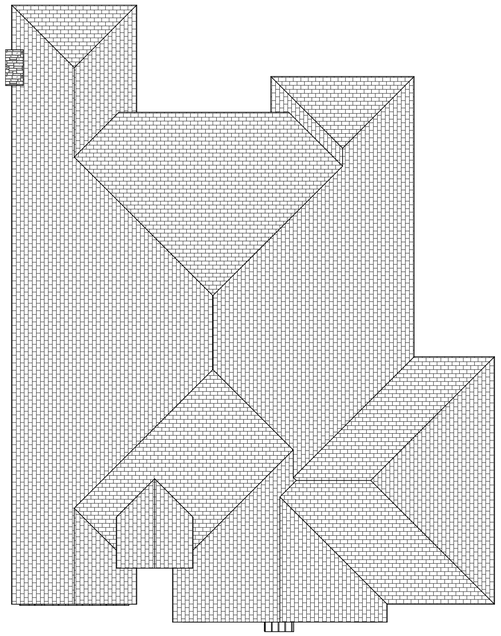
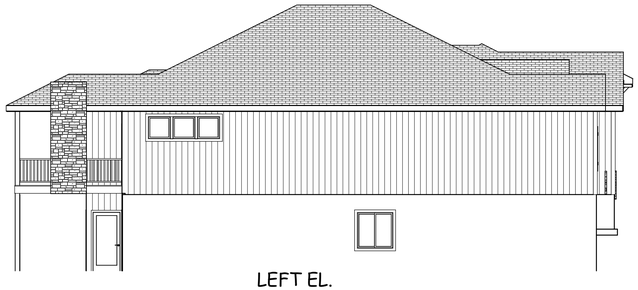


ROOF PLAN
1/8 = 1-0
ROOF PITCHES 6/12 U.N.O.
RAFTERS 2 X 6 DF NO 2 @ 16" OC TYP.
HIPS AND RIDGES 2 X 8 DF NO 2 TYP.
SOFFITS 12" TYP.

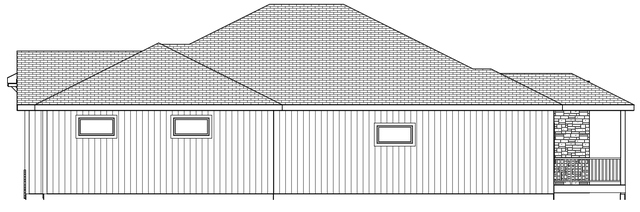
FRONT EL.
SIDING TBD

GARAGE DOOR TBD BY OWNER



LEFT EL.
1/8 = 1-0

REAR EL.
1/8 = 1-0



RIGHT EL.
1/8 = 1-0

3 SIDES LP PANEL SIDING

Review and Approval
Structural Only

David Mezger Engineering LLC
212 NE Circle Dr.
Kansas City, MO 64116

STATE OF MISSOURI
DAVID E. MEZGER
PE-2018009531
PROFESSIONAL ENGINEER

David Eugene Mezger
Digitally signed by David Eugene Mezger
DN: C=US, E=mezgerdes@gmail.com, O=David Mezger Engineering LLC, CN=David Eugene Mezger
Date: 2022.08.23 18:57:25-05'00'

Brandon Kalwei
Digitally signed by Brandon Kalwei
DN: CN=Brandon Kalwei, OU=Development, OU=LS Users, DC=COLS, DC=LOC
Date: 2022.09.26 11:49:07-05'00'

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/26/2022

BUILD IN ACCORDANCE WITH
2018 INTERNATIONAL
RESIDENTIAL CODE AND
LOCAL CODES.

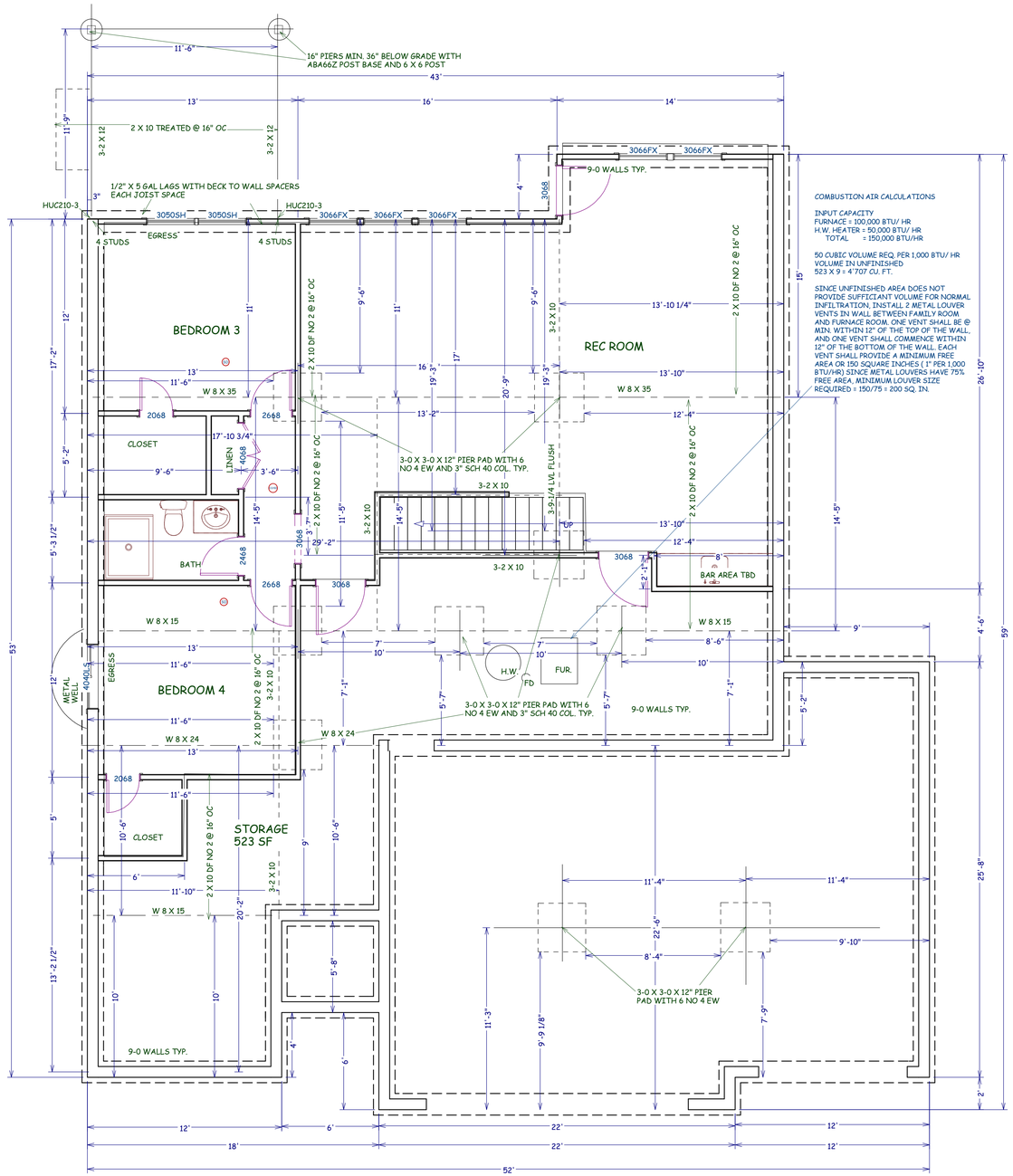
BEHOME LLC
COMO RES.
LOT 58 RETREAT AT HOOK FARMS
2122 SW RED BARN LANE
LEE SUMMIT MO

SCALE
1/4" = 1-0

DATE
8-22-22

PLAN NO.
3863

SHEET NO.
1 OF 5



COMBUSTION AIR CALCULATIONS

INPUT CAPACITY
FURNACE = 100,000 BTU/ HR
H.W. HEATER = 50,000 BTU/ HR
TOTAL = 150,000 BTU/HR

50 CUBIC VOLUME REQ. PER 1,000 BTU/ HR
VOLUME IN UNFINISHED
523 X 9 = 4'707 CU. FT.

SINCE UNFINISHED AREA DOES NOT PROVIDE SUFFICIANT VOLUME FOR NORMAL INFILTRATION, INSTALL 2 METAL LOUVER VENTS IN WALL BETWEEN FAMILY ROOM AND FURNACE ROOM. ONE VENT SHALL BE @ MIN. WITHIN 12" OF THE TOP OF THE WALL, AND ONE VENT SHALL COMMENCE WITHIN 12" OF THE BOTTOM OF THE WALL. EACH VENT SHALL PROVIDE A MINIMUM FREE AREA OR 150 SQUARE INCHES (1" PER 1,000 BTU/HR) SINCE METAL LOUVERS HAVE 75% FREE AREA. MINIMUM LOUVER SIZE REQUIRED = 150/75 = 200 SQ. IN.

FOUNDATION PLAN
1045 SF FINISHED
523 SF UNFINISHED

Review and Approval
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Kansas City, MO 64116

STATE OF MISSOURI
DAVID E. MEZGER
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Digitally signed by David Eugene Mezger
DN: C=US, E=mezgerde@gmail.com, O=David Mezger Engineering LLC, CN=David Eugene Mezger
Date: 2022.08.23 18:57:43-05'00'

David Eugene Mezger

BUILD IN ACCORDANCE WITH 2018 INTERNATIONAL RESIDENTIAL CODE AND LOCAL CODES.

BEHOME LLC
COMO RES.
LOT 58 RETREAT AT HOOT HOOK FARMS
2122 SW RED BARN LANE
LEE SUMMIT MO

SCALE
1/4" = 1-0

DATE
8-22-22

PLAN NO.
3863

SHEET NO.
2 OF 5

RELEASE FOR CONSTRUCTION
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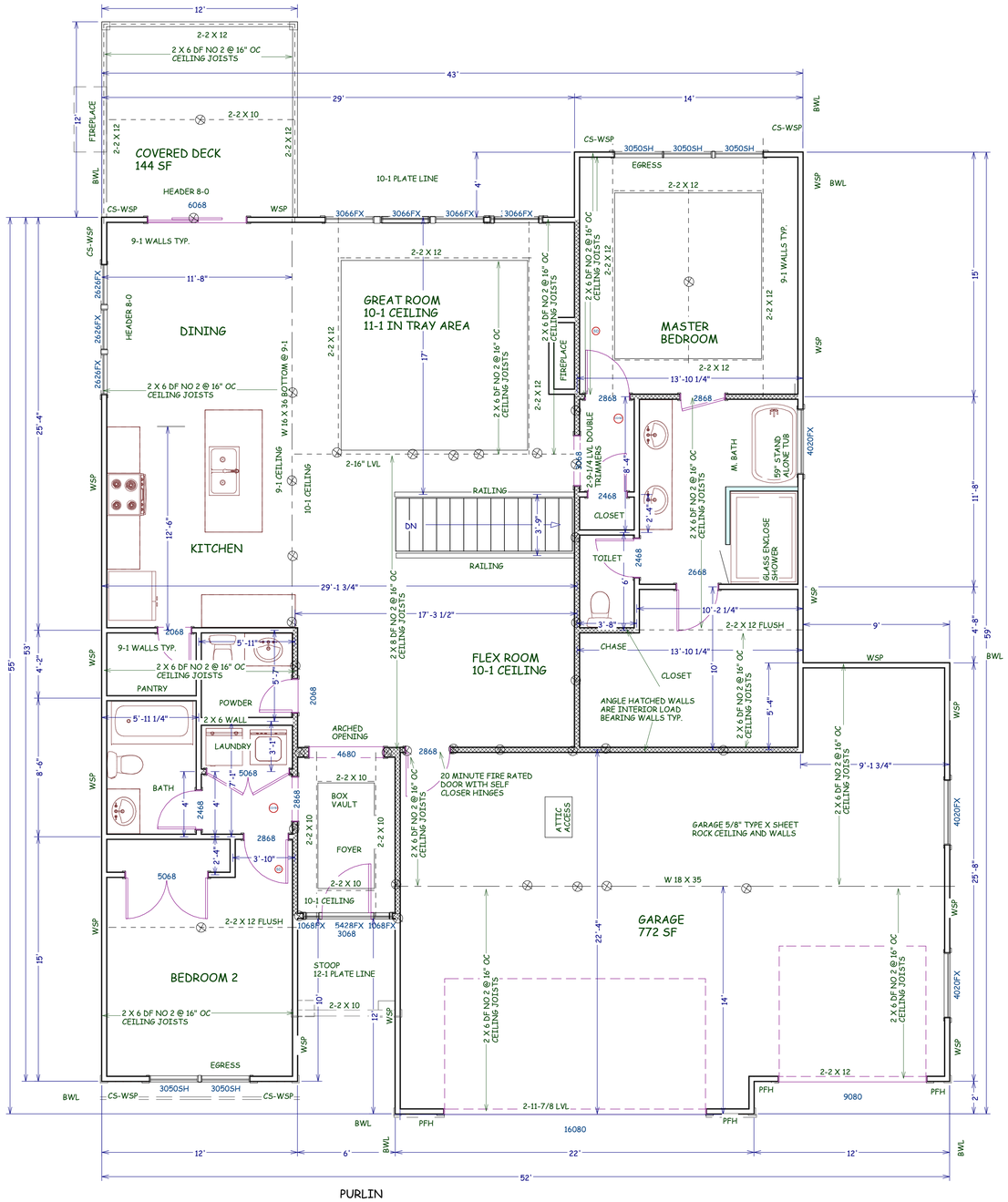
09/26/2022



MAIN FLOOR
1790 SF

BUILD IN ACCORDANCE WITH
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Review and Approval
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212 NE Circle Dr.
Kansas City, MO 64116

STATE OF MISSOURI
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PE-2018009531
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Digitally signed by David Eugene Mezger
DN: C=US, E=mezgerde@gmail.com, David Eugene Mezger O=David Mezger Engineering LLC, CN=David Eugene Mezger
Date: 2022.08.23 18:58:01-05'00'

BEHOME LLC
COMO RES.
LOT 58 RETREAT AT HOOK FARMS
2122 SW RED BARN LANE
LEE SUMMIT MO

SCALE
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DATE
8-22-22

PLAN NO.
3863

SHEET NO.
3 OF 5

RELEASE FOR CONSTRUCTION
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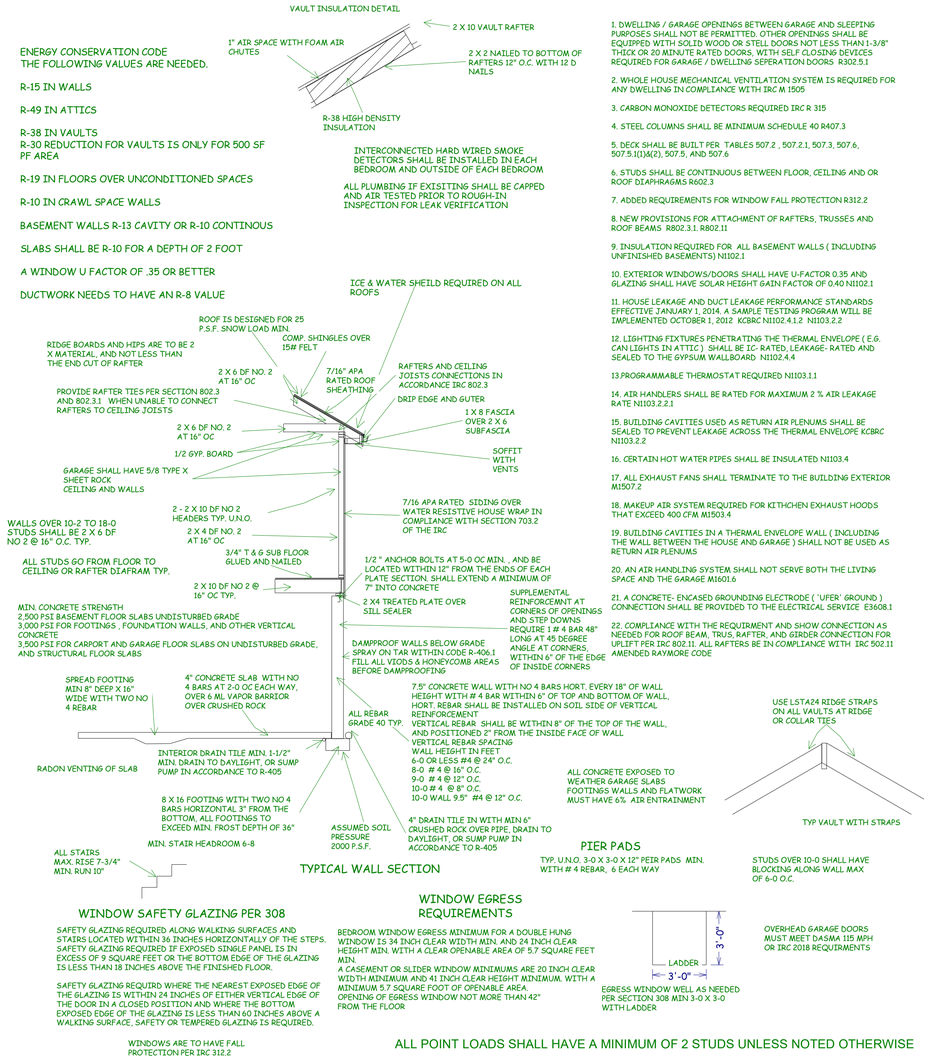
09/26/2022



1. DWELLING / GARAGE OPENINGS BETWEEN GARAGE AND SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS SHALL BE EQUIPPED WITH SOLID WOOD OR STELL DOORS NOT LESS THAN 1-3/8" THICK OR 20 MINUTE RATED DOORS, WITH SELF CLOSING DEVICES REQUIRED FOR GARAGE / DWELLING SEPERATION DOORS R302.5.1

2. WHOLE HOUSE MECHANICAL VENTILATION SYSTEM IS REQUIRED FOR ANY DWELLING IN COMPLIANCE WITH IRC M 1505

3. CARBON MONOXIDE DETECTORS REQUIRED IRC R 315

4. STEEL COLUMNS SHALL BE MINIMUM SCHEDULE 40 R407.3

5. DECK SHALL BE BUILT PER TABLES 507.2 , 507.2.1, 507.3, 507.6, 507.5.1(1)&(2), 507.5, AND 507.6

6. STUDS SHALL BE CONTINUOUS BETWEEN FLOOR, CEILING AND OR ROOF DIAPHRAGMS R602.3

7. ADDED REQUIREMENTS FOR WINDOW FALL PROTECTION R312.2

8. NEW PROVISIONS FOR ATTACHMENT OF RAFTERS, TRUSSES AND ROOF BEAMS R802.3.1. R802.11

9. INSULATION REQUIRED FOR ALL BASEMENT WALLS (INCLUDING UNFINISHED BASEMENTS) N1102.1

10. EXTERIOR WINDOWS/DOORS SHALL HAVE U-FACTOR 0.35 AND GLAZING SHALL HAVE SOLAR HEIGHT GAIN FACTOR OF 0.40 N1102.1

11. HOUSE LEAKAGE AND DUCT LEAKAGE PERFORMANCE STANDARDS EFFECTIVE JANUARY 1, 2014. A SAMPLE TESTING PROGRAM WILL BE IMPLEMENTED OCTOBER 1, 2012 KCBRC N1102.4.1.2 N1103.2.2

12. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE (E.G. CAN LIGHTS IN ATTIC) SHALL BE IC- RATED, LEAKAGE- RATED AND SEALED TO THE GYPSUM WALLBOARD N1102.4.4

13.PROGRAMMABLE THERMOSTAT REQUIRED N1103.1.1

14. AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2 % AIR LEAKAGE RATE N1103.2.2.1

15. BUILDING CAVITIES USED AS RETURN AIR PLENUMS SHALL BE SEALED TO PREVENT LEAKAGE ACROSS THE THERMAL ENVELOPE KCBRC N1103.2.2

16. CERTAIN HOT WATER PIPES SHALL BE INSULATED N1103.4

17. ALL EXHAUST FANS SHALL TERMINATE TO THE BUILDING EXTERIOR M1507.2

18. MAKEUP AIR SYSTEM REQUIRED FOR KITHCHEN EXHAUST HOODS THAT EXCEED 400 CFM. M1503.4

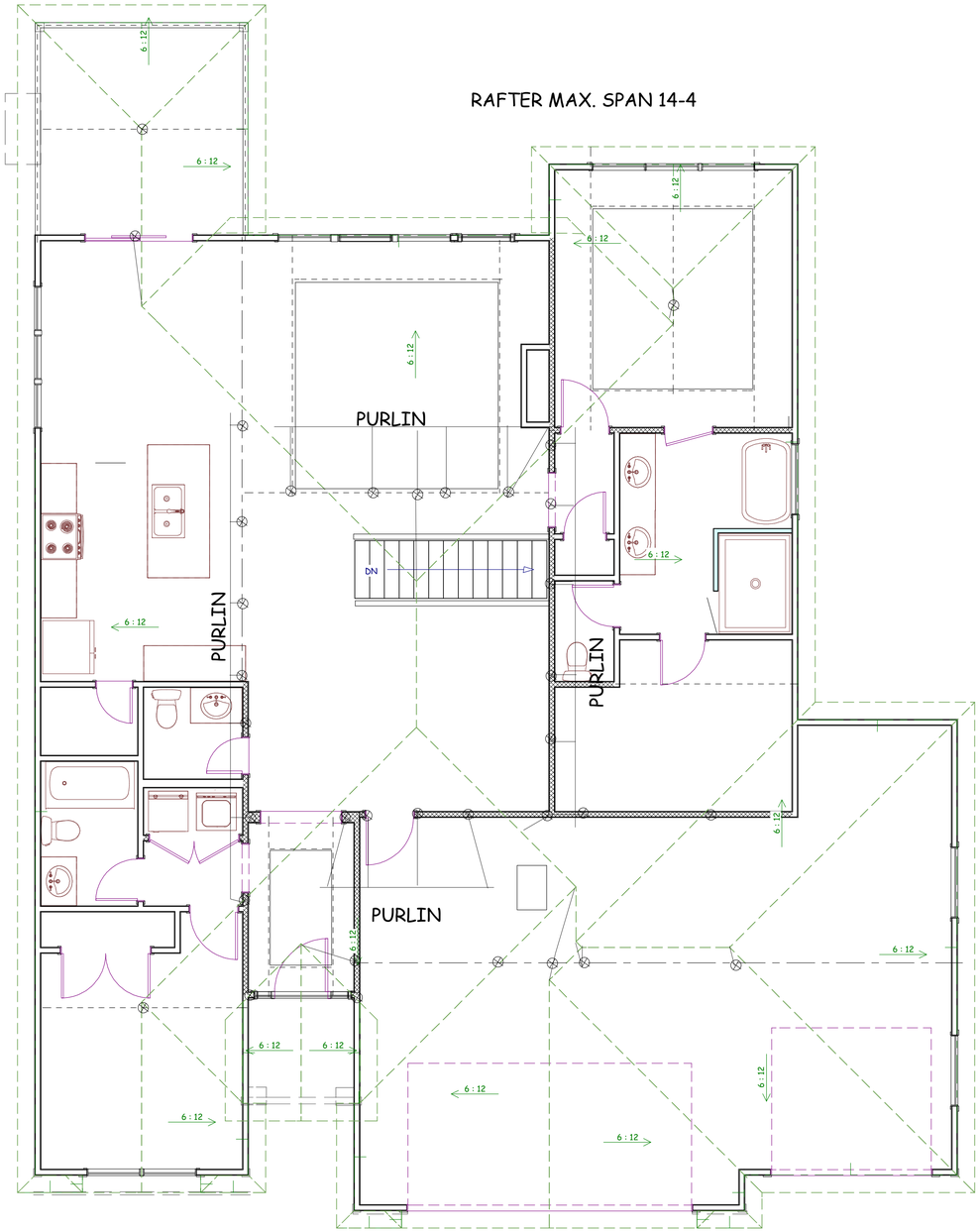
19. BUILDING CAVITIES IN A THERMAL ENVELOPE WALL (INCLUDING THE WALL BETWEEN THE HOUSE AND GARAGE) SHALL NOT BE USED AS RETURN AIR PLENUMS

20. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE M1601.6

21. A CONCRETE- ENCASED GROUNDING ELECTRODE ('UFER' GROUND) CONNECTION SHALL BE PROVIDED TO THE ELECTRICAL SERVICE E3608.1

22. COMPLIANCE WITH THE REQUIRMENT AND SHOW CONNECTION AS NEEDED FOR ROOF BEAM, TRUS, RAFTER, AND GIRDER CONNECTION FOR UPLIFT PER IRC 802.11. ALL RAFTERS BE IN COMPLIANCE WITH IRC 502.11 AMENDED RAYMORE CODE

ALL POINT LOADS SHALL HAVE A MINIMUM OF 2 STUDS UNLESS NOTED OTHERWISE



PURLIN PLAN
ROOF PITCHES 6/12 U.N.O.
RAFTERS 2 X 6 DF NO 2 @ 16" OC TYP.
HIPS AND RIDGES 2 X 8 DF NO 2 TYP.
SOFFITS 12" TYP.

Review and Approval
Structural Only

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Kansas City, MO 64116

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PROFESSIONAL ENGINEER

David Eugene Mezger

Digitally signed by David Eugene Mezger
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Date: 2022.08.23 18:58:18-05'00'

BUILD IN ACCORDANCE WITH 2018 INTERNATIONAL RESIDENTIAL CODE AND LOCAL CODES.

BEHOME LLC
COMO RES.
LOT 58 RETREAT AT HOOK FARMS
2122 SW RED BARN LANE
LEE SUMMIT MO

SCALE
1/4" = 1-0

DATE
8-22-22

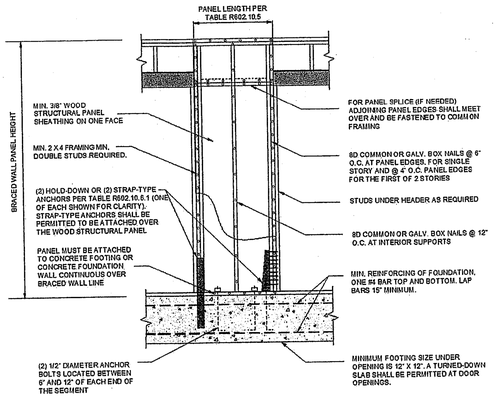
PLAN NO.
3863

SHEET NO.
4 OF 5

TABLE R602.10.3(1)
BRACING REQUIREMENTS BASED ON WIND SPEED

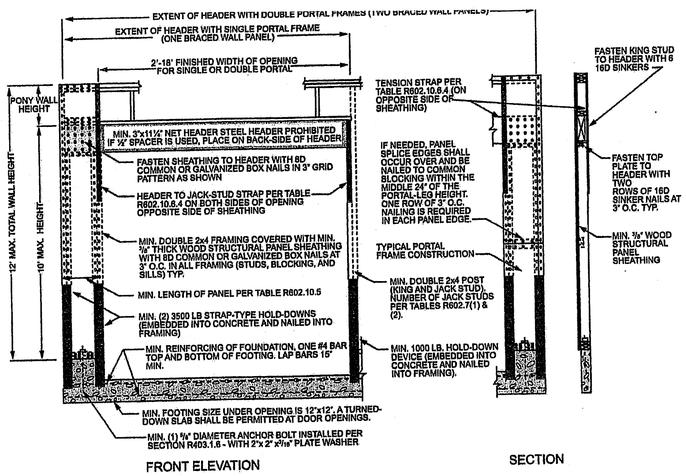
- EXPOSURE CATEGORY B
- 30-FOOT MEAN ROOF HEIGHT
- 10-FOOT WALL HEIGHT
- 2 BRACED WALL LINES

Ultimate Design Wind Speed (mph)	Story Location	Braced Wall Line Spacing[a] (feet)	Minimum total length (feet) of braced wall panels required along each braced wall line[a]: Method LIB[b]	Method GB	Methods DWB, WSP, SFB, PBS, PCP, HPS, BV-WSP, ABW, PFH, PFG, CS-SFB	Methods CS-WSP, CS-G, CS-PF
≤ 115		10	3.5	3.5	2.0	2.0
		20	6.5	6.5	3.5	3.5
		30	9.5	9.5	5.5	4.5
		40	12.5	12.5	7.0	6.0
		50	15.0	15.0	9.0	7.5
		60	18.0	18.0	10.5	9.0
		10	7.0	7.0	4.0	3.5
		20	12.5	12.5	7.5	6.5
		30	18.0	18.0	10.5	9.0
		40	23.5	23.5	13.5	11.5
		50	29.0	29.0	16.5	14.0
		60	34.5	34.5	20.0	17.0
		10	NP	10.0	6.0	5.0
		20	NP	18.5	11.0	9.0
		30	NP	27.0	15.5	13.0
		40	NP	35.0	20.0	17.0
		50	NP	43.0	24.5	21.0
		60	NP	51.0	29.0	25.0



25.4 mm.

FIGURE R602.10.6.1
METHOD ABW—ALTERNATE BRACED WALL PANEL



4 mm, 1 foot = 304.8 mm.

FIGURE R602.10.6.2
METHOD PFH—PORTAL FRAME WITH HOLD-DOWNS

TABLE R602.10.4
BRACING METHODS

Methods, Material		Minimum Thickness	Figure	Connection Criteria[a]: Fasteners	Connection Criteria[a]: Spacing
Intermittent Bracing Methods	LIB Let-in-bracing	1 × 4 wood or approved metal straps at 45° to 60° angles for maximum 16" stud spacing		Wood: 2-8d common nails or 3-8d (2½" long x 0.113" dia.) nails	Wood: per stud and top and bottom plates
				Metal strap: per manufacturer	Metal: per manufacturer
	DWB Diagonal wood boards	⅝" (1" nominal) for maximum 24" stud spacing		2-8d (2½" long × 0.113" dia.) nails or 2 - 1¾" long staples	Per stud
	WSP Wood structural panel (See Section R604)	⅜"		Exterior sheathing per Table R602.3(3)	6" edges 12" field
				Interior sheathing per Table R602.3(1) or R602.3(2)	Varies by fastener
	BV-WSP[e] Wood structural panels with stone or masonry veneer (See Section R602.10.6.5)	⅞"	See Figure R602.10.6.5	8d common (2½" × 0.131") nails	4" at panel edges 12" at intermediate supports 4" at braced wall panel end posts
	SFB Structural fiberboard sheathing	½" or ²⁵/₃₂" for maximum 16" stud spacing		1½" long × 0.12" dia. (for ½" thick sheathing) 1¾" long × 0.12" dia. (for ²⁵/₃₂" thick sheathing) galvanized roofing nails	3" edges 6" field
	GB Gypsum board	½"		Nails or screws per Table R602.3(1) for exterior locations	For all braced wall panel locations: 7" edges (including top and bottom plates) 7" field
				Nails or screws per Table R702.3.5 for interior locations	
	PBS Particleboard sheathing (See Section R605)	⅜" or ½" for maximum 16" stud spacing		For ½", 6d common (2" long × 0.113" dia.) nails For ½", 8d common (2½" long × 0.131" dia.) nails	3" edges 6" field
	PCP Portland cement plaster	See Section R703.7 for maximum 16" stud spacing		1½" long, 11 gage, ⅞" dia. head nails or ⅞" long, 16 gage staples	6" o.c. on all framing members
	HPS Hardboard panel siding	⅞" for maximum 16" stud spacing		0.092" dia., 0.225" dia. head nails with length to accommodate 1½" penetration into studs	4" edges 8" field
	ABW Alternate braced wall	⅜"		See Section R602.10.6.1	See Section R602.10.6.1

TABLE R602.10.4—continued
BRACING METHODS

Methods, Material		Minimum Thickness	Figure	Connection Criteria[a]: Fasteners	Connection Criteria[a]: Spacing
Intermittent Bracing Methods	PFH Portal frame with hold-downs	⅜"		See Section R602.10.6.2	See Section R602.10.6.2
	PFG Portal frame at garage	⅞"		See Section R602.10.6.3	See Section R602.10.6.3
Continuous Sheathing Methods	CS-WSP Continuously sheathed wood structural panel	⅜"		Exterior sheathing per Table R602.3(3)	6" edges 12" field
				Interior sheathing per Table R602.3(1) or R602.3(2)	Varies by fastener
	CS-G[c,e] Continuously sheathed wood structural panel adjacent to garage openings	⅞"		See Method CS-WSP	See Method CS-WSP
	CS-PF Continuously sheathed portal frame	⅞"		See Section R602.10.6.4	See Section R602.10.6.4
	CS-SFB[d] Continuously sheathed structural fiberboard	½" or ²⁵/₃₂" for maximum 16" stud spacing		1½" long × 0.12" dia. (for ½" thick sheathing) 1¾" long × 0.12" dia. (for ²⁵/₃₂" thick sheathing) galvanized roofing nails	3" edges 6" field

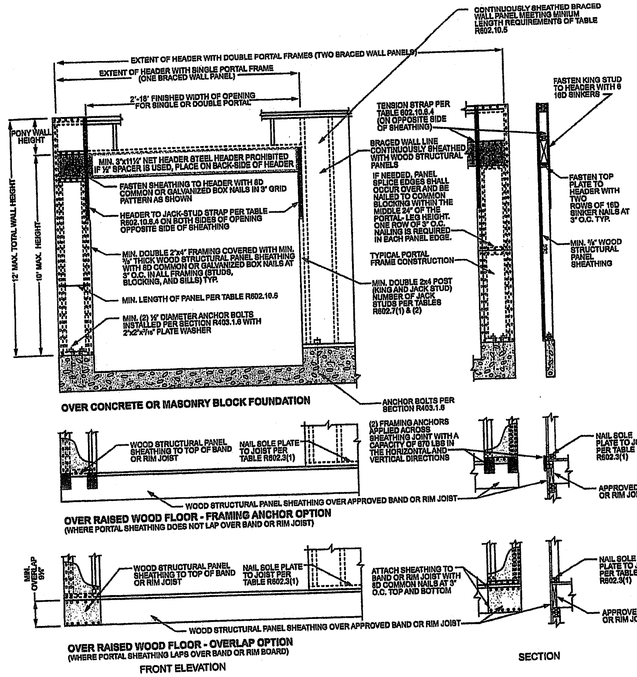
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.0175 rad, 1 pound per square foot = 47.8 N/m², 1 mile per hour = 0.447 m/s.
a. Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in Seismic Design Categories C, D_0, D_1 and D_2.
b. Applies to panels next to garage door opening where supporting gable end wall or roof load only. Shall only be used on one wall of the garage. In Seismic Design Categories D_0, D_1 and D_2, roof covering dead load shall not exceed 3 psf.
c. Garage openings adjacent to a Method CS-G panel shall be provided with a header in accordance with Table R602.7(1). A full-height clear opening shall not be permitted adjacent to a Method CS-G panel.
d. Method CS-SFB does not apply in Seismic Design Categories D_0, D_1 and D_2.
e. Method applies to detached one- and two-family dwellings in Seismic Design Categories D_0 through D_2 only.

TABLE R602.10.5
MINIMUM LENGTH OF BRACED WALL PANELS

Method (See Table R602.10.4)		Minimum length[a] (inches): Wall Height 8 feet	9 feet	10 feet	11 feet	12 feet	Contributing length (inches)
DWB, WSP, SFB, PBS, PCP, HPS, BV-WSP		48	48	48	53	58	Actual[b]
GB		48	48	48	53	58	Double sided = Actual Single sided = 0.5 × Actual
LIB		55	62	69	NP	NP	Actual[b]
ABW	SDC A, B and C, ultimate design wind speed < 140 mph	28	32	34	38	42	48
	SDC D_0, D_1 and D_2, ultimate design wind speed < 140 mph	32	32	34	NP	NP	
CS-G		24	27	30	33	36	Actual[b]
CS-WSP, CS-SFB	Adjacent clear opening height (inches) ≤ 64	24	27	30	33	36	Actual[b]
	68	26	27	30	33	36	
	72	27	27	30	33	36	
	76	30	29	30	33	36	
	80	32	30	30	33	36	
	84	35	32	32	33	36	
	88	38	35	33	33	36	
	92	43	37	35	35	36	
	96	48	41	38	36	36	
	100	—	44	40	38	38	
	104	—	49	43	40	39	
	108	—	54	46	43	41	
	112	—	—	50	45	43	
	116	—	—	55	48	45	
	120	—	—	60	52	48	
	124	—	—	—	56	51	
	128	—	—	—	61	54	
	132	—	—	—	66	58	
	136	—	—	—	—	62	
	140	—	—	—	—	66	
	144	—	—	—	—	72	

Method (See Table R602.10.4)		Portal header height[a]: 8 feet	9 feet	10 feet	11 feet	12 feet	
PFH	Supporting roof only	16	16	16	Note c	Note c	48
	Supporting one story and roof	24	24	24	Note c	Note c	
PFG		24	27	30	Note d	Note d	1.5 × Actual[b]
CS-PF	SDC A, B and C	16	18	20	Note e	Note e	1.5 × Actual[b]
	SDC D_0, D_1 and D_2	16	18	20	Note e	Note e	Actual[b]

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.
NP = Not Permitted.
a. Linear interpolation shall be permitted.
b. Use the actual length where it is greater than or equal to the minimum length.
c. Maximum header height for PFH is 10 feet in accordance with Figure R602.10.6.2, but wall height shall be permitted to be increased to 12 feet with pony wall.
d. Maximum header height for PFG is 10 feet in accordance with Figure R602.10.6.3, but wall height shall be permitted to be increased to 12 feet with pony wall.
e. Maximum header height for CS-PF is 10 feet in accordance with Figure R602.10.6.4, but wall height shall be permitted to be increased to 12 feet with pony wall.



[a]For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE R602.10.6.4
METHOD CS-PF—CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION

BRACE WALL DETAILS
WIND SPEED 115 MPH
WIND EXPOSURE A
SEISMIC DESIGN CAEGORY A

Review and Approval
Structural Only

David Mezger Engineering LLC
212 NE Circle Dr.
Kansas City, MO 64116

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DAVID E. MEZGER
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Date: 2022.08.23 18:58:37 -05'00'

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