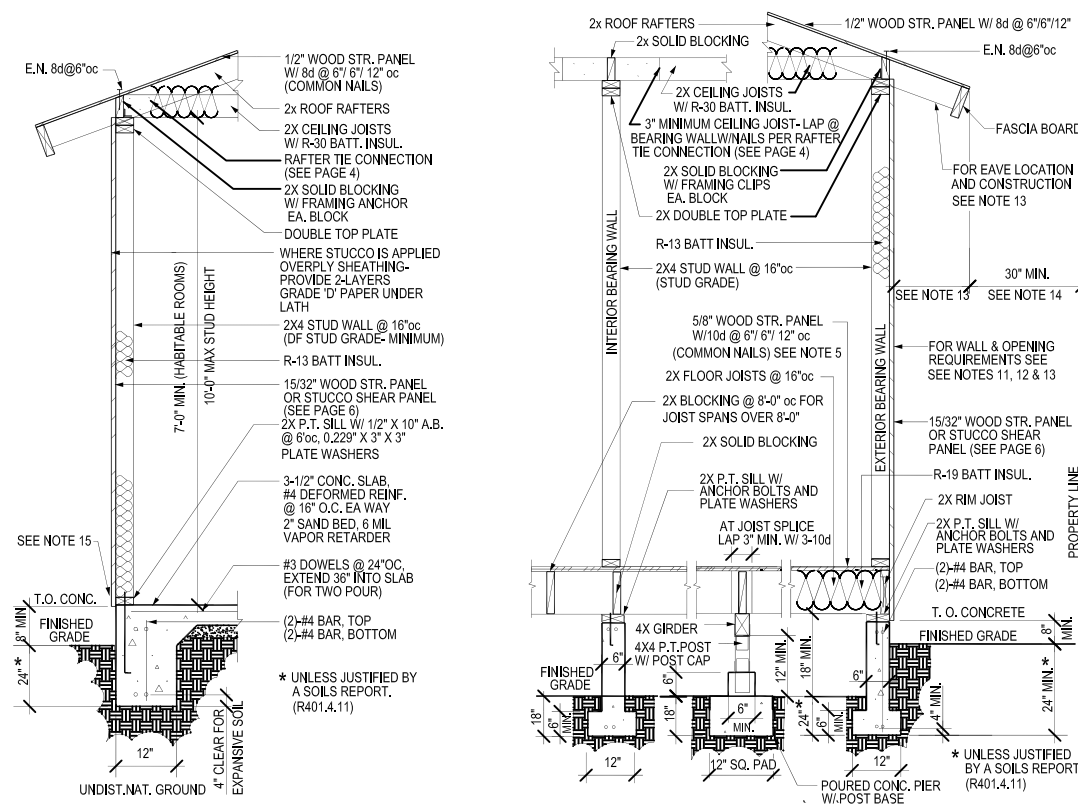
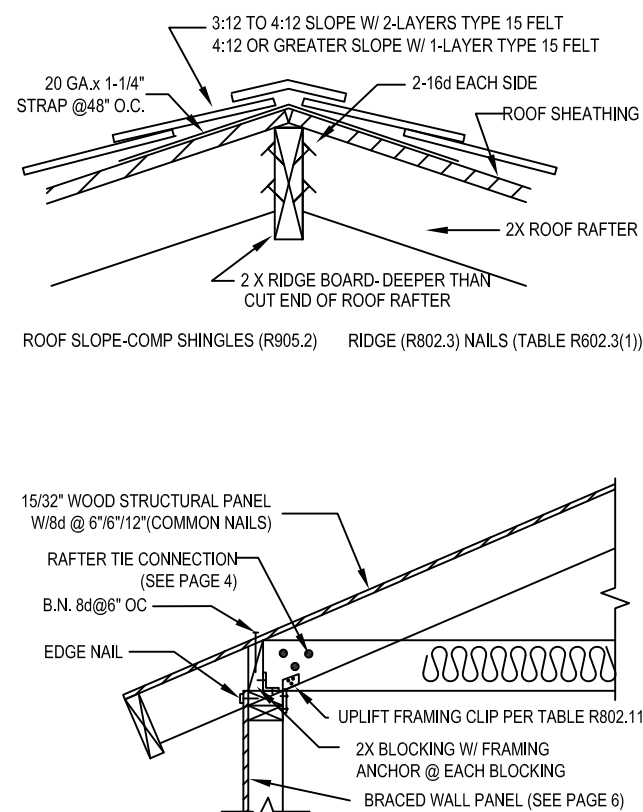
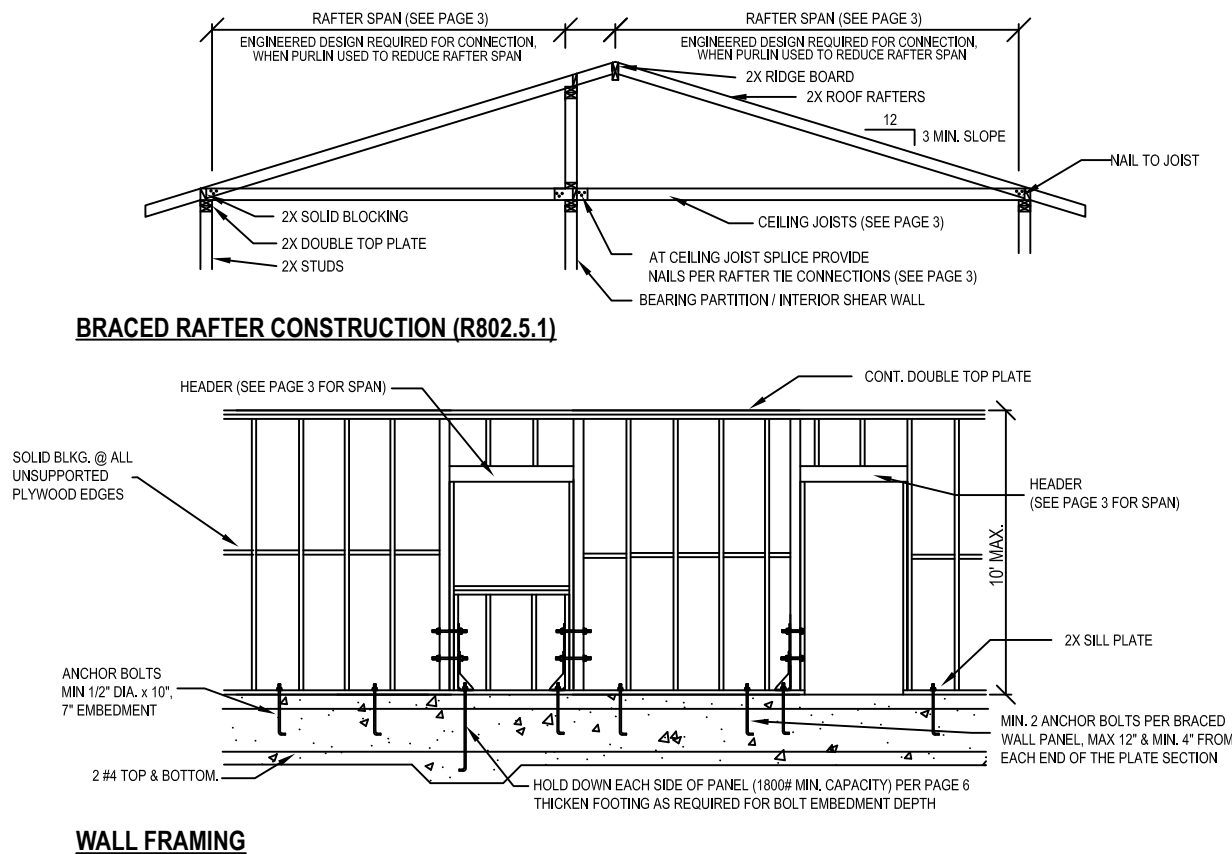


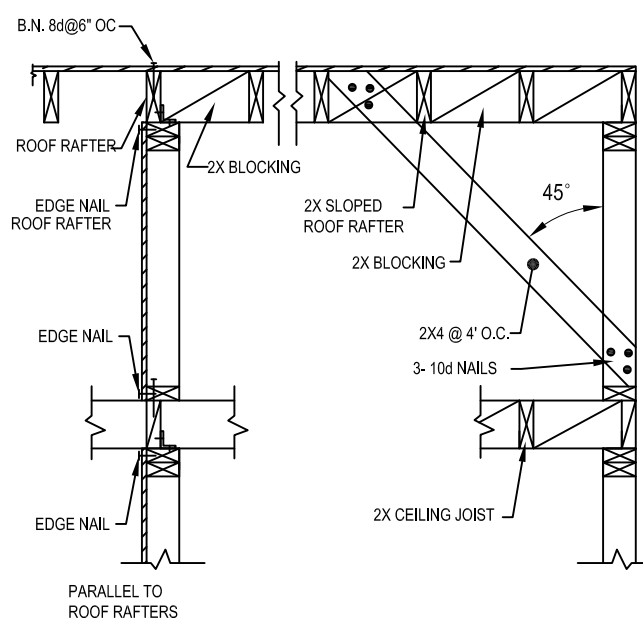


An automatic fire sprinkler system shall be installed in new one and two-family dwellings, and townhouses per R313.2 of the CRC.



**NOTES:**

1. Anchor bolts 1/2" x 10" embedded 7" and spaced maximum 6' with 0.229" x 3" x 3" plate washers, minimum 2 anchor bolts per piece, located not more than 12" or less than 7 bolt diameters from each end of the piece.
2. All foundation plates or sills and sleepers on a concrete or masonry slab, which is in direct contact with earth, and sills that rest on concrete or masonry foundations shall be preservative treated wood (AWPA U1) and field cut ends, notches, and drilled holes shall be field treated in accordance with AWPA M4. Fasteners (other than anchor bolts) in preservative treated wood or fire retardant treated wood shall be of hot dipped zinc coated galvanized steel or stainless steel.
3. Minimum concrete strength 2,500 psi.
4. Bearing walls and braced wall panels require continuous footings.
5. 23/32" plywood required for 24" joist spacing.
6. Where interior walls are shear walls, wall framing and sheathing shall extend to the roof sheathing.
7. Footings on or adjacent to slopes shall meet the requirements of R403.1.7.
8. Walls separating units in townhouses shall be provided with parapet in accordance with R302.2.2
9. Projects located in the Very High Fire Hazard Severity Zone (VHFHSZ) must also incorporate the requirements of R327 into the design.
10. Exterior walls of dwellings and accessory structures closer than 5-ft. (non-sprinklered) or 3-ft. (sprinklered) to the property line shall be 1-hr fire-resistance rated construction.
11. No openings other than approved foundation vents shall be permitted in the exterior walls of dwellings and accessory buildings where the exterior wall is less than 3-ft. to the property line.
12. The area of exterior wall openings of non-sprinklered dwellings and accessory buildings located  $\geq$  3-ft. and  $<$  5-ft. to the property line shall be limited to 25% of the wall area. Exterior wall openings are unlimited when exterior walls are located  $\geq$  5-ft. for non-sprinklered buildings and  $\geq$  3-ft. for sprinklered buildings.
13. Eaves shall be of 1-hr fire-resistive construction on the underside when located between 2-ft. and 5-ft. from the property line for non-sprinklered buildings and between 2-ft. and 3-ft. from the property line for sprinklered buildings. Detached garages within 2-ft. of a property line may have a maximum 4-inch eave, provided the eave does not extend over the property line and is allowed by the Zoning Code.
14. Eaves shall not project more than 4" for each one foot of required side yard, and shall provide a minimum 30" clear space between the eave and the property line.
15. Exterior plaster (stucco) walls shall be provided with a corrosion resistant weep screed complying with R707.6.2.1





**NOTCHING & BORING RAFTERS, CEILING JOISTS, FLOOR JOISTS**

**\*NOTCHING NOT PERMITTED IN MIDDLE 1/3 JOIST SPAN. HOLES SHALL NOT BE LOCATED WITHIN 2" OF A NOTCH**

**EXTERIOR WALLS AND BEARING PARTITIONS**

**NON-BEARING PARTITIONS**

**EXTERIOR WALLS AND BEARING WALLS MAY HAVE BORED HOLES BETWEEN 40 AND 60 PERCENT WHEN STUD IS DOUBLED AND NOT MORE THAN TWO SUCCESSIVE DOUBLE STUDS ARE BORED (R502.1, R802.7.1, R602.6)**

**GIRDER (R317.1/R502.6)**

**TRENCHES AS FOOTING**

**DF#2 CEILING JOISTS, ALLOWABLE SPANS**

JOIST SPACING	ATTICS WITHOUT STORAGE, LL = 10psf				ATTICS WITH LIMITED STORAGE, LL = 20psf			
	2 X 4	2 X 6	2 X 8	2 X 10	2 X 4	2 X 6	2 X 8	2 X 10
12"	12-5	19-6	25-8	26-0	9-10	14-10	18-9	22-11
16"	11-3	17-8	23-0	26-0	8-9	12-10	16-3	19-10
24"	9-10	14-10	18-9	22-11	7-2	10-6	13-3	16-3

\*DATA FROM CBC 2013 TABLE 2308.10.2. ATTICS WITH STORAGE ARE THOSE WHERE THE CLEAR HEIGHT BETWEEN THE CEILING JOIST AND RAFTER IS 42" OR GREATER. ATTICS SHALL BE UNINHABITABLE. CEILING DEAD LOAD SHALL NOT EXCEED 5 PSF.

**DF#2 RAFTERS, ALLOWABLE SPANS**

RAFTER SPACING	DL = 10psf, LL = 20psf				
	2 X 4	2 X 6	2 X 8	2 X 10	2 X 12
12"	9'-10"	15'-6"	20'-5"	25'-8"	26'-0"
16"	8'-11"	14'-1"	18'-2"	22'-3"	25'-9"
24"	7'-10"	11'-9"	14'-10"	18'-2"	21'-0"

\*DATA FROM CBC 2013 TABLE 2308.10.3(2).

**DF#2 FLOOR JOIST, ALLOWABLE SPANS**

JOIST SPACING	DL = 10psf, LL = 40psf				
	2 x 6	2 x 8	2 x 10	2 x 12	2 x 12
12"	10'-9"	14'-2"	17'-9"	20'-7"	20'-7"
16"	9'-9"	12'-7"	15'-5"	17'-10"	17'-10"
24"	8'-1"	10'-3"	12'-7"	14'-7"	14'-7"

\*DATA FROM CBC 2013 TABLE 2308.8(2).

**DF HEADER AND GIRDER SPANS FOR EXTERIOR BEARING WALLS, ALLOWABLE SPANS**

SIZE	DL = 25psf, LL = 30psf						DL = 25psf, LL = 50psf					
	20-foot building width		28-foot building width		36-foot building width		20-foot building width		28-foot building width		36-foot building width	
	Span	NJ	Span	NJ	Span	NJ	Span	NJ	Span	NJ	Span	NJ
2-2 X 6	5'-5"	1	4'-8"	1	4'-2"	1	4-8	1	4-1	1	3-8	2
2-2 X 8	6'-10"	1	5'-11"	2	5'-4"	2	5-11	2	5-2	2	4-7	2
2-2 X 10	8'-5"	2	7'-3"	2	6'-6"	2	7-3	2	6-3	2	5-7	2
2-2 X 12	9'-9"	2	8'-5"	2	7'-6"	2	8-5	2	7-3	2	6-6	2
3-2 X 8	8'-4"	1	7'-5"	1	6'-8"	1	7-5	1	6-5	2	5-9	2
3-2 X 10	10'-6"	1	9'-1"	2	8'-2"	2	9-1	2	7-10	2	7-0	2
3-2 X 12	12'-2"	2	10'-7"	2	9'-5"	2	10-7	2	9-2	2	8-2	2

\*DATA FROM CBC 2013 TABLE 2308.9.5.

**DF HEADER AND GIRDER SPANS FOR INTERIOR BEARING WALLS, ALLOWABLE SPANS**

SIZE	ONE FLOOR ONLY						TWO FLOORS					
	20-foot building width		28-foot building width		36-foot building width		20-foot building width		28-foot building width		36-foot building width	
	Span	NJ	Span	NJ	Span	NJ	Span	NJ	Span	NJ	Span	NJ
2-2 X 6	4-6	1	3-11	1	3-6	1	3-2	2	2-9	2	2-5	2
2-2 X 8	5-9	1	5-0	2	4-5	2	4-1	2	3-6	2	3-2	2
2-2 X 10	7-0	2	6-1	2	5-5	2	4-11	2	4-3	2	3-10	3
2-2 X 12	8-1	2	7-0	2	6-3	2	5-9	2	5-0	3	4-5	3
3-2 X 8	7-2	1	6-3	1	5-7	2	5-1	2	4-5	2	3-11	2
3-2 X 10	8-9	1	7-7	2	6-9	2	6-2	2	5-4	2	4-10	2
3-2 X 12	10-2	2	8-10	2	7-10	2	7-2	2	6-3	2	5-7	3

\*DATA FROM CBC 2013 TABLE 2308.9.6.

**RAFTER TIE CONNECTIONS, #16d COMMON NAILS**

TIE SPACING	RAFTER SLOPE															
	3 : 12				4 : 12				5 : 12				7 : 12			
	Span				Span				Span				Span			
	12'	20'	28'	36'	12'	20'	28'	36'	12'	20'	28'	36'	12'	20'	28'	36'
12"	4	6	8	10	3	4	5	6	3	3	4	5	3	3	3	3
16"	5	7	10	13	3	5	7	8	3	4	5	7	3	3	4	5
24"	7	11	15	19	4	7	10	12	4	6	8	10	3	4	6	7
32"	10	14	19	25	6	9	13	16	5	8	10	13	4	6	8	10
48"	14	21	29	37	8	14	19	24	7	11	15	20	5	8	11	14

\*DATA FROM CBC 2013 TABLE 2308.10.4.1. THE NUMBER OF NAILS SPECIFIED IN THE TABLE SHALL BE PROVIDED AT EACH CONNECTION. WHEN FULL-HEIGHT INTERIOR BEARING WALLS OR PURLIN BRACING ARE PROVIDED. RAFTER TIE NAILING MAY BE REDUCED PROPORTIONAL TO THE REDUCTION IN RAFTER SPAN; NO LESS THAN 3 NAILS SHALL BE PROVIDED AT EACH CONNECTION. NO SNOW LOAD.

**BRACED WALL PANEL REQUIREMENTS**

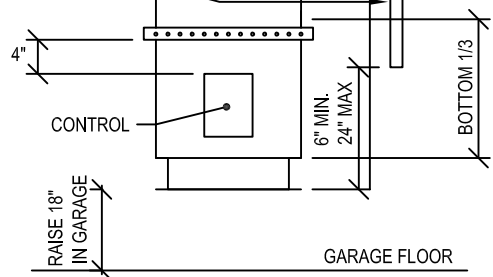
**BRACED WALL PANEL REQUIREMENTS**

- NOTES:**
- BRACED WALL LINES AT EXTERIOR WALLS SHALL HAVE A BRACED WALL PANEL LOCATED AT EACH END OF THE BRACED WALL LINE.  
**EXCEPTION:** FOR METHOD WSP, THE BRACED WALL PANEL SHALL BE PERMITTED TO BEGIN NO MORE THAN 8 FEET FROM EACH END OF THE BRACED WALL LINE PROVIDED:  
  
  
A MIN. 24" PANEL IS APPLIED TO EACH SIDE. THIS 24" WIDE PANEL DOES NOT COUNT AS BRACING  
1800 LBF HOLD-DOWN DEVICES REQUIRED AT THE ENDS OF EACH BRACED WALL PANEL CLOSEST TO THE CORNER
  - MIXING BRACING METHODS WITHIN A BRACED WALL LINE IS NOT PERMITTED.
  - INTERIOR BRACE WALL PANEL SHALL BE LOCATED NOT MORE THAN 12.5-FT FROM THE END OF A BRACED WALL LINE AND THE TOTAL COMBINED DISTANCE FROM EACH END SHALL NOT EXCEED 12.5 FT AS DEMONSTRATED IN FIGURE R602.10.1.4(2) OF THE CRC.
  - HOLD-DOWN DEVICE SHALL BE APPROVED BY CURRENT LOS ANGELES CITY RESEARCH REPORT OR A NATIONALLY RECOGNIZED AGENCY REPORT W/ 25% CAPACITY REDUCTION.



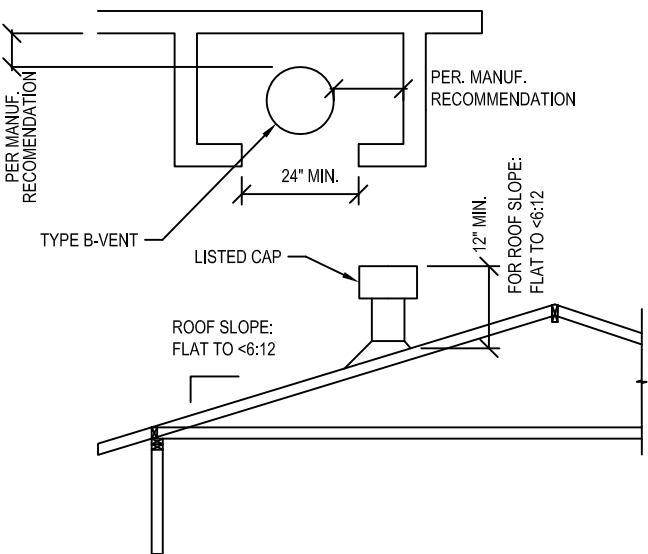
SEISMIC STRAPS: TWO MIN.  
DSA APPROVED SEISMIC STRAPS  
APPLIED PER MANUF. SPECS

T&P VALVE PIPED TO EXTERIOR  
3/4" MIN. PIPE. NO THREADS  
ALLOWED IN BOTTOM PIPING



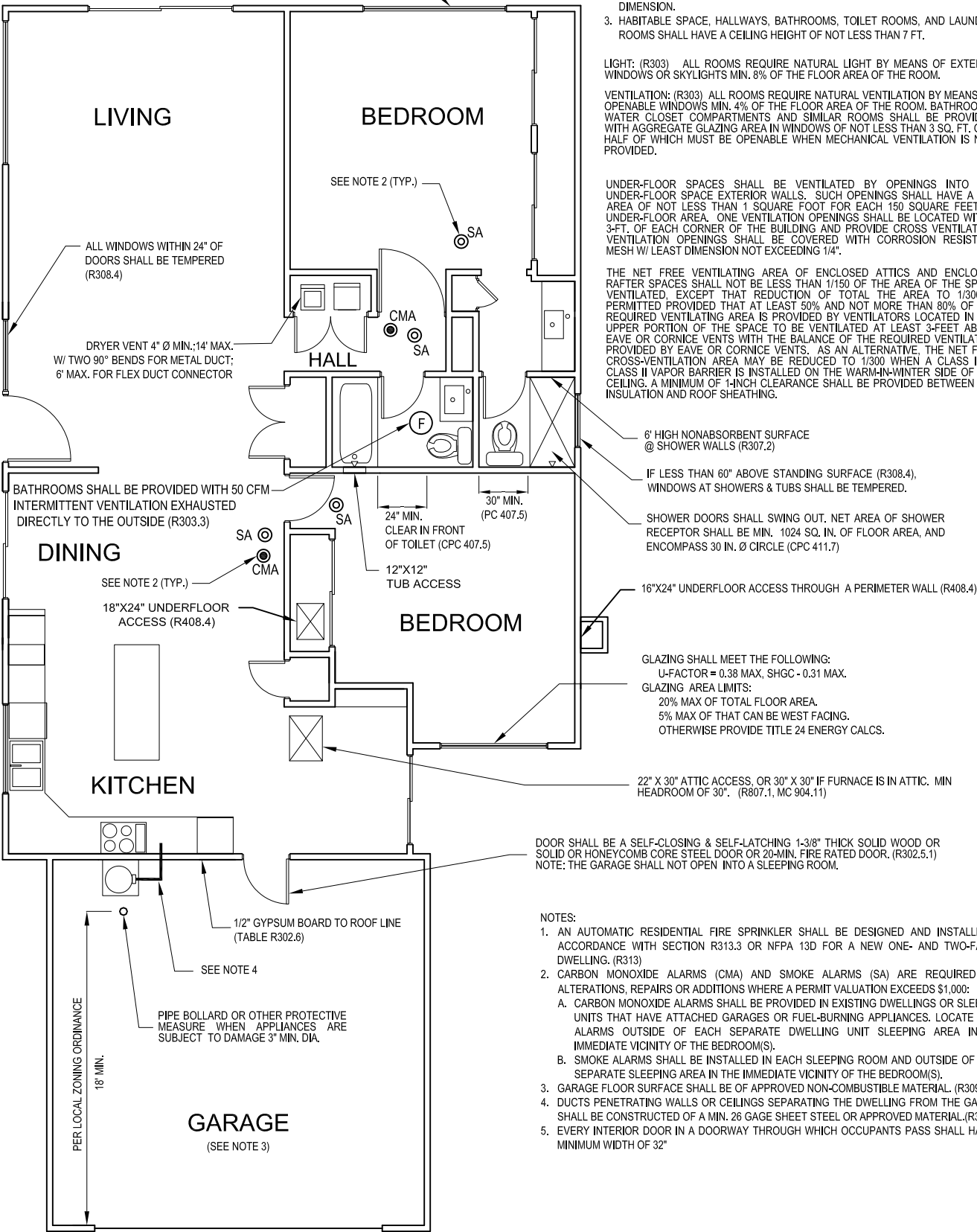
NOTE: NO GAS-FIRED WATER HEATER ALLOWED IN BEDROOMS, BATHROOMS,  
CLOTHES CLOSETS, OR ANY SPACE OPENING INTO A BEDROOM OR BATHROOM.

**WATER HEATER (CPC 508)**



**WATER HEATER VENT AND ACCESS REQUIRMENTS**

EMERGENCY ESCAPE / RESCUE WINDOW (SEE PAGE 7)



MINIMUM ROOM DIMENSIONS: (R304 & R305)

1. AT LEAST ONE HABITABLE ROOM SHALL HAVE NOT LESS THAN 120 SF. AND OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN 70 SF.
2. HABITABLE ROOMS SHALL NOT BE LESS THAN 7 FT. IN ANY HORIZONTAL DIMENSION.
3. HABITABLE SPACE, HALLWAYS, BATHROOMS, TOILET ROOMS, AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FT.

LIGHT: (R303) ALL ROOMS REQUIRE NATURAL LIGHT BY MEANS OF EXTERIOR WINDOWS OR SKYLIGHTS MIN. 8% OF THE FLOOR AREA OF THE ROOM.

VENTILATION: (R303) ALL ROOMS REQUIRE NATURAL VENTILATION BY MEANS OF OPENABLE WINDOWS MIN. 4% OF THE FLOOR AREA OF THE ROOM. BATHROOMS, WATER CLOSET COMPARTMENTS AND SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQ. FT. ONE HALF OF WHICH MUST BE OPENABLE WHEN MECHANICAL VENTILATION IS NOT PROVIDED.

UNDER-FLOOR SPACES SHALL BE VENTILATED BY OPENINGS INTO THE UNDER-FLOOR SPACE EXTERIOR WALLS. SUCH OPENINGS SHALL HAVE A NET AREA OF NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR AREA. ONE VENTILATION OPENINGS SHALL BE LOCATED WITHIN 3-FT. OF EACH CORNER OF THE BUILDING AND PROVIDE CROSS VENTILATION. VENTILATION OPENINGS SHALL BE COVERED WITH CORROSION RESISTANT MESH W/ LEAST DIMENSION NOT EXCEEDING 1/4".

THE NET FREE VENTILATING AREA OF ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED. EXCEPTION: REDUCTION OF TOTAL THE AREA TO 1/300 IS PERMITTED PROVIDED THAT AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3-FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. AS AN ALTERNATIVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A CLASS I OR CLASS II VAPOR BARRIER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING. A MINIMUM OF 1-INCH CLEARANCE SHALL BE PROVIDED BETWEEN THE INSULATION AND ROOF SHEATHING.

6" HIGH NONABSORBENT SURFACE  
@ SHOWER WALLS (R307.2)

IF LESS THAN 60" ABOVE STANDING SURFACE (R308.4),  
WINDOWS AT SHOWERS & TUBS SHALL BE TEMPERED.

SHOWER DOORS SHALL SWING OUT. NET AREA OF SHOWER  
RECEPTOR SHALL BE MIN. 1024 SQ. IN. OF FLOOR AREA, AND  
ENCOMPASS 30 IN. Ø CIRCLE (CPC 411.7)

16"X24" UNDERFLOOR ACCESS THROUGH A PERIMETER WALL (R408.4)

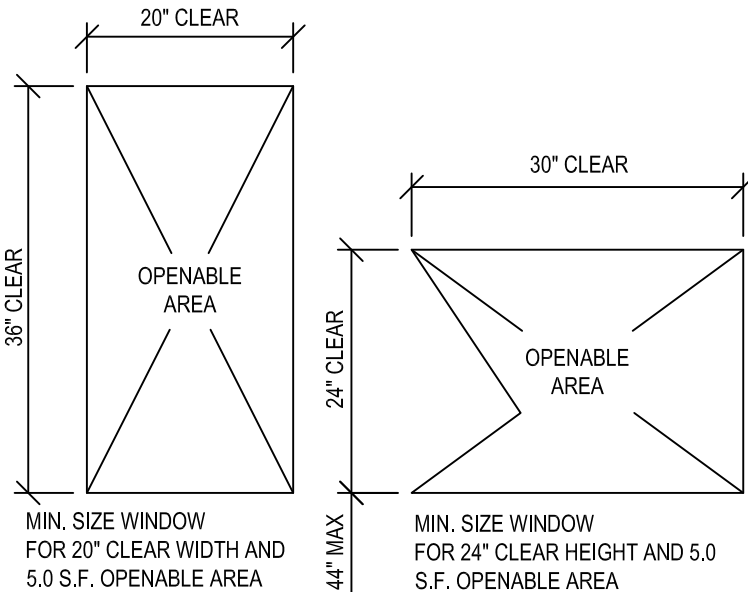
GLAZING SHALL MEET THE FOLLOWING:  
U-FACTOR = 0.38 MAX, SHGC - 0.31 MAX.  
GLAZING AREA LIMITS:  
20% MAX OF TOTAL FLOOR AREA.  
5% MAX OF THAT CAN BE WEST FACING.  
OTHERWISE PROVIDE TITLE 24 ENERGY CALCS.

22" X 30" ATTIC ACCESS, OR 30" X 30" IF FURNACE IS IN ATTIC. MIN  
HEADROOM OF 30". (R807.1, MC 904.11)

DOOR SHALL BE A SELF-CLOSING & SELF-LATCHING 1-3/8" THICK SOLID WOOD OR  
SOLID OR HONEYCOMB CORE STEEL DOOR OR 20-MIN. FIRE RATED DOOR. (R302.5.1)  
NOTE: THE GARAGE SHALL NOT OPEN INTO A SLEEPING ROOM.

NOTES:

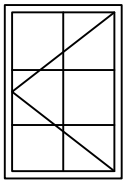
1. AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTION R313.3 OR NFPA 13D FOR A NEW ONE- AND TWO-FAMILY DWELLING. (R313)
2. CARBON MONOXIDE ALARMS (CMA) AND SMOKE ALARMS (SA) ARE REQUIRED FOR ALTERATIONS, REPAIRS OR ADDITIONS WHERE A PERMIT VALUATION EXCEEDS \$1,000:  
A. CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN EXISTING DWELLINGS OR SLEEPING UNITS THAT HAVE ATTACHED GARAGES OR FUEL-BURNING APPLIANCES. LOCATE SUCH ALARMS OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S).  
B. SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM AND OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S).
3. GARAGE FLOOR SURFACE SHALL BE OF APPROVED NON-COMBUSTIBLE MATERIAL. (R309)
4. DUCTS PENETRATING WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MIN. 26 GAGE SHEET STEEL OR APPROVED MATERIAL.(R302.5)
5. EVERY INTERIOR DOOR IN A DOORWAY THROUGH WHICH OCCUPANTS PASS SHALL HAVE A MINIMUM WIDTH OF 32"



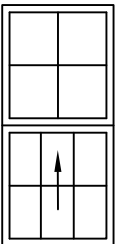
1. 20" MIN. CLEAR WIDTH
2. 24" MIN. CLEAR HEIGHT
3. 5.0 SF MIN. OPENABLE AREA AT GRADE-FLOOR ONLY, 5.7 SF MIN. ELSEWHERE.

**EMERGENCY ESCAPE/RESCUE OPENING (R310)**

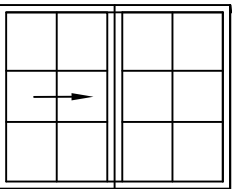
THE FOLLOWING WINDOW SIZES WILL BE THE MINIMUM ALLOWED FOR 5.0 SF.



SINGLE CASEMENT: 2-4 X 4-0,  
2-6 X 3-6  
DOUBLE CASEMENT: 4-8 X 4-0  
CASEMENT/ FIXED COMBO: 7-0 X 4-0  
OTHER WINDOW TYPES:  
AWNING & BAY W/ FIXED CENTER:  
NONE W/O MANUF. DATA



SINGLE/ DOUBLE HUNG:  
3-0 X 5-0, 3-0 X 5-6, 3-4 X 5-0,  
3-8 X 5-0, 4-0 X 5-0  
SINGLE/ FIXED COMBO: NONE W/O  
MANUF. DATA



SLIDER:  
4-0 X 4-0  
5-0 X 3-6  
6-0 X 3-0  
SLIDER/ FIXED COMBO:  
8-0 X 4-0  
10-0 X 4-0  
12-0 X 3-0

NOTE: SIZES ARE TAKEN FROM DATA SUPPLIED BY  
WINDOW MANUFACTURERS. HOWEVER, THESE ARE  
GENERAL DIMENSIONS AND MUST BE VERIFIED WITH  
ACTUAL WINDOWS INSTALLED TO MEET MINIMUM  
EGRESS REQUIREMENTS.