INFORMATIONAL ONLY AND SHALL NOT BE RELIED ON AS GUARANTEES OR WARRANTIES AS TO THE ACCURACY, COMPLETENESS, RELIABILITY OR SUITABILITY OF SUCH INFORMATION.







* SEE OPT. 'L' SHEETS FOR OTHER

REV. 01/04/18 JSTFTG-HANG

CONDITIONS THAT MAY APPLY.

- 4" + PERFORATED DRAIN TILE (TYP. WHERE REQ'D)

TAG	PAD SIZE	REINFORCING	MAX. BR
-	18' DIA. x 7'	N.A.	2,474
F2Ø	20'x20'x10'	N.A.	3,819
F24	24"x24"xl2"	N.A.	5,400
F28	28'x28"x14"	N.A.	7,211
F3Ø	30'x30'x15'	N.A.	8,203
F36	36'x36'xl3'	(5) #4 BARS @ 7' O.C. E/W	12,Ø37
F42	* 42"x42"x12"	(5) *4 BARS @ 8" O.C. E/W	16,537
F48	** 48"x48"x12"	(6) *4 BARS @ 9' O.C. E/W	21,600
F54	*** 54"x54"x12"	(6) *4 BARS @ 9' O.C. E/W	27,337
F60	*** 60'x60'x12'	(7) #4 BARS @ 9" O.C. E/W	33,750

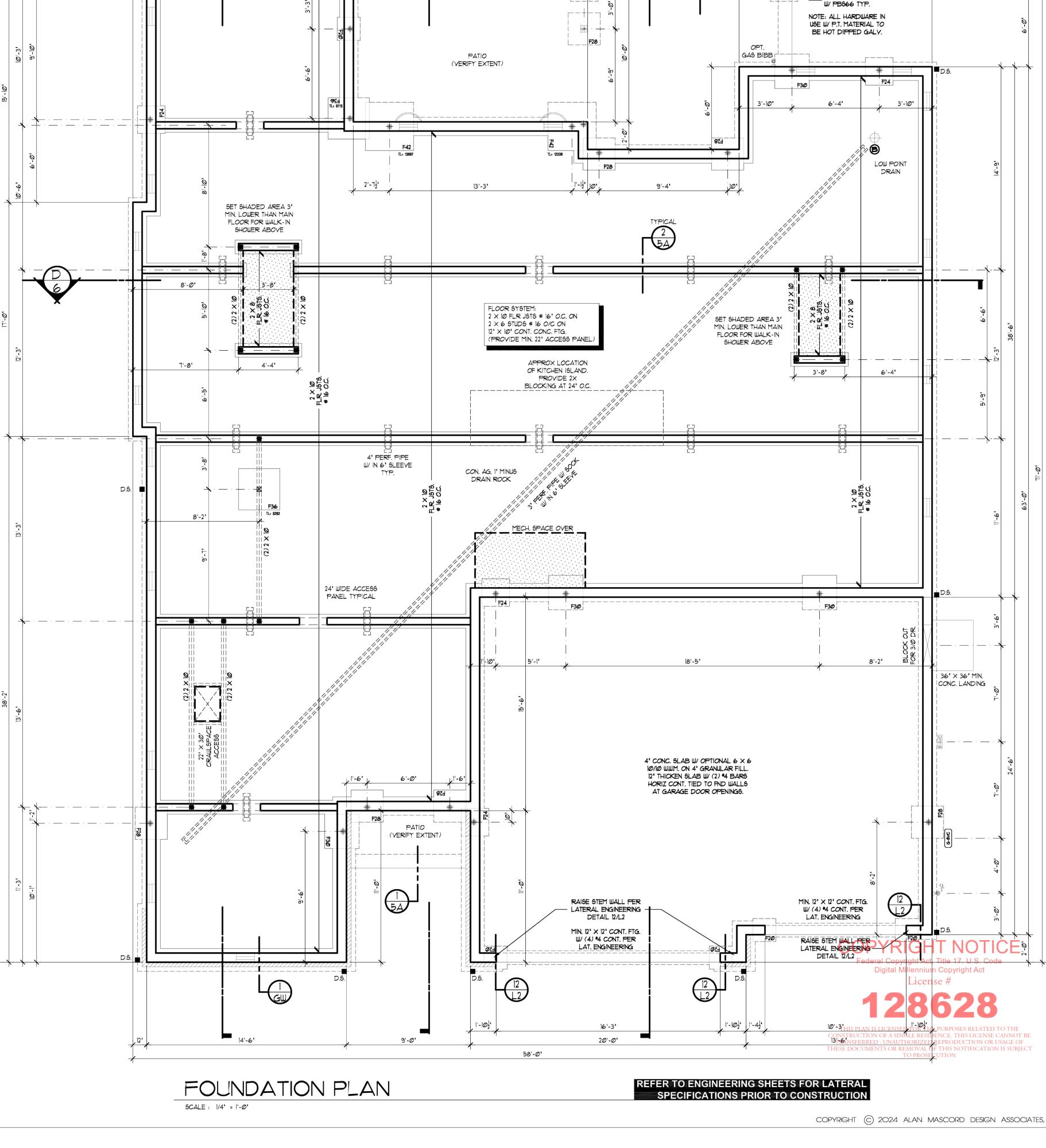
IN AN EFFORT TO DELIVER A BETTER HOME, QUAIL HOMES, LLC RESERVES THE RIGHT TO CHANGE ELEVATIONS, SPECIFICATIONS, MATERIALS AND PRICES WITHOUT PRIOR NOTICE. ANY STATEMENTS MADE HEREIN OR OTHERWISE BY QUAIL HOMES, LLC, WHETHER ORALLY OR IN WRITING, REGARDING THE SPECIFICATIONS, QUALITY, COMPONENTS AND PERFORMANCE OF ITS HOMES, INCLUDING, BUT NOT LIMITED TO, THE ENERGY PERFORMANCE (WATER USAGE, ENERGY EFFICIENCY), ARE INFORMATIONAL ONLY AND SHALL NOT BE RELIED ON AS

GUARANTEES OR WARRANTIES AS TO THE ACCURACY, COMPLETENESS,

RELIABILITY OR SUITABILITY OF SUCH INFORMATION.

*4 CONT. —

SCALE : 3/4" = 1'-0"



17'-0"

HOSE BIBB 🚇 🗰

COPYRIGHT (C) 2024 ALAN MASCORD DESIGN ASSOCIATES, INC.

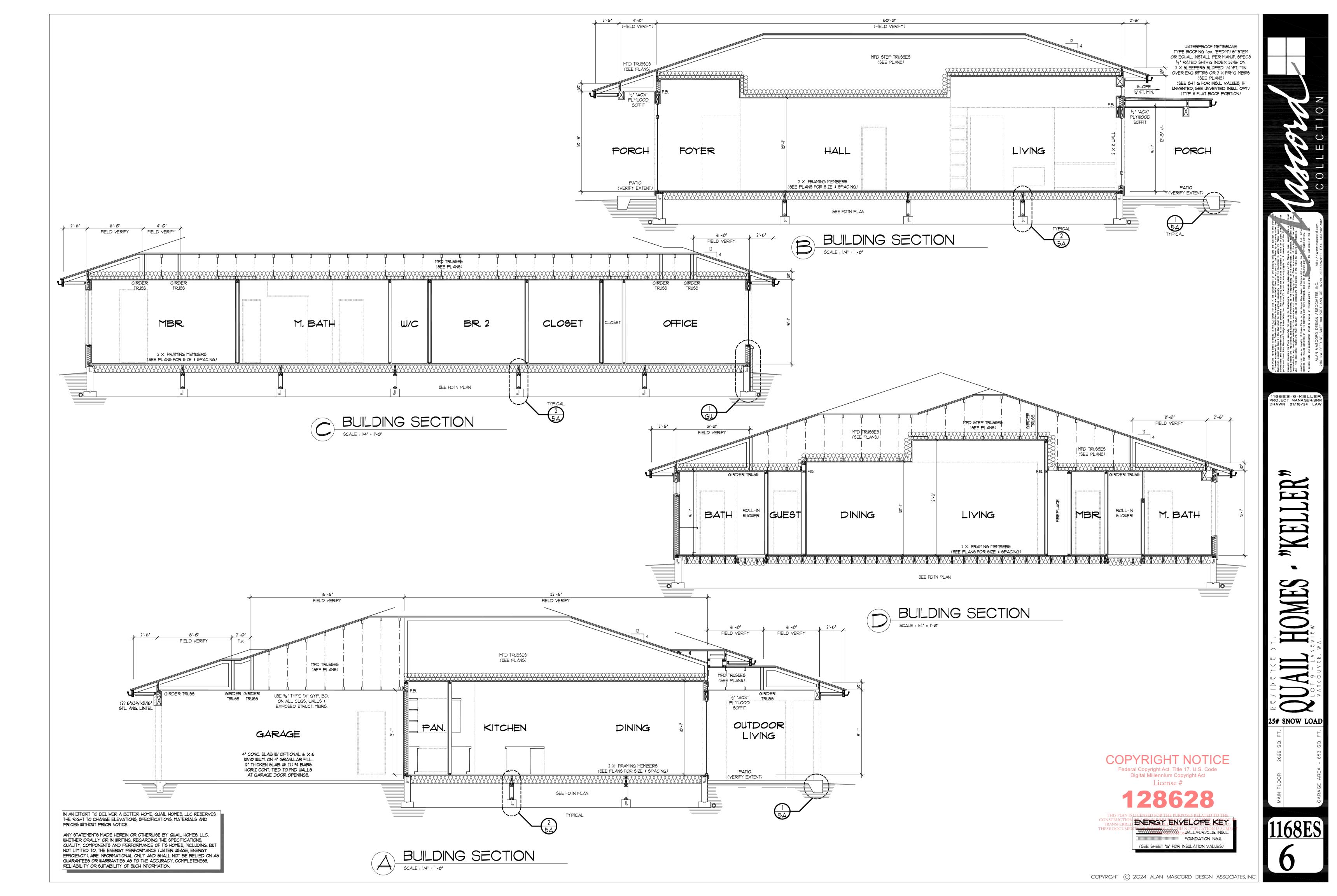
1168ES-5A-KELLER PROJECT MANAGER:SRE DRAWN 01/18/24 LAW

HOMES

25# SNOW LOAD

14'-0**'**

6×6 P.T. POSTS



ROOF DESIGN NOTES

ROOF LIVE LO			25.Ø PSF	3.25 F	est ,	4VE.(U	圧T)
FRAMING MATE BHEATHING MA			2.0 PSF 1.5 PSF	33.25 F			L REQ'D
MISC. MATERIA			1.5 PSF	6.75		BAFET	Y FACTOR
ROOFING TY	₽ E	DRY / WE	ΕT	40	.Ø	PSF	TL
MED SHAKES HVY SHAKES SHINGLES COMPOSITIO	N N	2Ø / 325 3Ø / 4Ø 2Ø / 325 25 / 3Ø	PSF (VAULTED FACTOR)	AREAS (COVE	D 2.0 PSF RED IN SAF
DTE: HIPS, VA HE END CUT OI						N	
1.3		·		COM	P/SHA	Œ f	ROOF
	EGEN WOOD POS OR VALLEY (2) 2 x 4 RE	T FROM RII) TO WALL Q'D AT WA	BELOW	"	4XIMUM 1004 W.W.P. 120 F. L 25# LL 4	A. TBI ./240	RR-28
	(VALLEYS \$			SIZE	SPACE	NG	SPAN
49 50	IR @ POST D Q. IN. ROOF V E FOR QTY.	ENTS (SE	E VENT	2×6	12' 0.0 16' 0.1 24" 0.	C.	14'-0" 12'-1" 9'-10"
2×4 F	PURLIN WALL DW. (FRAM'G ,	TO BM. OF	R WALL	2×8	12' 0.0 16' 0.1 24" 0.1	C.	17'-8' 15'-4' 12'-6'
11	ED AREA D ED OVER R			2×10	12' 0.0 16' 0.1 24" 0.1	C.	21'-7' 8'-9' 5'-3'
DOMV	ISPOUTS			2×12	12' 0.0 16' 0.1 24" 0.1	C.	25'-1' 21'-8' 17'-9'
			ROOF VENTS				
	ROOF AR	EA (ft²) =			BLOCK'G	ROO	F VENTS
% EAVE	AREA (in²)	% ROOF	AREA (in²)	3-VENT	4-VENT	4	9 in²
60	1112.3	40	741.5	118	89		15
56.7	1051.1	43.3	8Ø2.7	112	84		16
			0457	100	79		10
53.3	988.1	46.7	865.7	105	13		18

50 926.9 50 926.9 98 14 19

PER 2016 LR.C. - R8006.2 THE MIN. NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.

EXCEPTION: THE MIN. NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET: IN CLIMATE ZONES 6, T AND 8, A CLASS I OR II VAPOR RETARDER IS

NOTALLED ON THE WART-IN-WINTER SIDE OF THE CELLING.

NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE

REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN

THE WIPFER PORTION OF THE ATTIC OR RAFTER SPACE. WIPFER VENTILATORS

SHALL BE LOCATED NOT MORE THAN 3 FEET (914 MY) BELOW THE RIDGE OR

HIGHEST POINT OF THE SPACE, WERE THE LOCATED IN THE BOTTOM

ONE-THIRD OF THE ATTIC SPACE, WERE THE LOCATION OF WALL OR ROOF

PRASMISS MEDIBERS CONFLICTS WITH THE INSTALLATION OF WIPPER

VENTILATORS, INSTALLATION MORE THAN 3 FEET (914 MY) BELOW THE RIDGE

OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

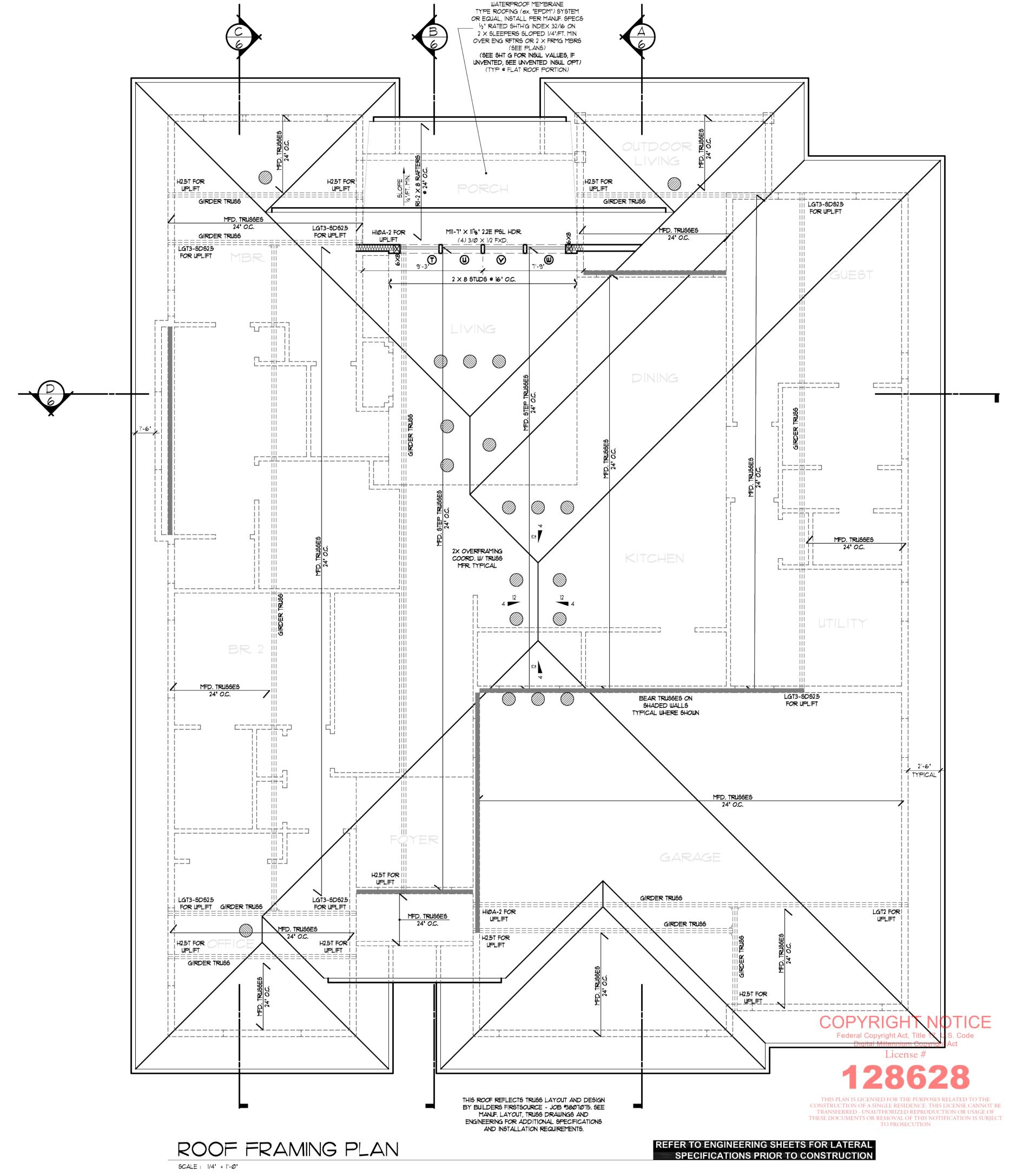
EAVE BLOCKING 000/

3-VENT BLOCK

4-YENT BLOCK (3) 2-\$'\(\theta\) HOLES (4) 2-\$'\(\theta\) (MIN.) HOLES (9.45 in^2 EA.) (12.6 in^2 EA.)

IN AN EFFORT TO DELIVER A BETTER HOME, QUAIL HOMES, LLC RESERVES THE RIGHT TO CHANGE ELEVATIONS, SPECIFICATIONS, MATERIALS AND PRICES WITHOUT PRIOR NOTICE.

ANY STATEMENTS MADE HEREIN OR OTHERWISE BY QUAIL HOMES, LLC, WHETHER ORALLY OR IN WRITING, REGARDING THE SPECIFICATIONS, QUALITY, COMPONENTS AND PERFORMANCE OF ITS HOMES, INCLUDING, BUT NOT LIMITED TO, THE ENERGY PERFORMANCE (WATER USAGE, ENERGY EFFICIENCY), ARE INFORMATIONAL ONLY AND SHALL NOT BE RELIED ON AS GUARANTEES OR WARRANTIES AS TO THE ACCURACY, COMPLETENESS, RELIABILITY OR SUITABILITY OF SUCH INFORMATION.



THESE PLANS HAVE BEEN LICENSED TO THE CUSTOMER FOR USE IN THE CONSTRUCTION OF ONE BUILDING ONL AND ARE SUBJECT TO THE CONDITIONS OF LICENSE ACCEPTED BY THE CUSTOMER, (MULTI-USE BUILDING LICENSES ARE AVAILABLE), USE OF ANY PART OF THE PLANS BY ANY PARTY OTHER THAN THE CUSTOMER EXCEPT ON LOAN BY THE CUSTOMER TO THIRD PARTIES NECESSARY TO ASSIST THE CUSTOMER IN USING THE PLANS, SUCH AS CONTRACTORS AND SUBCONTRACTORS, IS STRICTLY PROHIBITED. THE PLANS MAY NOT BE RE-USED OR COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION FROM ALAN MASCORD DESIGN ASSOCIATES, INC. ("MASCORD"), WHICH RETAINS COPYRIGHTS TO, & OWNERSHIP OF THE PLANS.

MASCORD PREPARES ITS PLANS CAREFULLY FOR USE BY ITS CUSTOMERS. HOURVER ADAPTATION OF THE PLANS TO MEET SPECIFIC STATE AND LOCAL BUILDING CODES AND REGULATIONS, AND SPECIFIC SITE CONDITIONS, IS THE RESPONSIBILITY OF THE CONTRACTOR. IN ADDITION, MASCORD WILL NOT BE RESPONSIBLE FOR ANY DAMAGES RELATING TO THE ACCURACY AND OVERALL INTEGRITY OF THE PLANS IN EXCESS OF THE LICENSE FEE PAID FOR THEIR USE. THE CONTRACTOR, THEREFORE, MUST CAREFULLY INSPECT ALL DIMENSIONS AND DETAILS IN THE PLANS FOR ERRORS OR OMISSIONS.

UNAUTHORIZED USE/COPYING OF THESE PLANS, OR THE DESIGN THEY DEPICT, INFRINGES RIGHTS UNDER THE COPYRIGHT ACT. INFRINGERS FACE LIABILITIES THAT INCLUDE PENALTIES OF UP TO 120,000 PER WORK INFRINGED, AND UP TO \$100,000 PER WORK INFRINGED WILLFULLY.

GENERAL NOTES:

1. WORK SHALL COMPLY WITH THE LATEST ADOPTED VERSION OF THE 2018 INTERNATIONAL RESIDENTIAL CODE (I.R.C.) AND/OR ANY APPLICABLE COUNTY OR LOCAL JURISDICTION.

2. THE CONTRACTOR IS RESPONSIBLE TO CHECK THE PLANS AND IS TO NOTIFY THE DESIGNER OF ANY ERRORS OR OMISSIONS PRIOR TO THE START OF CONSTRUCTION. <u>OWNER/CONTRACTOR SHALL VERIFY WITH</u> LOCAL BLDG. DEPT. WHICH CLIMATE ZONE THE PROJECT WILL BE BUILT IN.

3. WRITTEN DIMS, SHALL HAVE PRECEDENCE OVER SCALED DIMS. DO NOT SCALE THE DILIGS.

3. WRITTEN DIMS. SH	ALL HAVE PRECEDENCE OVER SCALED D	IMS. DO	NOT SO	JALE THE DU
A DEGICAL CADG	USE	LL.	D.L.	
4. DESIGN LOADS: (IN P.S.F.)	UNINHAB. ATTIC W/O STORAGE	10	10	
(IN P.S.F.)	UNINHAB. ATTIC W/ LIMITED STORAGE	20	10	
	HABITABLE ATTICS & ATTICS SERVED BY STAIR	3Ø	10	
	BALCONIES (EXTERIOR) & DECKS	60	10	
	GUARD RAILS & HAND RAILS	200	-	
	GUARD RAIL IN-FILL COMPONENTS	50	-	
	PASSENGER VEHICLE GARAGE (3,000* POINT)	50	VARIES	
	ROOMS OTHER THAN SLEEPING ROOMS	40	10	
	SLEEPING ROOMS	3Ø	10	
	STAIRS	40	10	

(IF YOUR LOCAL AREA REQUIRES DIFFERENT DESIGN LOADS CONSULT WITH A LOCAL QUALIFIED PROFESSIONAL TO DETERMINE THE APPROPRIATE REVISIONS.) FOR ROOF LOADS, SEE ROOF PLAN.

5. THIS PLAN IS DESIGNED TO MEET 2018 WASHINGTON STATE ENERGY CODE CHAPTER 51-11C WAC. UNDER PRESCRIPTIVE COMPLIANCE, TABLE R402.1.1. CONTACT LOCAL BUILDING JURISDICTION FOR YOUR CLIMATE ZONE. TABLE R402.1.1 INSUL. & FENSTRATION REQIMTS BY COMPONENT &

CLIMATE ZONE 5 & MARINE 4		
FENESTRATION U-FACTOR b	030	
SKYLIGHT ^b U-FACTOR	0.50	
CEILING R-VALUE ⁶	49	(U=0.026)
WOOD FRAME WALL " R-VALUE	21 INT	(U=0.056)
FLOOR R-VALUE	3Ø	(U=Ø.Ø29)
BELOW-GRADE ^{C, h} WALL R-VALUE	10/15/21 INT + 5TB	(U=Ø.Ø42)
SLAB ^{d, f} R-VALUE & DEPTH	1∅, 2 FT.	(U=0.054)

Appendix Table AlØ1.4 shall not be less than the R-value specified in the table.

DUCTS TO BE INSULATED TO MIN OF R-8 R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-value of the insulation from

ci = continuous insulation

int = intermediate framing UP TO 15 ft2 GLAZED FENESTRATION \$ (1) SIDE HINGED SOLID DR UP TO 24 ft² IS PERMITTED TO BE EXEMPTED FROM THE U-FACTOR REQIMIT OF TABLE R402.1.1

- The fenestration U-factor column excludes skylights. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. 10/15/21 + 57B' shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the "5TB" means R-5 thermal break between floor slab and basement wall.
- R-10 continuous insulation is required under heated slab on grade floors. See Section R4022.9.1. For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required
- perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.

 Int. (intermediate framing) denotes framing and insulation as described in Section Al0322 including standard framing 16 inches on center, 78 percent of the wall cavity insulated and headers insulated with a minimum of

ACCESS HATCHES AND DOORS FROM CONDITIONED SPACES SHALL BE WEATHERSTRIPPED AND INSULATED TO THE EQUIVALENT INSULATION VALUE ON THE SURROUNDING SURFACES. EXCEPTION: VERTICAL ACCESS DOORS TO UNCONDITIONED SPACE SHALL BE PERMITTED TO MEET THE FENESTRATION REQUIREMENTS

AIR BARRIER: CONT. AIR BARRIER SHALL BE INSTALLED IN THE BDLG. ENVELOPE, BREAKS/JOINTS IN THE AIR BARRIER SHALL BE SEALED. AIR PERMEABLE INSUL. SHALL NOT BE USED AS A SEALING MATERIAL. INSUL. SHALL BE INSTALLED PER MANUF, GUIDELINES.

INFILTRATION: THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OF OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL, SUITABLE FILM OR SOLID MATERIAL

- SPACE BETWEEN WINDOWS/DOOR JAMBS & FRAMING AND SKYLIGHTS & FRAMING.
- DUCTS, SHAFTS, UTILITY PENETRATIONS & FLUE SHAFTS OPENING TO EXT. OR UNCONDITIONED SPACE. JUNCTIONS OF FOUNDATION & SILL PLATE & JUNCTION OF THE TOP PLATE & TOP OF EXT. WALLS. HVAC REGISTER BOOTS THAT PENETRATE BLDG. THERMAL ENVELOPE (SEAL TO SUBFLOOR/DRYWALL). RECESSED LIGHT FIXTURES INSTALLED IN THE BLDG. THERMAL ENVELOPE SHALL BE AIR TIGHT,
- IC-RATED (SEALED TO THE DRYWALL). BETWEEN GARAGE AND CONDITIONED SPACES
- AIR BARRIER TO BE INSTALLED ON FIREPLACE WALLS FIREPLACE TO HAVE GASKETED DOORS. OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH THE ROOF, WALLS, AND FLOORS BUILDING ASSEMBLIES USED AS DUCTS OR PLENUMS
- JOINTS, SEAMS, AND PENETRATIONS OF VAPOR RETARDERS ALL OTHER OPENINGS IN THE BUILDING ENVELOPE

CAVITIES W/IN WALL CORNERS & HDRS, TO BE FULLY INSULATED TO R3/In FLOORS, INCLUDING ABOVE GARAGE AND CANTILEVERED FLOORS - INSUL. SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT W/ UNDERSIDE OF SUBFLOOR DECKING. (EXCEPTIONS PER R4022.1 1-3) THE AIR BARRIER SHALL BE INSTALLED AT ANY EXPOSED EDGE OF INSUL. RIM JOIST SHALL BE INSULATED & INCLUDE AIR BARRIER

CEILING/ATTIC - AIR BARRIER . DROPPED CEILING/SOFFIT SHALL BE ALIGNED W/ THE INSUL. AND ANY GAPS IN AIR BARRIER SEALED, ACCESS OPENINGS, DROP-DOWN STAIR ETC. INTO UNCONDITIONED ATTIC SPACE SHALL BE SEALED. BATT INSUL. INSTALLED IN ATTIC ROOF ASSEMBLIES MAY BE COMPRESSED . EXT. WALL LINES TO ALLOW FOR REQ'D ATTIC VENTILATION

BATT INSUL. SHALL BE CUT NEATLY TO FIT AROUND WIRING & PLUMBING IN EXT. WALLS WITHOUT VOIDS/GAPS. AIR BARRIER SHALL EXTEND BEHIND ELECTRICAL/COMMUNICATION BOXES OR INSTALL AIR SEALED BOXES. EXT. WALLS ADJACENT TO TUBS/SHOWERS TO BE INSULATED AND AIR BARRIER SHALL SEPARATE THE INSULATED WALL FROM THE SHOWER/TUB.

TESTING: DWELLING SHALL BE TESTED TO VERIFY LEAKAGE RATE DOES NOT EXCEED 5 AIR CHANGES PER HOUR BY BLOWER DR. TEST AT A PRESSURE OF 02 IN W.G. (50 PASCALS). CODE OFFICIAL MAY REQUIRE TESTING TO BE COMPLETED BY APPROVED THIRD PARTY. SEE R402.4.12 FOR PROCEDURES AND DOCUMENTATION REQIMITS

DUCTS AIR HANDLERS & BILTER BOXES SHALL BE SEALED (NII/2332) JOINTS & SEAMS SHALL COMPLY W/ IMC OR MIGOL4.I EXCEPTIONS ALLOWED FOR AIR- IMPERMEABLE SPRAY FOAM PRODUCTS (EXCEPTION I) OR DUCTS MEETING SPECIFIC PRESSURE 1 JOINT REQMTS (EXCEPTION 2), DUCTS SHALL BE PRESSURE TESTED PER NII03.3.3 (MANDATORY) BY EITHER ROUGH-IN TEST OR POST CONSTRUCTION TEST AS DESCRIBED IN CODE, UNLESS DUCTS \$ AIR HANDLERS ARE LOCATED ENTIRELY WITHIN THERMAL BLDG. ENVELOPE. A WRITTEN TEST REPORT, SIGNED BY THE TESTER, SHALL BE PROVIDED TO THE BUILDING OFFICIAL. TOTAL DUCT LEAKAGE SHALL MEET (PRESCRIPTIVE) REQIMTS OF NII03.3.4.1 ROUGH-IN TEST, OR NII03.3.4.2 POST CONSTRUCTION TEST

6. ALL EXPOSED INSULATION IS TO HAVE A FLAME SPREAD RATING NOT TO EXCEED 25. A SMOKE-DEVELOPED INDEX NOT TO EXCEED 450, WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 123, AND CRITICAL RADIANT FLUX NOT LESS THAN Ø.12 WATTS PER SQUARE CENTIMETER & EXPOSED ATTIC INSUL.

1. ALL WINDOWS W/N A 24" ARC OF EITHER VERTICAL EDGE OF ANY DR. IN A CLOSED POSITION, WITH BOTTOM EXPOSED EDGE LESS THAN 60' ABOVE FLR OR WALKING SURFACE SHALL HAVE TEMPERED GLAZING. WINDOWS WITH AN EXPOSED AREA LARGER THAN 9 SQ. FT. AND THE BOTTOM EDGE OF GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR SHALL HAVE TEMPERED GLAZING.

8. SKYLIGHTS ARE ASSUMED TO BE PRE-MANUFACTURED UNIT SKYLIGHTS. UNIT SKYLIGHTS SHALL BE COMPLIANT WITH THE REQUIREMENTS OF AAMA/WDMA/CSA 101/1.52/A440

9. ALL EXT. WINDOWS ARE TO BE DBL. GLAZED AND ALL EXT. DRS, ARE TO BE SOLID CORE W/ WEATHERSTRIPPING PROVIDE 1/2" IN. DEAD BOLT LOCKS ON ALL EXT. DRS., AND LOCKING DEVICES ON ALL DRS. AND WINDOWS W/IN 10

FT. (VERTICAL) OF GRADE. PROVIDE PEEPHOLE 54' - 66' ABOVE FIN. FLR. ON EXT. ENTRY DRS. 10. BASEMENTS, EVERY SLEEPING ROOM AND HABITABLE ATTICS TO HAVE MIN. WINDOW OPENING OF 5.7 SQ. FT. WITH A MIN. WIDTH OF 20' AND A SILL HGT. NOT MORE THAN 44' ABOVE FIN. FLOOR.

II. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS & SHOWERS, AND IN ANY PART OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS, WHERE BOTTOM EDGE OF GLAZING 19 LEGG THAN 60' MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE, TO BE TEMPERED GLAZING. OPERABLE WINDOWS LOCATED MORE THAN 12' ABOVE FINISHED GRADE OR SURFACE SHALL HAVE LOWEST PART OF CLEAR OPENING A MIN. OF 24' ABOVE FINISHED FLOOR. (R3122.1) GLAZING BETWEEN FINISHED FLOOR AND 24" SHALL BE FIXED OR HAVE OPENINGS THROUGH WHICH A 4" DIA, SPHERE CANNOT PASS

OR CODE APPROVED WINDOW GUARD (COMPLIANT W/ ASTM F2090). **12. SMOKE DETECTORS SHALL BE INSTALLED IN EA. SLEEPING ROOM, OUTSIDE THE IMMEDIATE VICINITY OF EA.** GLEEPING AREA AND ON EA. STORY OF THE DWELLING. CARBON MONOXIDE ALARMS SHALL BE LOCATED IN EA. BEDROOM OR W/N 15 FEET OUTSIDE OF EA. BEDROOM DR. BEDROOMS ON SEPARATE FLR LEVELS IN A STRUCTURE OF TWO OR MORE STORIES SHALL HAVE SEPARATE CARBON MONOXIDE ALARMS SERVING EA. STORY. PROVIDE AN NFPAT2 COMPLIANT HEAT ALARM SENSOR CENTRALLY LOCATED WITHIN THE GARAGE. ALL SMOKE DETECTORS, COMBINATION SMOKE/CARBON MONOXIDE ALARMS AND/OR HEAT ALARM SENSORS SHALL BE INTERCONNECTED SUCH THAT THE ACTUATION OF ONE ALARM/SENSOR WILL ACTUATE ALL THE ALARMS AND WILL BE AUDIBLE IN ALL SLEEPING AREAS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED. SINGLE STATION CARBON MONOXIDE ALARMS THAT ARE HARD WIRED SHALL BE EQUIPPED W/ BATTERY BACKUP. 13. ELECTRICAL RECEPTACLES IN BATHROOMS, KITCHENS, EXTERIOR LOCATIONS AND GARAGES SHALL BE G.F.I. OR G.F.I.C. PER NATIONAL ELECTRICAL CODE (N.E.C.) REQUIREMENTS. A MIN. OF 90% OF THE LAMPS IN

PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICACY LAMPS. 14. INT. 4 EXT. STAIRS SHALL HAVE A MEANS TO ILLUMINATE THE STAIRS, INCLUDING LANDINGS 4 TREADS. INT. STAIRS OF 6 STEPS OR MORE SHALL HAVE THE REQUIRED LIGHTING IN THE IMMEDIATE VICINITY OF THE TOP 4 BOTTOM OF THE STAIRS, EXT. STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF STAIR, EXT. STAIRS LEADING FROM GRADE TO BASEMENT SHALL HAVE AN ARTIFICIAL LIGHT SOURCE IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF STAIRS.

LIGHTING FOR INT. STAIRS SHALL BE CONTROLLED FROM TOP & BOTTOM OF EA. STAIR. SEE I.R.C. 303.7 15. PROVIDE COMBUSTION AIR VENTS (W/ SCREEN AND BACK DAMPER) FOR FIREPLACES, WOOD STOVES, AND ANY APPLIANCES WITH AN OPEN FLAME. FIREPLACE FLUE DAMPERS SHALL BE TIGHTLY FITTING AND OPERATED BY A READILY ACCESSIBLE MANUAL OR APPROVED AUTOMATIC CONTROL.

16. BATHROOMS, UTILITY ROOMS & INDOOR SWIMMING POOLS & SPAS ARE TO BE VENTED WITH A FAN CAPABLE OF PRODUCING A MIN. 50 CFM INTERMITTENT OR 20 CFM CONT. AND KITCHENS CAPABLE OF 100 CFM INTERMITTENT OR 25 CFM CONT. DUCT LENGTH, DIA., 4 TYPE TO BE DETERMINED PER TABLE MISO62 ALL EXHAUST VENTS TO BE VENTED TO EXTERIOR. THE EQUIVALENT LENGTH OF THE DRYER EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG, WHERE IT EXCEEDS 35', LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION. 17. SPECIFIC MANUFACTURES AND MATERIALS DEPICTED ON THESE PLANS ARE AN INDICATION OF QUALITY AND STRENGTH. VERIFY ALL CONSTRUCTION MATERIAL SUBSTITUTIONS WITH CURRENT APPLICABLE BUILDING CODES AND LOCAL BUILDING OFFICAILS PRIOR TO INSTALLATION/SUBSTITUTION. 18. THIS DESIGN, UNLESS PURCHASED WITH ITS SPECIFIC ENGINEERED ANALYSIS, HAS NOT BEEN REVIEWED FOR

ANY SPECIFIC LATERAL DESIGN REQUIREMENTS.

ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS (MANDATORY) This dwelling shall comply w/ sufficient options from table R4062 so as to achieve the

following min number of credits (choose applicable dwelling unit) 1. Small Dwelling Unit:15 credits

Dwelling units less than 1500 square feet in conditioned floor area with less than 300

square feet of fenestration area.

All dwellings units that are not in included in #1 or #3

3. Large Dwelling Unit: 7 credits Dwelling units exceeding 5000 sq. ft. of conditioned floor area.

pecified	TABLE 4062	
SYSTEM TYPE	DESCRIPTION OF PRIMARY HEATING SOURCE	CREDITS
□ 1	Combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.32(4) or C403.32(5)	Ø
□ 2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.32(1)C or C403.32(2) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	lØ
□ 3	For heating system based on electric resistance only (either forced air or Zonal)	- 10
□ 4	For heating system based on electric resistance with a ductless mini-split heat pump system in accordance with Section R403.7.1 including the exception	N/A
□ 5	All other heating systems	-05
	TABLE 4063	
	DESCRIPTION	
OPTION	I. EFFICIENT BUILDING ENVELOPE OPTIONS Only one option from item I.I I.7 in this category may be selected.	CREDITS
□ I. 1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration $U=0.24$.	Ø.5
□ 1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration $U=020$.	IØ
□ l.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 028 Floor R-38	Ø.5

□ 1.1	Vertical fenestration U = 024.	Ø.5
□ 1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 020.	IØ
□ 1.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 028 Floor R-38	Ø.5
	Slab-on-grade R-IØ perimeter and under entire slab Below-grade slab R-IØ perimeter and under entire slab or	
	Compliance based on Section R402.1.4: Reduce the Total conductive UA by 5%.	
□ 1.4	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 025 Wall R-21 plus R-4 ci Floor R-38	IØ
	Basement wall R-21 int plus R-5 cl 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 conductive UA by 15%	
□ 1.5	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 022 Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38	2.00
	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 conductive UA by 30%.	
□ 1.6	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.18 Ceiling and single-rafter or joist-vaulted R-60 advanced Wood frame wall R-21 int plus R-16 ci Floor R-48 Basement wall R-21 int plus R-16 ci Slab-on-grade R-20 perimeter and under entire slab Below-grade slab R-20 perimeter and under entire slab	3.0
	or	
	Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%. Advanced framing and raised beet trusses or rafters	
□ 1. 7	Advanced framing and raised heel trusses or rafters Vertical Glazing U-028 R-49 Advanced (U-0020) as listed in Section Al022.1, Ceilings below a vented attic and	Ø.5
	R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.	
OPTION	2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS Only one option from Items 2.1 through 2.4 may be selected in this category.	CREDITS
□ 2.1	Compliance based on Section R402.4.12: Reduce the tested air leakage to 3.0 air changes per hour maximum at 5.0 Pascals and	Ø.5
	All whole-house ventilation requirements as determined by Section MISØ7.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a high efficiency fan(s) (maximum 0.35 watts/cfm), not interlooked with the furnace fan (if present). Ventilation systems using a furnace including an ECM 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, the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	
□ 2.2	Compliance based on Section R402.4.12: Reduce the tested air leakage to 20 air changes per hour maximum at 50 Pascals and	lØ
	All whole-house ventilation requirements as determined by Section MI507.3 of the International Residential Code or Section 4038 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.65. 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.	
□ 2.3	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air changes per hour maximum at 50 Pascals	1.5
	and All whole-house ventilation requirements as determined by Section MI5073 of the International Residential Code or Section 4038 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of <u>0.75</u> . 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.	
□ 2.4	Compliance based on Section R402.4.12: Reduce the tested air leakage to <u>0.6</u> air changes per hour maximum at 50 Pascals	2.0
	and All whole-house ventilation requirements as determined by Section Mi5073 of the International Residential Code or Section 4038 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 080. Duct installation shall comply with Section R4033.7. 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.	
OPTION	3. HIGH-EFFICIENCY HVAC EQUIPMENT OPTIONS Only one option from Items 3.1 through 3.6 may be selected in this category.	CREDITS
□ 3.1ª	Energy Star rated (U.S. North) Gas or propane furnace with minimum APUE of 95% or Energy Star rated (U.S. North) Gas or propane boiler with minimum APUE of 90%. 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.	lØ
□ 32ª	Air-source centrally ducted heat pump with minimum HSPF of 9.5. 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.	lØ
□ 33ª	Closed-loop ground source heat pump± with a minimum COP of 33 or Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 36. 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.	1.5
□ 3.4	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSFF of IDD 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.	1.5
□ 3.5ª	Air-source, centrally ducted heat pump with minimum HSPF of II.Ø. To qualify to claim this	1.5

	All whole-house ventilation requirements as determined by Section MI507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 065. 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.	
3	Compliance based on Section R402.4.12: Reduce the tested air leakage to 15 air changes per hour maximum at 50 Pascals and All whole-house ventilation requirements as determined by Section MI507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.75. 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.	15
-	Compliance based on Section R402.4.12: Reduce the tested air leakage to <u>0.6</u> air changes per hour maximum at 50 Pascals and All whole-house ventilation requirements as determined by Section MI507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of <u>0.80</u> , Duct installation shall comply with Section R403.3.7. 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.	2Ø
١	3. HIGH-EFFICIENCY HVAC EQUIPMENT OPTIONS Only one option from Items 3.1 through 3.6 may be selected in this category.	CREDITS
	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% or Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. 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.	IØ
	Air-source centrally ducted heat pump with minimum HSPF of 9.5. 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.	ها
1	Closed-loop ground source heat pump± with a minimum COP of 3.3 or Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet 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.	1.5
	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of IOD 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.	15
ı	Air-source, centrally ducted heat pump with minimum HSPF of IID. 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.	1.5
	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2Ø
	a. An alternative heating source sized at a maximum of 0.5 Watts/ft2 (equivalent) of heated floor area or 500 Watts, whichever is bigger, may be installed in the dwelling unit.	
٧	4. HIGH-EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS	CREDITS
	All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.T. For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. 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. Duct leakage shall be limited to 3 cm per 100 square feet of conditioned floor area. Air handler(s) shall be located within the conditioned space.	Ø5
?	HVAC equipment and associated duct system(s) installation shall comply with the requirements of Section R4033.T. 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	lØ

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 heating equipment

type and shall show the location of the heating and cooling equipment and all the

TABLE 4063 (CONT.)

OPTION	5. EFFICIENT WATER HEATING OPTIONS Only one option from Items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.					
□ 5. 1	all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.					
□ 5.2	5. 2 Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. 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.					
□ 5.3	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 or Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kUh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems or Water heater heated by ground source heat pump meeting the requirements of Option 33. 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.	1.00				
□ 5.4	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification or For R-2 occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 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.	1.5				
□ 5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification.	2.0				
□ 5.6	Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard Advanced Water Heating Specification with the UEF noted above.	25				
OPTION	6. RENEWABLE ELECTRIC ENERGY OPTION	CREDITS				
□ 6.1	For each 1200 kUh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 10 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 using the National Renewable Energy Laboratory calculator PVWATTs or approved alternate by the code official. 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 curvet average annual wind speed at the site if requency 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.	1.00				
OPTION	1. APPLIANCE PACKAGE OPTION	CREDITS				
□ 1. 1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: Dishwasher — Energy Star rated Refrigerator (if provided) — Energy Star rated Washing machine — Energy Star rated Dryer — Energy Star rated, ventless dryer with a minimum CEF rating of 52. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to	1.00				

FRAMING NOTES:

1. ALL EXTERIOR WALL OPENINGS & BEARING WALL OPENINGS TO HAVE 4 X 10 HEADERS UNLESS OTHERWISE INDICATED. IF BUILDING BUILT WITH 88% IN. STUDS USE 4 X 8 HEADERS UNLESS OTHERWISE NOTED ON THE PLAN.

utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the

2. ALL EXTERIOR WALLS TO BE BUILT OF 2 \times 6 STUDS & 16' O.C. TYPICALLY UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS ARE TO BE BUILT OF 2 X 4 STUDS * 16" O.C. TYPICALLY UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SUPPORTING TWO OR MORE FLOORS AND I OR MORE ROOF/CEILING ASSEMBLIES SHALL BE 2 X 6 STUDS @ 16" O.C. FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDDING ABOVE. WHEN EXCEEDING 4'-0" IN HEIGHT, SUCH WALLS SHALL BE FRAMED OF STUDS HAVING THE SIZE REQUIRED FOR AN ADDITIONAL STORY UNLESS SPECIFIED OTHERWISE.

3. ALL METAL CONNECTORS TO BE "SIMPSON" OR EQUIVALENT. U.N.O. JOISTS HUNG ON FLUSH BEAMS TO BE ATTACHED WITH U2/0 OR EQUIVALENT. MULTIPLE JOISTS USE U2/0-2/U2/0-3 AS REQUIRED. USE OF 100 imes 1-1/2 NAILS ARE ALLOWED WITH THESE TYPE OF HANGERS UNLESS OTED ON THE PLANS. SEE NAIL CONVERSION CHART FROM CONNECTOR MANUFACTURES CATALOG FOR OTHER NOTES AND RESTRICTIONS THAT MAY APPLY. "USP" CONNECTORS CONSIDERED APPROVED EQUAL

4. PROVIDE DOUBLE JOISTS UNDER ALL WALLS ABOVE, RUNNING PARALLEL TO JOISTS AND SOLID BLOCKING BELOW ALL BEARING WALLS RUNNING PERPENDICULAR TO FLOOR JOISTS.

5. PROVIDE POSITIVE VENTILATION AT EACH END OF EACH RAFTER SPACE AT VAULTED CLG AREAS, AND INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS. RAFTER VENTILATION IS ALSO REQUIRED AT BLOCKING LOCATIONS ABOVE THE PLATE.

1. HIPS, VALLEY'S AND RIDGES SHALL NOT BE LESS IN DEPTH THAN THE END CUT OF THE

6. PROVIDE FIRE BLOCKING PER 2018 I.R.C. R302.11 & DRAFT STOPS PER 2018 I.R.C. R302.12

8. UNLESS NOTED OTHERWISE, CONNECT POST TO BEAM WITH "SIMPSON" BC SERIES CAP/BASE (OR APPROVED EQUAL) CONNECTORS. AT EXTERIOR APPLICATIONS USE "SIMPSON" EPB SERIES BASES UND. AND AT INTERIOR GARAGE POSTS AT FINISH FLOOR, (POST NOT EMBEDDED) USE "SIMPSON" CB SERIES BASES, "USP" CONNECTORS CONSIDERED APPROVED EQUAL.

9. FASTENERS FOR PRESERVATIVE-TREATED WOOD INCLUDING NUTS AND WASHERS SHALL BE HOT-DIPPED, ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL.

FOUNDATION NOTES:

AS REQUIRED TO MAINTAIN THE REQUIRED DEPTH BELOW THE FINAL GRADE. 2. CONTINUOUS FOOTINGS ARE DESIGNED PER 2018 IRC TABLE R403.((1) - SOIL BEARING VALUE OF 1500 PSF, 30° SNOW LOAD, LIGHT FRAME CONSTRUCTION BASED ON 32' WIDE HOUSE WITH CENTER BEARING WALL. 3. MAX. SLOPE OF CUTS AND FILLS TO BE TWO (2) HORIZ. TO ONE (1) VERT. FOR BLDG, STRUCTURES, AND FDTNS. 4. ANY FILL UNDER GRADE SUPPORTED SLABS TO BE A MIN. OF 4" IN. GRANULAR MAT. COMPACTED TO 95%.

5. CC	NCRETE: - MIX AND 28 DAY STRENGTH OF CO	NCRETE.		
	- BASEMENT WALLS & FOUNDATIONS EXPOSED TO WEATHER:	NOT	2,500 PSI	MORTAR & GROUT TO BE MIXED PER
	- BASEMENT & INTERIOR SLABS ON GRADE:		2,500 PSI	MFR REQ'MTS
	- BASEMENT WALLS & FOUNDATIONS EXPOSED TO THE WEATHER:, AND GARAGE SLABS		3 <i>,000</i> PSI	
	- PORCHES, STEPS, & CARPORT SLABS EXPOSED TO WEATHER:		3,500 PSI	

6. GARAGE FLOORS TO SLOPE 1/81/FT MIN. TOWARDS OPENING AS REQUIRED FOR DRAINAGE. CONCRETE SLABS TO HAVE CONTROL JOINTS AT 25' FT. (MAX.) INTERVALS EA. WAY. SLABS ARE TO BE 5-7% AIR ENTRAINED 1. CONCRETE SIDEWALKS TO HAVE 3/4' IN. TOOLED JOINTS AT 5' FT. (MIN.) O.C.

8. REINFORCING STEEL TO BE A-615 GRADE 60. OPTIONAL WELDED WIRE MESH TO BE A-185. 9. EXCAYATE SITE TO PROVIDE A MIN. OF 18' CLEARANCE UNDER ALL GIRDERS.

IØ, COVER ENTIRE CRAWL SPACE WITH CLASS I VAPOR RETARDER (e.g. 6 MIL POLYETHYLENE FILM). & INSTALL A RADON VENT BETWEEN GROUND COVER AND SOIL (PER IRC APPENDIX F,- SEE SHEET R), AS REQ'D WHERE VENT AREA IS LESS THAN 1/150 OF CRAILLSPACE AREA OR OPERABLE LOUVERS ARE INSTALLED AT CRAULSPACE VENTS.

II. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL BE NOT LESS THAN I SQ. FT. FOR EACH 300 SQUARE FEET OF UNDER-FLOOR AREA. (PER IRC R408.)) PROVIDE FOUNDATION VENTS WITH 13 SQ. IN. NET FREE AREA FOR EVERY 150 SQ. FT OF CRAILL SPACE AREA. SPACE EVENLY TO PROVIDE CROSS-VENTILATION. ONE SIDE OF BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS. EXCEPTION: THE TOTAL AREA OF VENTILATION OPENINGS SHALL BE PERMITTED TO BE REDUCED TO 1/1,500 OF THE UNDER-FLOOR AREA WHERE THE GROUND SURFACE IS COVERED WITH AN APPROVED CLASS I VAPOR RETARDER MATERIAL AND THE REQUIRED OPENINGS ARE PLACED TO PROVIDE CROSS VENTILATION OF THE SPACE.

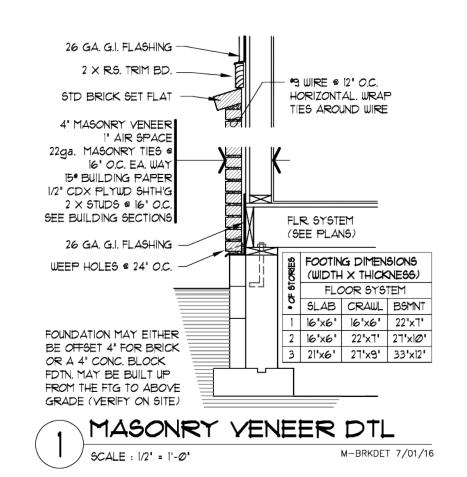
12. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED WITH 55° ROLL ROOFING. 13. BEAM POCKETS IN CONCRETE TO HAVE 1/2" IN. AIRSPACE AT SIDES AND ENDS WITH A MIN. BEARING OF 3" IN. 14. WATERPROOF BASEMENT WALLS BEFORE BACKFILLING. PROVIDING A 4' IN. DIA. PERFORATED DRAIN TILE BELOW THE TOP OF THE FOOTING (SEE BUILDING SECTIONS).

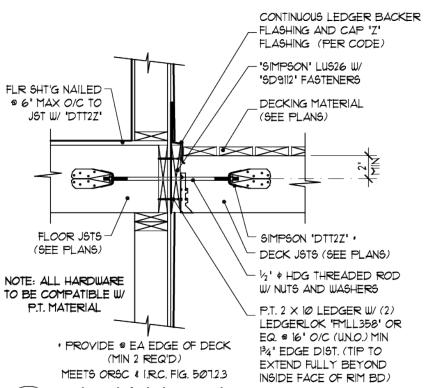
15. PROVIDE MIN. 18" X 24" CRAWLSPACE ACCESS THROUGH FLOOR OR MIN. 16" X 24" CRAWLSPACE ACCESS

10	LUMBER SPECIES:			
	A. POSTS, BEAMS, HEADERS JOIST	S AND RAFTER	85	NO. 2 DOUGLAS FIR
	B. SILLS, PLATES, BLOCKING BRID	GING ETC.		NO. 3 DOUGLAS FIR
	C. STUDS			STUD GRADE DF.
	D. STUDS OVER 10' HIGH			NO. 2 OR BETTER D/F
	E. POST & BEAM DECKING			UTILITY GRADE DF.
	F. PLYWOOD SHEATHING	1/2 CDX PLY, 32/16		
	G. GLU-LAM BEAMS (EXT. ADH @ E	XT. CONDITION	15)	Fb-2400, DRY ADH.
	H. PSL MATERIALS * LVL. MATERIALS **	Flo = 2900 Flo = 2900 Flo = 2600	E= 2.0	Fv = 285
	LSL MATERIALS ***			Fv = 525
	PSL INDICATES PARALLEL STE LYL INDICATES LAMINATED VEI LAMINATED STRAND LUMBER I. METAL HANGERS & FASTENERS U STEEL OR HOT DIPPED GALVINIZE	NEER LUMBER SED WITH P.T. I	LUMBER	TO BE STAINLESS

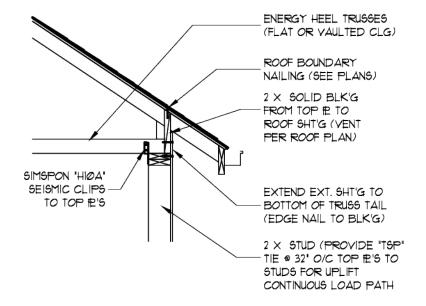
Д	STENING SCHEDULE:		
	BLK'G BETWEEN CEIL JSTS OR FFTRS TO TOP PL	4-8d BOX (21/2 'x@.113')	TCE NAIL
.	CLG JST TO TOP #2	4-8d BOX (21/2 xØ.1131)	FACE NAIL
K 007	CLG J5T LAPPED AT PARTITION	4-10d BOX (3'x0.128')	TOE NAIL
ž	CEIL J6T6 TO RAFTER	PER TABLE 802.5.1.(9)	FACE NAIL EA. RET
	COLLAR TIE TO RAFTER	4-10d BOX (3'x0.128')	TOE NAIL
	RAFTER/TRUSS TO PE	3-16d BOX (3½'x0.135')	END NAIL
	RAFTER TO RIDGE/HIP/VALLEY (MIN. 2")	3-16d BOX (31/2 'x0.135")	12" O.C. FACE
MALL	STUD TO STUD & INTSECTING WALL CORNERS	16d BOX (3½'xØ.135')	16' O.C. EA. EDGE
	BUILT-UP HDR 2X MEMBERS	16d COM (3½'xØ.162')	TOE NAIL
	CONT. HDR TO STUD	5-8d BOX (21/2 xØ.1131)	12" O.C. FACE
	TOP E TO TOP E	2-16d COM (3½ 'x@.162')	FACE EA. SIDE
	DBL. TOP #2 SPLICE	12-16d COM (31/2"x0.162")	16' O.C. FACE
	SOLE #2 TO JST, RIM OR BLK'G	16d COM (3½'xØ.162')	END NAIL
È	TOP OR BOTTOM #2 TO STUD	3-16d BOX(31/2 'x@.135')	FACE NAIL
	TOP #2 LAPS @ CORNER/INTERSECTION	2-16d COM (3½ 'x@.162')	
			TOE NAIL
	JOIST TO SILL, TOP IE OR GIRDER	4-8d BOX (21/2 xØ.1131)	4' O.C. TOE NAIL
	RIM JST OR BLKG TO SILL OR TOP 12	8d BOX (21/2 xØ.113)	# EA BEAR'G
	2' SUBFLR TO JST/GIRDER	3-16d BOX (21/2 x0.135")	# EA BEAR'G
<u> </u>	2' PLANKS (P & B FLR AND ROOF)	3-16d BOX (21/2 'xØ.135')	END NAIL
<u>ر</u>	RIM JST. TO JST.	3-16d COM (3½'xØ.162')	24" O.C. FACE TOP
¥	BUILT-UP GIRDERS/BEAMS (2' LAYERS)	10d BOX (3'x0.128')	BTM & STAGGERED
90 X	Built-up GIRDERS/BEARS (2 LATERS)		6' EDGE/12' FIELD
ᅶ	%'-12" WOOD STRUCTURAL PANELS	8d COM (21/2 'x@.131')	6' EDGE/12' FIELD
	뭣'-1" WOOD STRUCTURAL PANELS	8d COM (21/2 'x0.131')	6' EDGE/12' FIELD
	11/21-11/41 WOOD STRUCTURAL PANELS	10d COM (3'x0.148')	1' EDGE/1' FIELD
	1/2" GYP9UM WALL/CLG. BD. (UN.O.)	14' TYPE '5'/'W' SCREW	1' EDGE/1' FIELD
	% GYPSUM WALL/CLG. BD. (UN.O.)	1% TYPE 'S'/'W' SCREW	TBL

	SPAN TABLES BASED ON 2018 I.R.C. TABLE R5023.1(1), R5023.1(2), R802.5(1), AND R802.5(2)								
JO	ISTS	FLOOR (40° LL/10° DL) (L/360)	FLOOR (30* LL/10* DL) (L/360)	70	ISTS	CEILING (20° LL/10° DL) (L/240)	CEILING (10* LL/5* DL (L/240)		
D.F. *2	SPAC'G O.C.	MAX. SPAN	MAX. SPAN	DF. #2	SPAC'G O.C.	MAX. SPAN	MAX. SPAN		
2 × 6	12' 16' 24'	10'-9" 9'-9" 8'-3"	11'-10 ' 10'-9 ' 9'-3 '	2 × 4	12" 16" 24"	9'-10" 8'-11' 7'-3'	12'-5 ' 11'-3 ' 9'-10 '		
2 × 8	12' 16' 24'	14'-2" 12'-9" 10'-5"	15'-7 " 14'-2" 11'-8 "	2 × 6	12" 16" 24"	15'-0 ' 13'-0 ' 10'-8 '	19'-6 ' 17'-8 ' 15'-0 '		
2 × 1Ø	12' 16' 24'	18'-0" 15'-7" 12'-9"	19'-10' 17'-5' 14'-3'	2 × 8	12' 16' 24'	19-1" 16'-6" 13'-6"	25-8 ' 23'-4" 19'-1 '		
2 × 12	12' 16' 24'	20'-11' 8'-1' 4'-9'	23'-4 ' 20'-3 ' 16'-6 '	2 × 10	12" 16" 24"	23'-3 20'-2' 16'-5'	26'-0' 26'-0' 23'-3'		

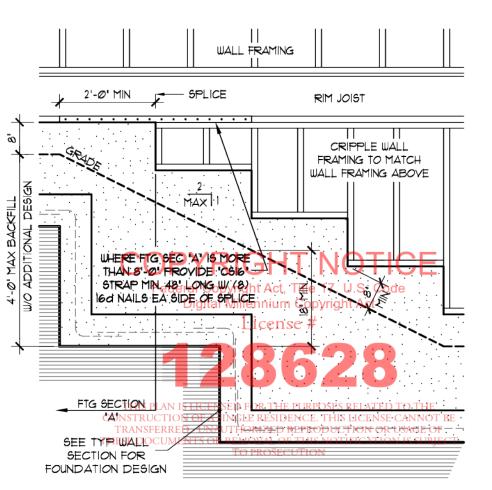




DECK LEDGER (TYP UN.O.) **DECKLATCONN**



TRUSS CONNECTION



STEP FOOTING DETAIL

1/2" = 1'-0"

25# SNOW LOAI

1168ES-GW-KELLE

DRAWN 01/18/24 LA

ROJECT MANAGER:SI

COPYRIGHT © 2024 ALAN MASCORD DESIGN ASSOCIATES, INC

PROVIDE AN APPROVED MECHANICAL CRAWL SPACE VENTILATION

SYSTEM OR OTHER EQIVALENT SYSTEM.

METHOD *2 - PASSIVE SUB-MEMBRANE DEPRESSURIZATION SYSTEM

PROVIDE FOUNDATION VENTILATION SYSTEM (SEE FOUNDATION NOTES

FOR CRAWLSPACE VENTING) PROVIDE A SOIL-GAS RETARDER, SUCH AS 6 MIL POLYETHYLENE OR

EQUIVALENT (SEE GAS-RETARDER NOTES) PROVIDE A VENT STACK (SEE VENT STACK NOTES)

METHOD #3 - CRAWLSPACE VENTILATION, AND BUILDING TIGHTNESS.

 PROVIDE NO LESS THAN ONE NET SQ. FT. OF CRAWLSPACE FOUNDATION VENT AREA PER EACH 150 SQ. FT. OF UNDER-FLOOR AREA (SEE FOUNDATION NOTES FOR CRAWLSPACE VENTING LOCATION

REQUIREMENTS). OPERABLE LOUVERS, DAMPERS, OR OTHER MEANS TO TEMPORARILY CLOSE OFF VENT OPENINGS ARE NOT ALLOWED TO MEET THE REQUIREMENTS OF THIS RADON MITIGATION METHOD.

 DWELLINGS SHALL BE TESTED WITH A BLOWER DOOR, DEPRESSURIZING THE DWELLING TO 50 PASCAL'S FROM AMBIENT CONDITIONS AND FOUND TO EXHIBIT NO MORE THAN 5.0 AIR CHANGES PER HOUR.

 INSTALL A MECHANICAL EXHAUST, SUPPLY, OR COMBINATION VENTILATION SYSTEM PROVIDING WHOE-BUILDING VENTILATION RATES AS PER TABLE NIIOI.I(3).

VENTILATION AIR REQUIREMENTS (cfm)

FLOOR AREA	NUMBER OF BEDROOMS				
(FT.²)	Ø-1	2-3	4-5	6-7	>7
⊲,500	3Ø	45	60	75	90
1,501-3,000	45	60	75	90	1Ø5
3,001-4,500	60	75	90	105	120
4,501-6,000	75	90	105	12Ø	135
6,000-1,500	90	1005	120	135	150
>1,5 0 0	105	120	135	150	165
				TABLE	M1507.3.3(1

SLAB-ON-GRADE/BASEMENT RADON MITIGATION

A PASSIVE SUB-SLAB DEPRESSURIZATION SYSTEM SHALL BE INSTALLED DURING CONSTRUCTION IN BASEMENT OR SLAB-ON-GRADE BUILDINGS. FOLLOW THE NOTES HERE REGARDING BUILDING TIGHTNESS MEASURES AND ASSEMBLE THE FOLLOWING ELEMENTS OF THIS MITIGATION SYSTEM...

 PROVIDE A RADON VENT PIPE EXTENDING FROM A GAS PERMEABLE LAYER BENEATH THE SLAB FLOOR SYSTEM, THROUGH THE FLOORS OF THE DWELLING AND TERMINATING AT THE ROOF.

 SEE NOTES REGARDING VENT PIPE, SOIL-GAS-RETARDER AND SLAB SUBFLOOR PREPARATION.

SLAB SUB-FLOOR PREPARATION

 A LAYER OF GAS-PERMEABLE MATERIAL SHALL BE PLACED UNDER ALL CONCRETE SLABS AND OTHER FLOOR SYSTEMS THAT DIRECTLY CONTACT THE GROUND, AND ARE WITHIN THE WALLS OF THE LIVING SPACES OF THE BUILDING. THE GAS-PERMEABLE LAYER SHALL CONSIST OF ONE OF THE FOLLOWING:

A UNIFORM LAYER OF CLEAN AGGREGATE, A MINIMUM OF 4 INCHES THICK THE AGGREGATE SHALL CONSIST OF MATERIAL SMALL ENOUGH TO PASS THROUGH A 2" SIEVE AND BE RETAINED BY A 1/4" SIEVE. A UNIFORM LAYER OF SAND (NATIVE OR FILL), A MINIMUM OF 4 INCHES THICK, OVERLAIN BY A LAYER OR STRIPS OF GEO-TEXTILE DRAINAGE MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES.

SOIL-GAS-RETARDER

 THE SOIL INCRAWLSPACES SHALL BE COVERED WITH A CONTINUOUS LAYER OF MINIMUM 6-MIL POLYETHYLENE SOIL-GAS-RETARDER. THE GROUND COVER SHALL BE LAPPED A MINIMUM OF 12 INCHES AT JOINTS AND SHALL EXTEND TO ALL FOUNDATION WALLS ENCLOSING THE CRAWL SPACE AREA.

. THE SHEETING SHALL FIT CLOSELY AROUND ANY PIPE, WIRE OR OTHER PENETRATIONS OF THE MATERIAL. ALL PUNCTURES OR TEARS IN THE MATERIAL SHALL BE SEALED OR

COVERED WITH ADDITIONAL SHEETING.

YENT PIPE (RADON)

 A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSTERED HORIZONTALLY BENEATH THE SOIL-GAS-RETARDER SHEETING AND CONNECTED TO A 3' OR 4' DIAMETER FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE SHEETING.

 THE VENT PIPE SHALL BE EXTENDED UP THROUGH THE BUILDING. FLOORS TO TERMINATE AT LEAST 12 INCHES ABOVE THE ROOF SURFACE IN A LOCATION AT LEAST 10 FEET AWAY FROM ANY WINDOW OR OTHER OPENING INTO THE CONDITIONED SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET BELOW THE EXHAUST POINT, AND 10 FEET FROM ANY WINDOW OR OTHER OPENING IN ADJOINING OR ADJACENT BUILDINGS.

 IN BUILDINGS WHERE INTERIOR FOOTINGS OR OTHER BARRIERS SEPARATE THE SUB-SLAB AGGREGATE OR OTHER GAS-PERMEABLE MATERIAL, EACH AREA SHALL BE FITTED WITH AN INDIVIDUAL VENT MULTIPLE VENT PIPES SHALL CONNECT TO A SINGLE VENT THAT

TERMINATES ABOVE THE ROOF OR EACH INDIVIDUAL VENT PIPE SHALL TERMINATE ABOVE THE ROOF. ALL COMPONENTS OF THE RADON VENT PIPE SYSTEM SHALL BE

INSTALLED TO PROVIDE POSITIVE DRAINAGE TO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER

 RADON VENT PIPES SHALL BE ACCESSIBLE FOR FUTURE FAN INSTALLATION THROUGH AN ATTIC OR OTHER AREA OUTSIDE THE HABITABLE SPACE, OR AN APPROVED ROOF TOP ELECTRICAL SUPPLY MAY BE PROVIDED FOR FUTURE USE FOR A POWERED RADON VENT

 ALL EXPOSED AND VISIBLE INTERIOR RADON VENT PIPES SHALL BE IDENTIFIED WITH AT LEAST ONE LABLE ON EACH FLOOR AND IN ACCESSIBLE ATTICS. THE LABEL SHALL READ: 'RADON REDUCTION

POWER SOURCE REQUIREMENT

 TO ACCOMMODATE FUTURE INSTALLATION OF AN ACTIVE SUB-MEMBRANE OR SUB-SLAB DEPRESSURIZATION SYSTEM, AN ELECTRICAL CIRCUIT TERMINATED IN AN APPROVED BOX SHALL BE INSTALLED DURING CONSTRUCTION IN THE ATTIC OR OTHER ANTICIPATED LOCATION OF VENT PIPE FANS. AN ELECTRICAL SUPPLY SHALL ALSO BE ACCESSIBLE INCANTICIPATED LIQUATION DE SYSTEMS. Code FAILURE ALARMS. Digital Millennium Copyright Act

COMBINATION FOUNDATIONS COMBINATION: BASEMENT/CRAWL SPACE OR SLAB-ON-GRADE/CRAWL SPACE FOUNDATIONS SHALL HAVE SEPARATE RADON MITIGATION SYSTEMS IN EACH TYPE OF FOUNDATION AREA. PASSIVE SUB-SLAB AND PASSIVE SUB-MEMBRANE RADON VENT PIPES MAY BE CONNECTED TO A SINGLE VENT TERMINATING ABOVE THE ROOF, OR

EACH VENT MAY INDIVIDUALLY CONNUENTO TERMINATER ABOVE THE ON OR USAGE OF

ROOF (SEE VENT PIPE NOTES): UMENTS OR REMOVAL OF THIS NOTIFICATION IS SUBJECT

12" MIN. ABOVE ROOF 1. ALL CONCRETE SLABS THAT COME IN CONTACT WITH THE GROUND SHALL — FLASHING BE LAID OVER A GAS PERMEABLE MATERIAL MADE UP OF EITHER A MINIMUM 4' THICK UNIFORM LAYER OF CLEAN AGGREGATE, OR A MINIMUM 4' THICK UNIFORM LAYER OF SAND, OVERLAIN BY A LAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATERAL FLOW OF SOIL GASES. 2. ALL CONCRETE FLOOR SLABS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL BUILDING CODES. ADDITIONAL REFS: AMERICAN CONCRETE INSTITUTE PUBLICATIONS, "ACI302.IR" & 'AC1332R', OR THE POST TENSIONING INSTITUTE MANUAL, "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS ON GROUND'. 3. ALL OPENINGS, GAPS AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT SOIL OR GAPS AROUND PIPES, TOILETS, BATHTUBS OR - ROOF BRACE DRAINS PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL, SEAL ATTIC LARGE OPENINGS WITH NON-SHRINK MORTAR, GROUTS OR EXPANDING FOAM MATERIALS AND SMALLER GAPS WITH AN ELASTOMERIC JOINT SEALANT, AS DEFINED IN ASTM C920-87. 4. VENT PIPES SHALL BE INSTALLED SO THAT ANY RAINWATER OR CONDENSATION DRAINS DOWNWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER MEMBRANE. 5. CIRCUITS SHOULD BE A MINIMUM IS AMP, 115 YOLT. JOIST - ELECTRICAL JUNCTION BOX FOR FUTURE INSTALLATION LIVING AREA OF VENT FAN± NOTE 5. -ELECTRICAL JUNCTION BOX INTERIOR PARTITION FOR FUTURE INSTALLATION OF WARNING DEVICE'S NOTE 5. FLOORING-- SUPPORT JOIST STRAPPING -CAP BLOCK OR OTHER SEAL ON HOLLOW BLOCK WALLS (PVC OR EQUIVALENT) - WATERPROOF SEALANT APPLIED TO EXTERIOR WALLS SOIL-GAS-RETARDER MEMBRANE (MIN. 6-MIL POLYETHYLENE SHEETING OR EQUIVALENT) + OVERLAP SEAMS 12' MIN. -MIN. 4' THICK LAYER OF GAS PERMEABLE - SEAL OPENINGS IN SLAB AND AROUND PENETRATIONS + NOTE 3 MATERIAL± NOTE 1

EXHAUST (10' FROM OPENINGS INTO

CONDITIONED SPACES OF BUILDING)

-PVC T-FITTING (OR EQUIVALENT)

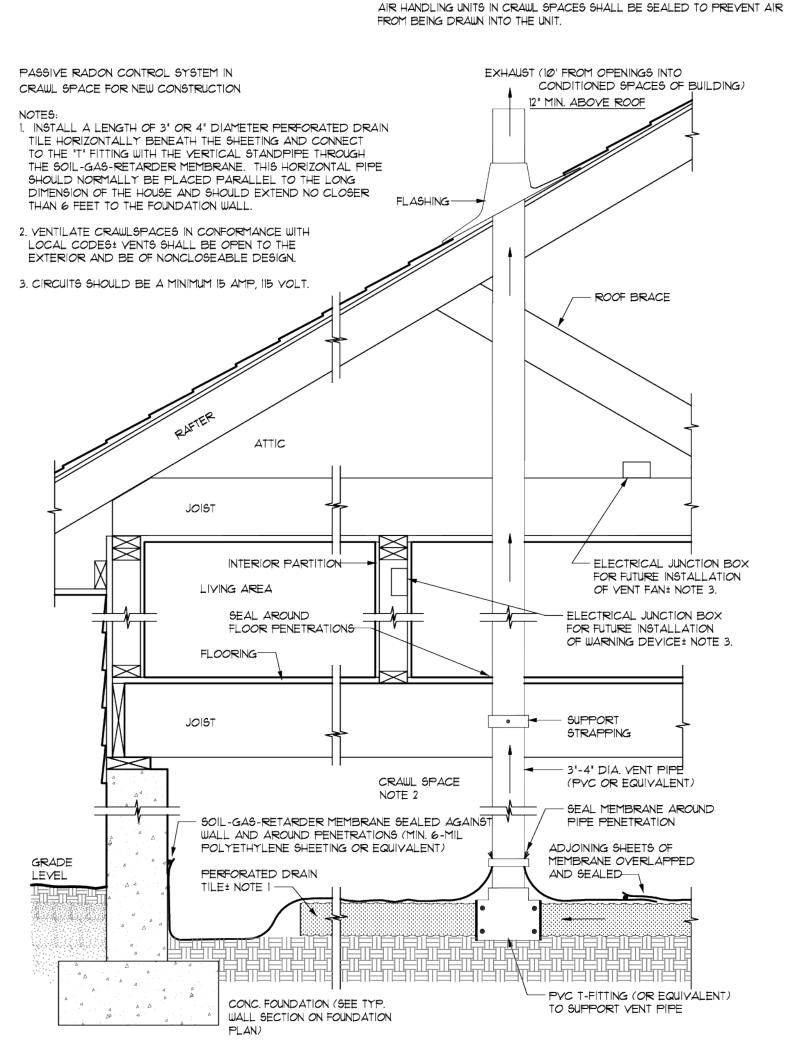
TO SUPPORT VENT PIPE

PASSIVE SUB-SLAB DEPRESSURIZATION RADON

CONTROL SYSTEM FOR NEW CONSTRUCTION

SLAB ON-GRADE/BELOW-GRADE (BASEMENTS) SUB-MEMBRANE DEPRESSURIZATION SYSTEM

(SEE TYP. WALL SECTION ON



RADON MITIGATION

THE FOLLOWING CONSTRUCTION TECHNIQUES AND MEASURES ARE INTENDED

BE REQUIRED ON A JURISDICTION BY JURISDICTION BASIS. FOR EXAMPLE, IN THE STATE OF OREGON, PER 2014 O.R.S.C., THE COUNTIES OF MULTNOMAH,

TO MITIGATE RADON ENTRY IN NEW CONSTRUCTION. THESE TECHNIQUES MAY

WASHINGTON, CLACKAMAS, POLK, YAMHILL, HOOD RIVER AND BAKER REQUIRE RADON MITIGATION, AS DO THE COUNTIES OF CLARK, FERRY,

OKANOGAN, PEND OREILLE, SKAMANIA, SPOKANE AND STEVENS, IN THE STATE OF WASHINGTON, PER 2015 1.R.C./WAC 51-51-60101 (AFI01 & AFI03).

FOLLOWING THE U.S. E.P.A. "MODEL STANDARDS AND TECHNIQUES FOR

SPECIFICATIONS MEET MOST NATIONAL CODES. THE BUILDER AND HOME

THE FOLLOWING ARE POINTS OF ENTRY TO PROTECT FROM PASSAGE OF

RADON GAS INTO LIVING SPACE - PROVIDE POLYURETHANE CAULK OR

OWNER SHOULD CHECK FOR ANY LOCAL VARIANTS TO THESE GUIDELINES.

CONTROL OF RADON IN NEW RESIDENTIAL BUILDINGS", THESE

BUILDING TIGHTNESS MEASURES

EQUIVALENT SEALANT AT THE FOLLOWING CRITICAL POINTS:

SLAB ON-GRADE AND BASEMENT WALLS

COLD JOINT BETWEEN TWO CONCRETE POURS

PORES AND JOINTS IN CONCRETE BLOCKS

FLOOR-TO-WALL CRACK OR FRENCH DRAIN

CRACKS IN SUBFLOORING AND FLOORING

ON UNCAPPED HOLLOW-BLOCK FOUNDATION

WEEPING (DRAIN) TILE, IF DRAINED TO OPEN SUMP

UNTRAPPED FLOOR DRAIN TO A DRY WELL OR SEPTIC SYSTEM.

CONDENSATE DRAINS SHALL BE RUN TO THE EXTERIOR USING NON PERFORATED PIPE OR SHALL BE PROVIDED WITH AN APPROVED TRAP.

SUMP PITS THAT SERVE AS END POINT FOR A SUB-SLAB OR EXTERIOR

SYSTEM, THE LID MUST BE DESIGNED TO ACCOMMODATE THE VENT PIPE.

WHERE USED AS A FLOOR DRAWING, THE SUMP PIT LID SHALL HAVE A

DUCTWORK WHICH PASSES THROUGH OR BENEATH A CONCRETE FLOOR

SLAB SHALL BE FREE OF SEAMS AND MUST BE PERFORMANCE TESTED.

CRAWLSPACE ACCESS OR UNDER-FLOOR MECHANICAL EQUIPMENT

GASKETED TO CREATE AN AIRTIGHT SEPARATION.

ACCESS, OR ANY OTHER ACCESS POINT FROM THE HABITABLE SPACE INTO

THE CRAWL SPACE, SUCH AS DOORS OR PANELS, MUST BE CLOSED AND

DUCTWORK PASSING THROUGH A CRAWLSPACE MUST HAVE ALL SEAMS AND

JOINTS SEALED (PER MIGØ13.1). ALL JOINTS OF DUCT SYSTEMS USED IN THE HEATING OR COOLING OF A CONDITIONED SPACE SHALL BE SEALED BY MEANS OF TAPES, MASTIC, AEROSOL SEALANT, GASKETING OR OTHER APPROVED CLOSURE SYSTEMS. WHERE MASTIC IS USED TO SEAL OPENINGS GREATER THAN 14", A COMBINATION OF MASTIC AND MESH SHALL BE USED.

DRAIN TILE LOOP SYSTEM, AND SUMP PITS WHICH ARE NOT SEALED FROM

THE SOIL, SHALL BE FITTED WITH A GASKETED OR SEALED LID. WHERE THE SUMP IS USED AS THE SUCTION POINT IN A SUB-SLAB DECOMPRESSION

SPACES BEHIND STUD WALLS AND BRICK VENEER WALLS THAT REST

CRACKS IN CONCRETE SLABS

EXPOSED SOIL, AS IN A SUMP

OPEN TOPS OF BLOCK WALLS

WATER (FROM SOME WELLS)

ELECTRICAL PENETRATIONS

 LOOSE-FITTING PIPE PENETRATIONS OPEN TOPS OF BLOCK WALLS WATER FROM SOME WELLS

 HEATING DUCT REGISTER PENETRATIONS COLD-AIR RETURN DUCTS IN CRAWL SPACE

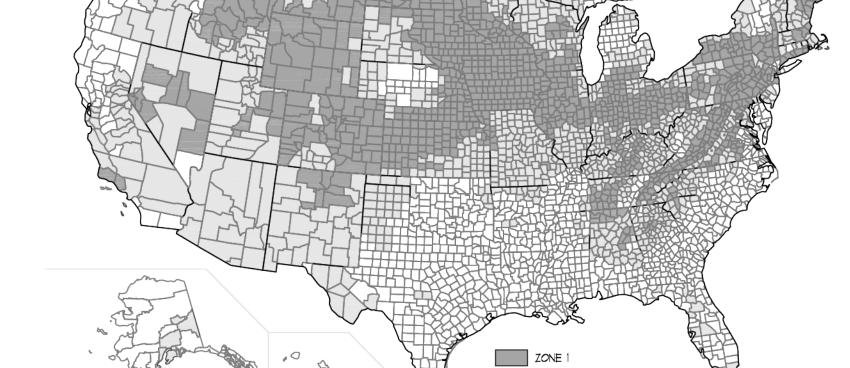
LOOSE FITTING PIPE PENETRATIONS

MORTAR JOINTS

CRAWL SPACE

TRAPPED INLET.

CRAWLSPACE SUB-MEMBRANE DEPRESSURIZATION SYSTEM



ZONE 2

RADON POTENTIAL FOR A SPECIFIC AREA.

ZONE 3

DISCLAIMER: THE PURPOSE OF THIS MAP IS TO ASSIST NATIONAL, STATE AND LOCAL

LOCATION. EPA RECOMMENDS THAT THIS MAP BE SUPPLEMENTED WITH ANY AVAILABLE LOCAL DATA IN ORDER TO FURTHER UNDERSTAND AND PREDICT THE

ORGANIZATIONS TO TARGET THEIR RESOURCES AND TO IMPLEMENT RADON-RESISTANT BUILDING CODES. ALL HOMES SHOULD BE TESTED REGARDLESS OF GEOGRAPHIC

EPA RADON ZONES

COPYRIGHT © 2024 ALAN MASCORD DESIGN ASSOCIATES, INC

1168ES-R-KELLE

ROJECT MANAGER:SI

DRAWN 01/18/24 LA

25# SNOW LOAI

*SPACING OF THESE CLIPS IS REQUIRED ON BOTH SIDES OF SHEATHING.

GENERAL NOTES

(1) All fasteners exposed to

weather shall be galvanized. SHEAR WALL LOCATIONS (2) All exterior walls shall be built

3 DETAIL REFERENCE TAG to "S" shearwall requirements as

3X SILL PLATE REQUIRED (272×DBL. 2X SILL PLATE REQUIRED (3) Sheathing on shearwalls shall

LEGEND

APPROX. HOLDOWN LOCATIONS

>>> SHEAR WALL LINE

LOAD FROM ABOVE DOUBLE 2x6 U.N.O.

(7) Nail dimensions: 8d common = 0.131x2.510d common = 0.148x3

aalvanized.

(6) All hardware & fasteners in contact with P.T. lumber shall be

stainless steel, Z-max or hot dip

16d sinker = 0.148x3.25 16d common = 0.162x3.5 SHEAR WALL SCHEDULE +

		псак		L L J				
	APA RA	TED PLYWO		<u>ic zone d</u> Riented		ND BOAF	RD (1)	
MARK	PANEL - THICKNESS	FASTENERS (3),(5),(6),(7)		SOLE #2	SILL PLATE			ALLOW
		TYPE	@ PANEL EDGES	NAILING 16d SINKER	SIZE (14)	AB SPACING (2)	NOTES	LOAD WIND SEIS
§	7/6" or ¹⁵ / ₃₂ "	0.131 φ × 2½" F. RH. P–NAIL	6" O.C.	6" O.C.	2X	48" O.C.		<u>348</u> 260
	7/6" or ¹⁵ /32"	0.131 φ × 2½" F. RH. P-NAIL	4" O.C.	4" O.C.	2X	32" O.C.		<u>523</u> 380
	%6" or ¹5%2"	0.131 φ × 2½" F. RH. P–NAIL	3" O.C.	3" O.C.	2X	26" O.C.	see (15)	679 490
©	7/6" or ¹⁵ / ₃₂ "	0.131 φ x 2½" F. RH. P–NAIL	2" O.C.	2" O.C.	2X	22" O.C.	see (4), (15)	<u>802</u> 640
	7/6" or ¹⁵ ∕32" EA. SIDE	0.131 φ × 2½" F. RH. P-NAIL	3" O.C.	3" O.C.	3X	20" O.C	see (4), (15), (16)	1123 980
E	7/6" or ¹⁵ / ₃₂ " EA. SIDE	0.131 φ × 2½" F. RH. P-NAIL	2" O.C.	2.5" O.C.	3X	16" O.C.	see (4), (8), (15), (16)	1404 1280
\$	¹⁵ ⁄ ₃₂ " EA. SIDE	0.148 ¢ × 3" F. RH. P−NAIL	2" O.C.	2" O.C.	3X	13" O.C.	see (4), (8), (15), (16)	1728 1540

- (1) 2X D.F. studs max. 16" O.C.
- (2) Anchor bolts to be $\frac{5}{8}$ "ø j-bolts w/min. 7" embedment into concrete. Secure with BP $\frac{5}{8}$ "-6 or BPS $\frac{5}{8}$ "-6. BPS $\frac{5}{8}$ "-6 requires an additional std. cut washer.
- (3) Intermediate studs nailed **©** 12" O.C.
- (4) Framing @ adjoining panels to be 3x nominal or wider,
- (5) 0.131"ø X 2½" F. RH P—nail may be replaced with 0.131"ø X 2½" common nail or 0.113"ø X 2½"hot dip or tumbled galvanized box nail.
- (6) 0.148° x 3" F. RH P-nail may be replaced with 0.148ø X 3" common nail or 0.128 ø X 3" hot dip or tumbled
- galvanized box nail. (7) "F. RH. P-nail"- designates a full round-head power nail.
- (8) Minimum 4X6 post @ each end. (9) Holdowns occur @ each end of each shearwall & fasten

to min. double 2X studs. Wall sht'g. shall be edge nailed

♦ (14) 3X plate required where shown on foundation plan.

to each holdown stud.

- (15) USE 2 ROWS FOR SILL PLATE NAILING W/ 1 ½" THICK RIM JOIST OR BLOCKING
- (16) SILL PLATE NAILING PER EACH SIDE OF SHEATHING.

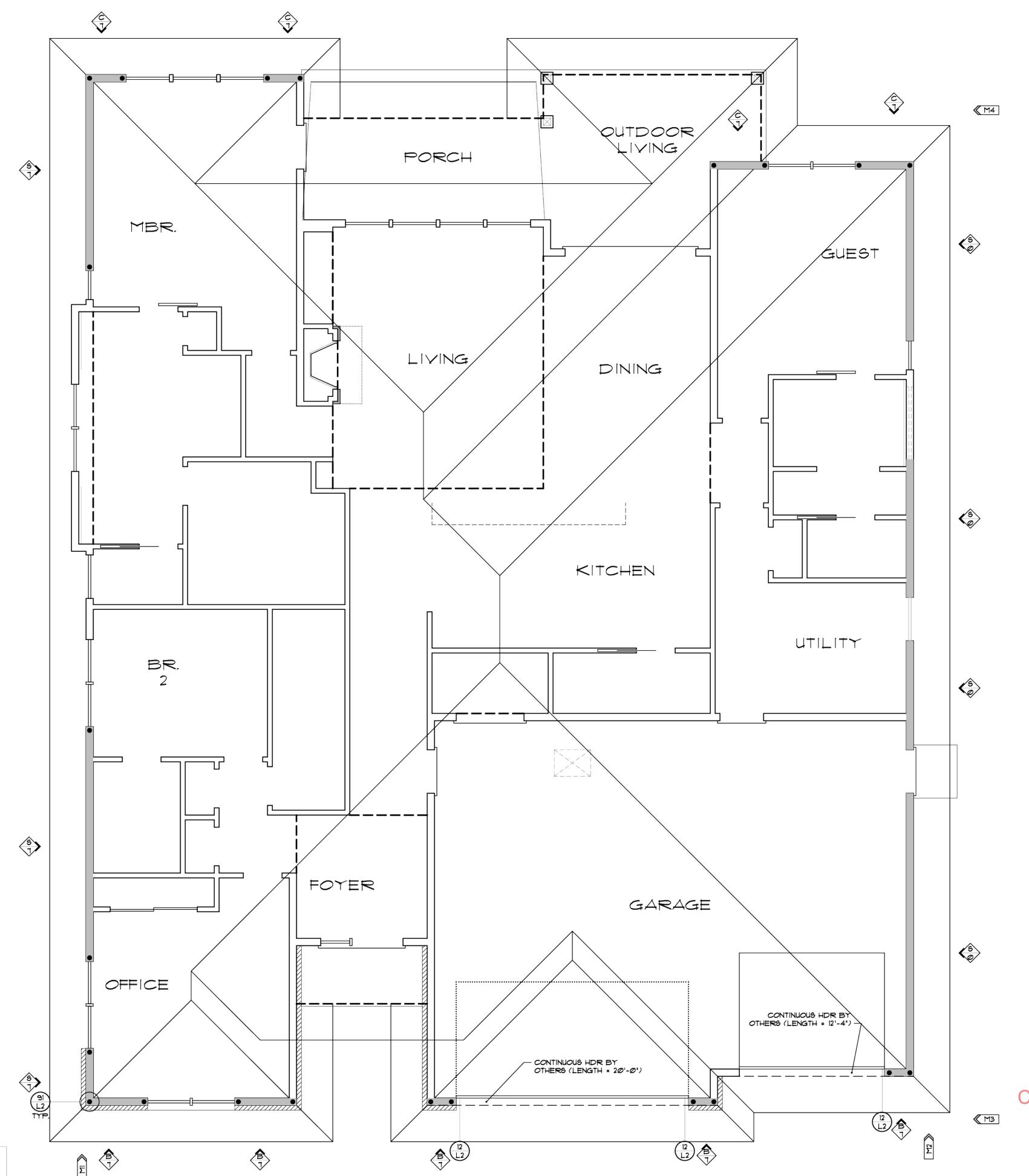
	• H C	LDOWN	SCHEDULE	•
:K	SIMPSON MODEL#	FASTENERS	CAPACITY (LBS.)	NOTES
>	No holdown	Connect btm. plate t floor jst/rim/bm/blk	to g. 500	

			, ,	
	No holdown required	Connect btm. plate to floor jst/rim/bm/blkg. w/16d @ 4" O.C.	500	
\Diamond	CMST12 x 36" Long	(7) 16d common naîls at each end.	1,740	
♦	CMST12 x 48" Long	(16) 16d common naîls at each end.	3,950	
\bigcirc	CMST12 x 60" Long	(22) 16d common naîls at each end.	5,470	
	CMST12 x 72" Long	(29) 16d common nails at each end.	7,220	
\$	CMST12 x 90" Long	(39) 16d common nails at each end.	9,710	
$\langle \rangle$	HTT5	(26) 16d sinkers SB%x24	5,090	

\diamondsuit	нтт5	(26) 16d sinkers SB % x24	5,090	
\$	HDU-8	(20) SDS¼" × 2½" screws, SB ½X24 EMBED 18" MIN.	7,855	Min. 4X6 OR (3) 2x6 STITCHED together w/16d sinker © 6" O.C. MIDWALL AND CORNER ONLY
\$	HDU-11	(30) SDS ¼" X 2½" screws, SB 1X30 EMBED 24" MIN.	9,335	4X6 post req'd.
	HDU-14	(36) SDS ¼" X 2½" screws, PAB8 ANCHOR. 11" EMBED INTO FOOTING MIN.	14,445	6X6 post req'd. Heavy hex nut req'd. 36X36X14" deep min. ftg. req'd. @ ea. anchor bolt.

PLEASE NOTE:

THE TOP OF EACH SHEAR WALL MUST BE CONNECTED TO THE ROOF SHEATHING OR FLOOR SHEATHING. THE BOTTOM OF EACH SHEAR WALL MUST BE CONNECTED TO THE FLOOR SHEATHING OR FOUNDATION. SEE TYPICAL CONNECTION DETAILS FOR APPROPRIATE CONNECTION.



MAIN FLOOR PLAN

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

Federal Copyright Act, Title 17. U.S. Code Digital Millennium Copyright Act License #

THESE DOCUMENTS OR REMOVAL OF THIS NOTIFICATION IS SUBJECT TO PROSECUTION

COPYRIGHT © 2013 ROWELL ENGINEERING

wind 4. seismic ANALYSIS 2021 IBC

ROWELL

EXP.: C 9EI9. CAT.: D ZIP: 9866



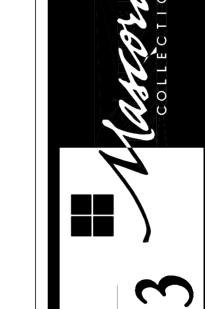




RAWN 12/19/23 S

HOMES

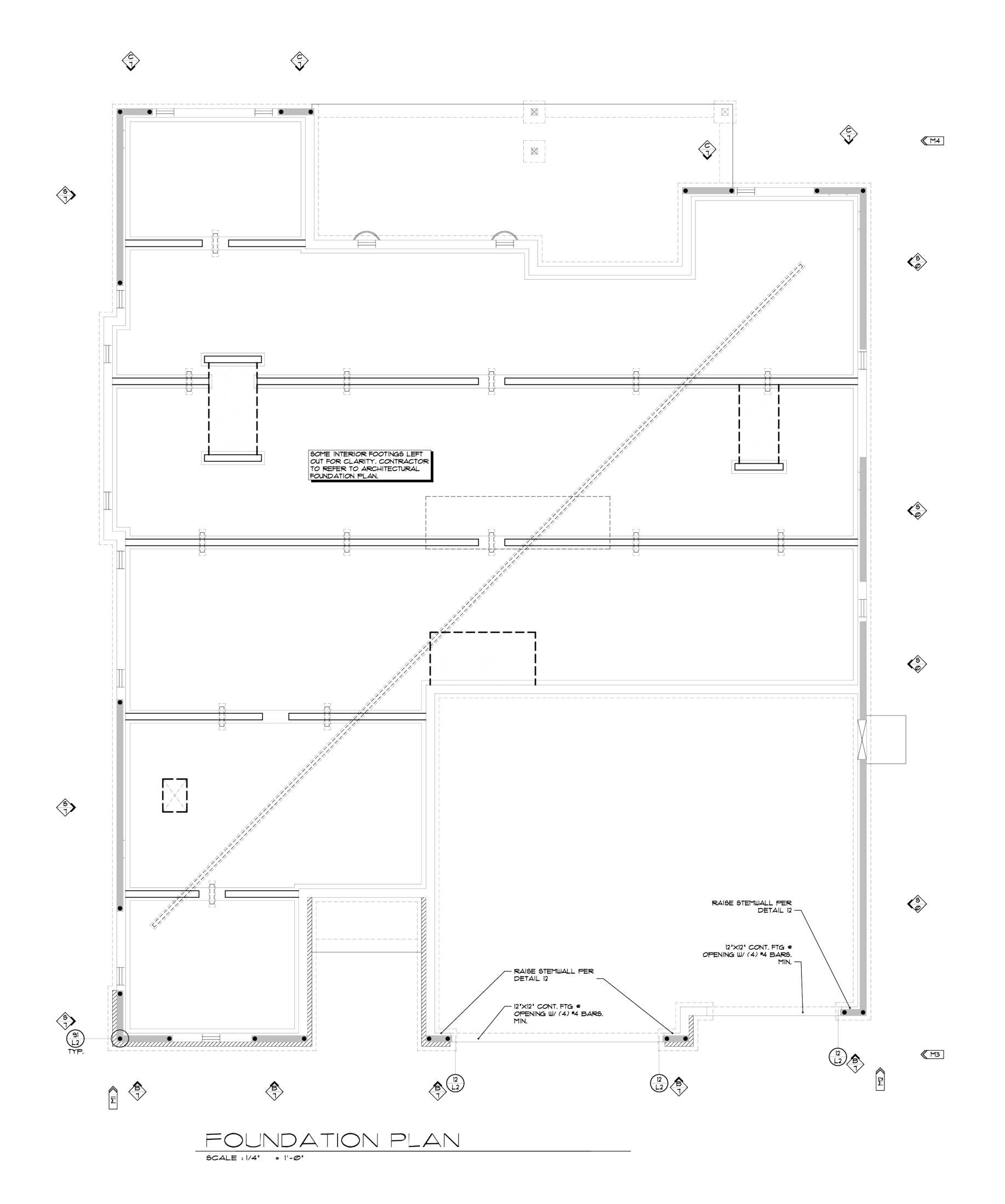
25# SNOW LOAD

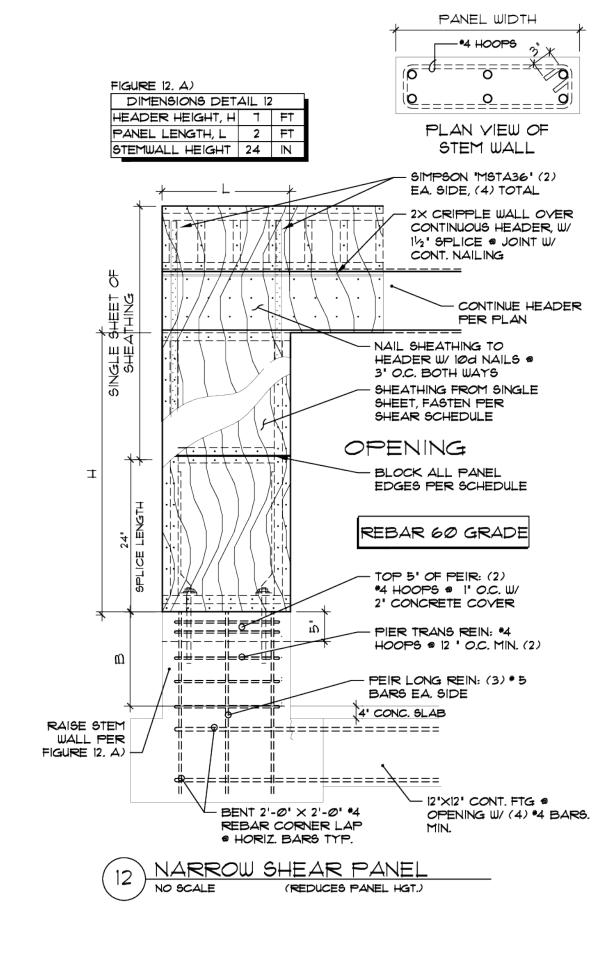


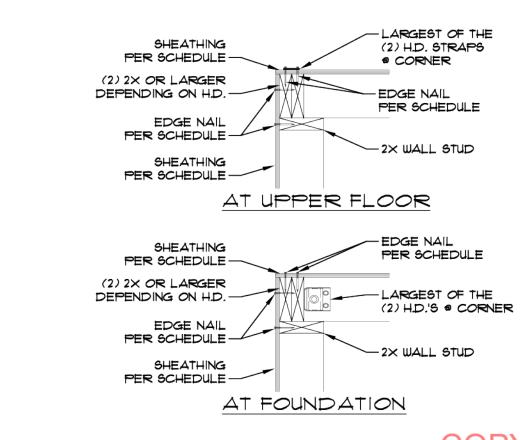
DRAWN 12/19/23 SN

HOMES

25# SNOW LOAD



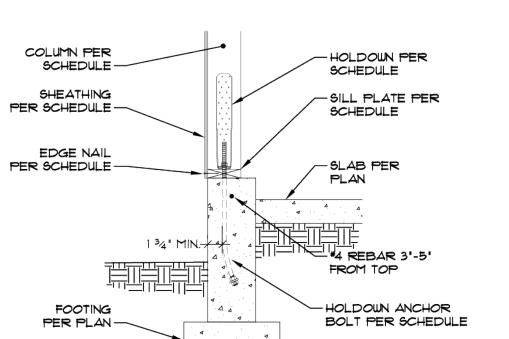


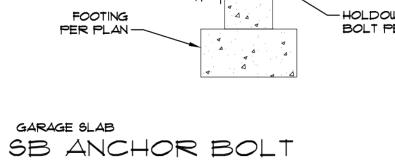


COMBINED H.D. @ CORNER PYRIGHT NOTICE deral Copyright Act, Title 17. U.S. Code Digital Millennium Copyright Act

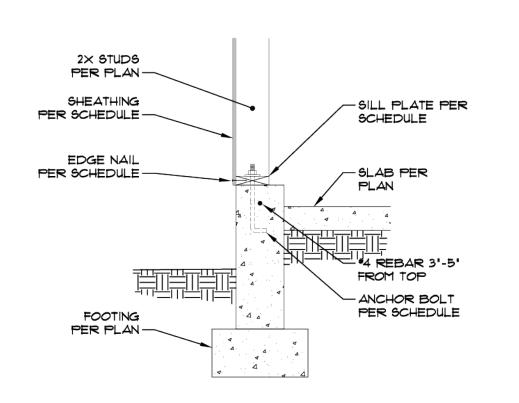
License #

THESE DOCUMENTS OR REMOVAL OF THIS NOTIFICATION IS SUBJECT TO PROSECUTION

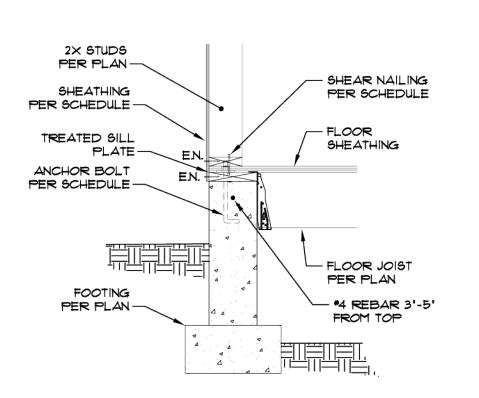




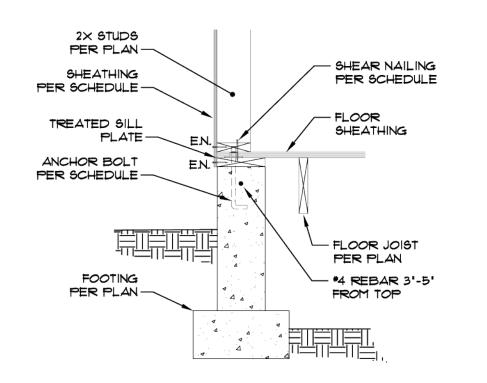
3/4" = 1'-0"



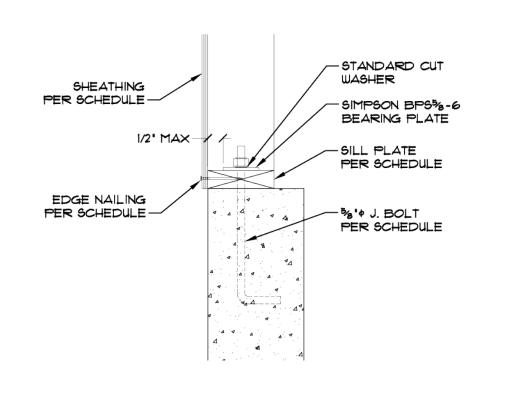
GARAGE SLAB SHEAR WALL



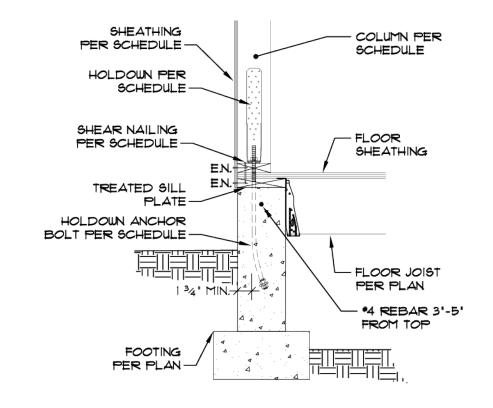
EXTERIOR SHEAR WALL 34" = 1'-0" PERPENDICULAR FLOOR JOISTS



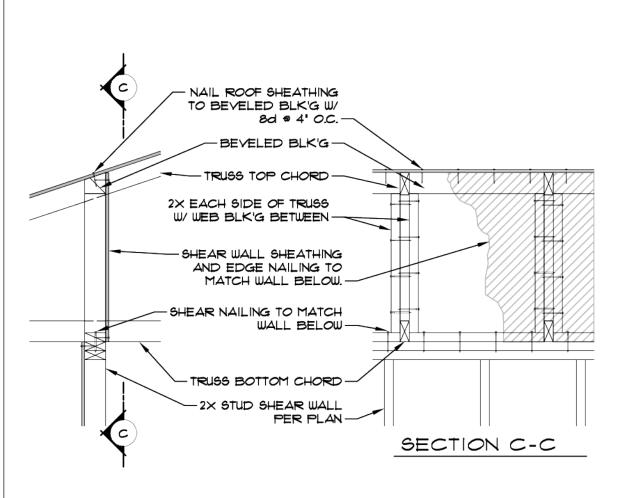
EXTERIOR SHEAR WALL 3/4" = 1'-0" PARALLEL FLOOR JOISTS



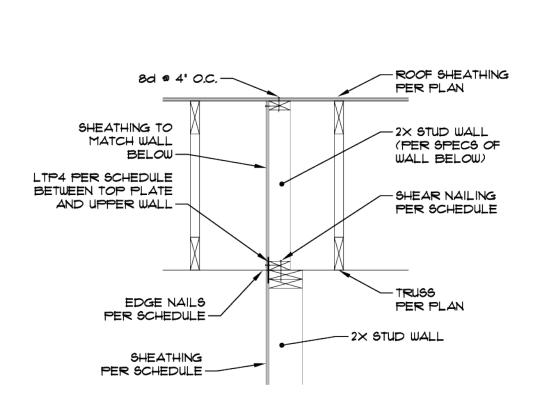
STANDARD A.B. DETAIL 1 1/2" = 1'-@"



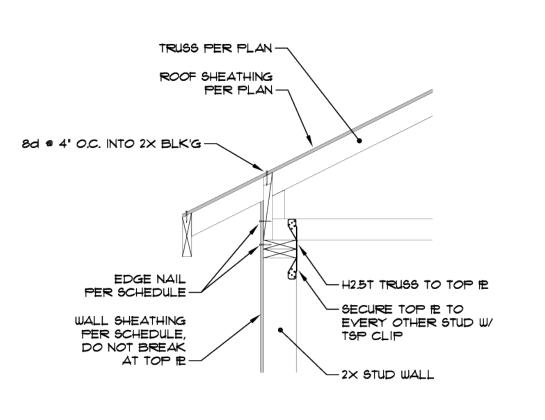
EXTERIOR SB ANCHOR BOLT ³4" = 1'-0"



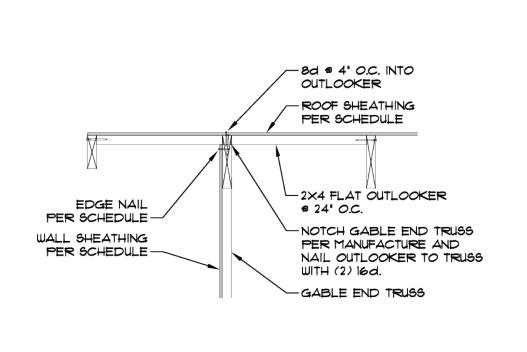
INTERIOR SHEAR WALL TO ROOF ³/4" = 1'-0" PERPENDICULAR ROOF TRUSSES



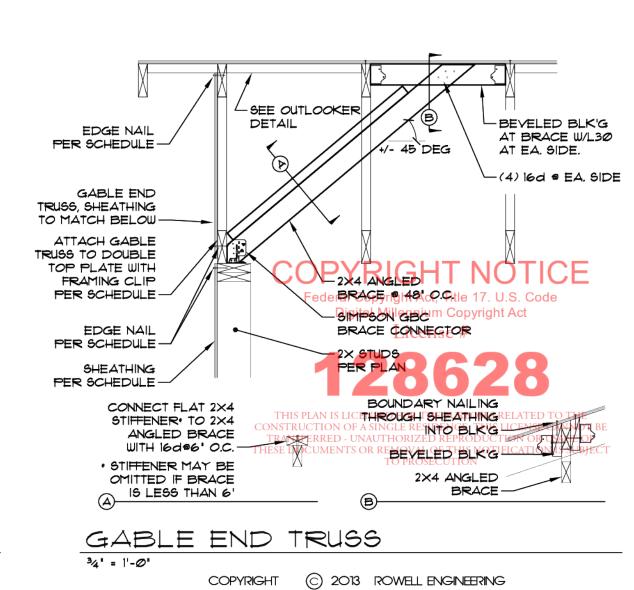
INTERIOR SHEAR WALL EXTENSION PARALLEL TO ROOF TRUSSES



RAISED HEEL TRUSS AT EAVE 34" = 1'-0"



OUTLOOKER DETAIL SCALE: 3/4" = 1'-0"



ER "KELL] HOMES

25# SNOW LOAD

ROJECT:

RAWN 12/19/23