

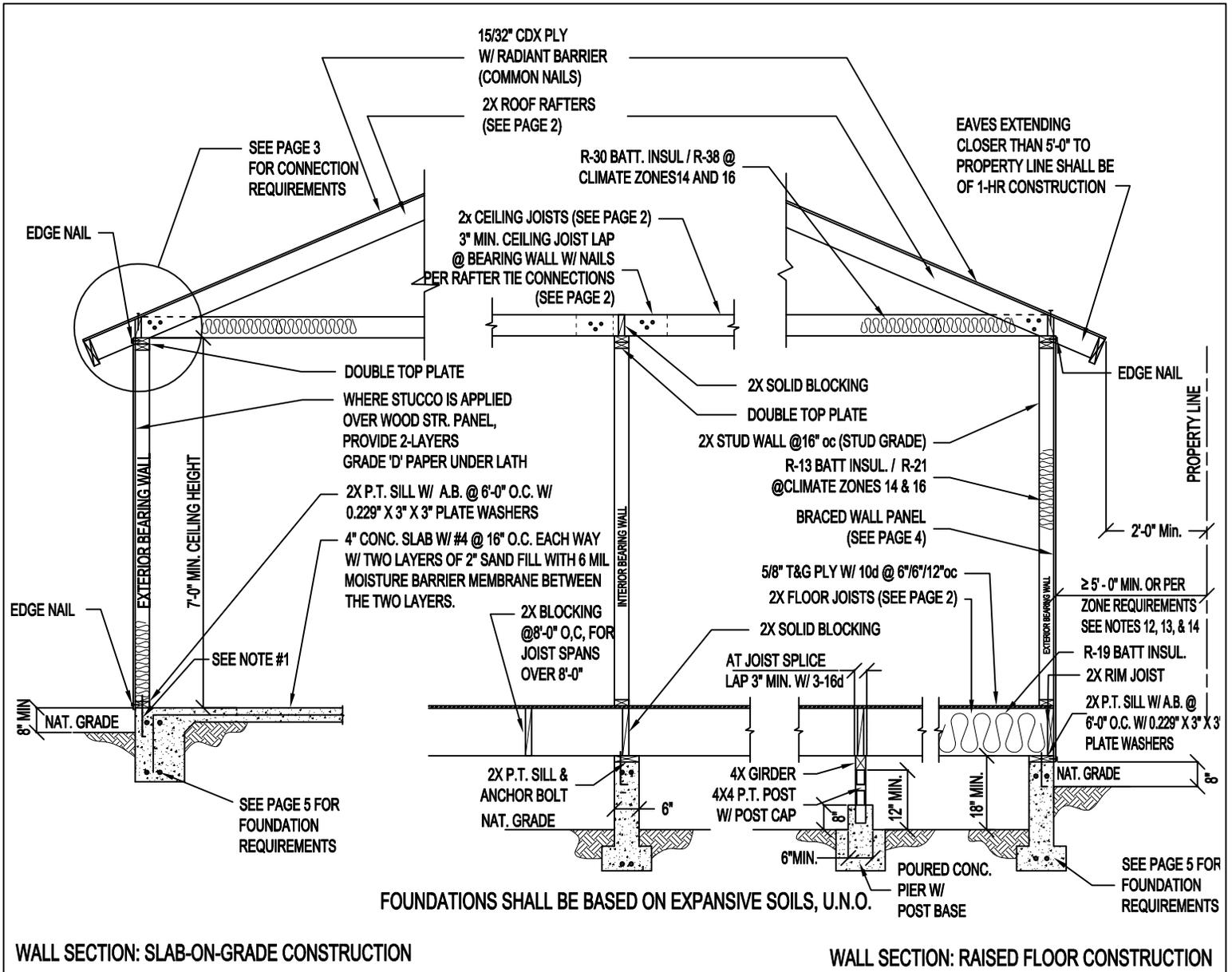


2014 COUNTY OF LOS ANGELES RESIDENTIAL CODE

WOOD FRAME PROVISIONS

DEAD LOAD SHALL NOT EXCEED 15 PSF FOR COMBINED ROOF / CEILING OR EXTERIOR WALLS AND 10 PSF FOR FLOORS OR PARTITIONS.

THIS SHEET IS FOR INFORMATION AND REFERENCE ONLY AND IS NOT A SUBSTITUTE FOR ACCURATE DRAWINGS PREPARED FOR EACH PROPOSED CONSTRUCTION PROJECT.



FOUNDATIONS SHALL BE BASED ON EXPANSIVE SOILS, U.N.O.

WALL SECTION: SLAB-ON-GRADE CONSTRUCTION

WALL SECTION: RAISED FLOOR CONSTRUCTION

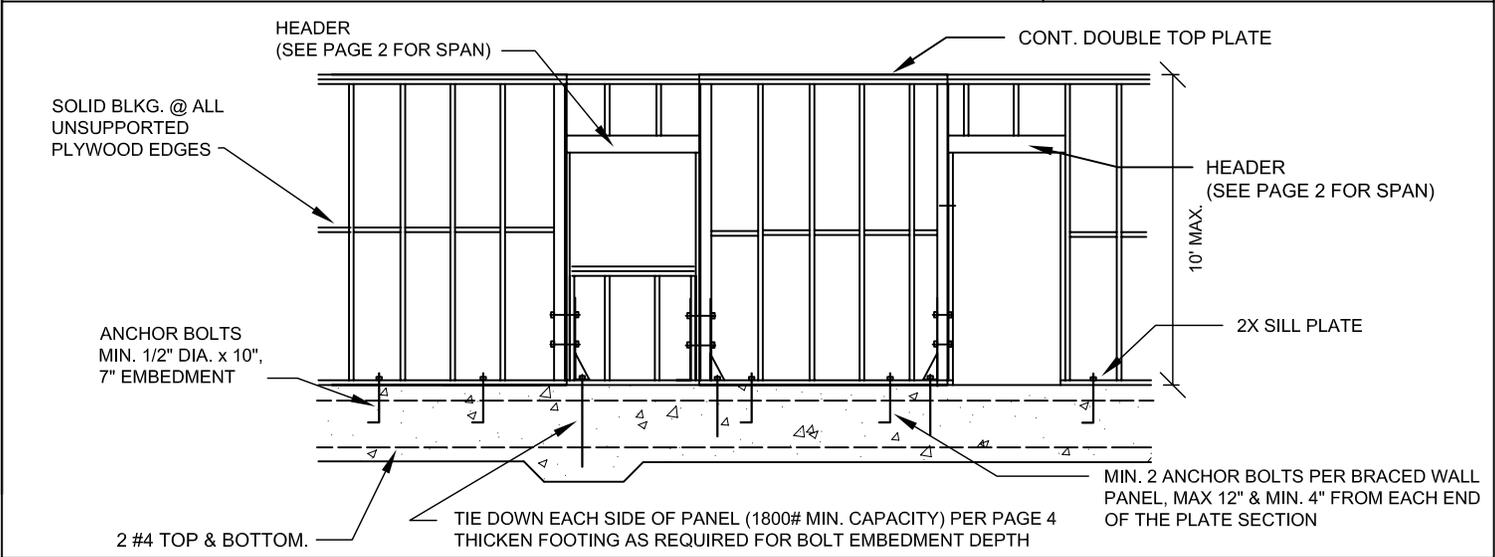
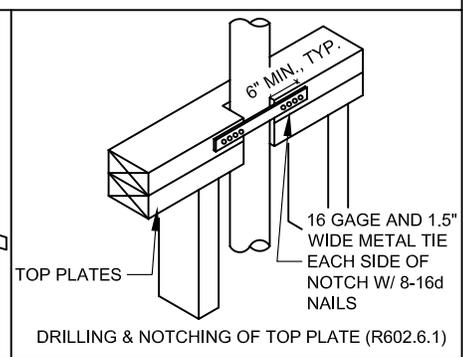
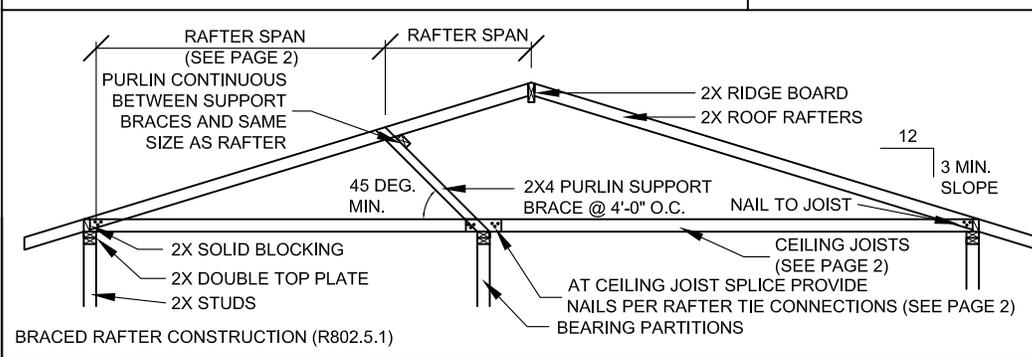
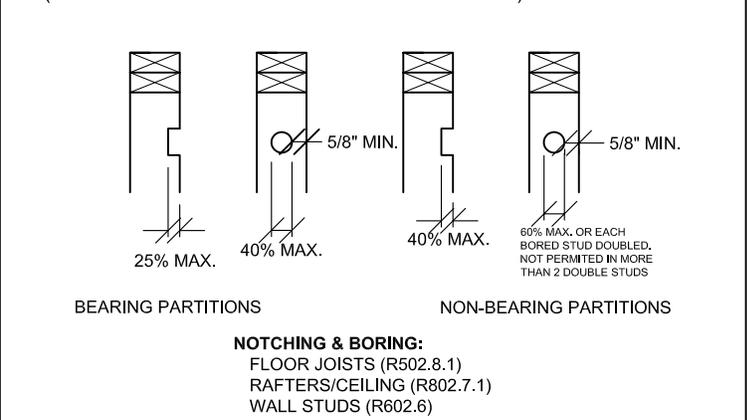
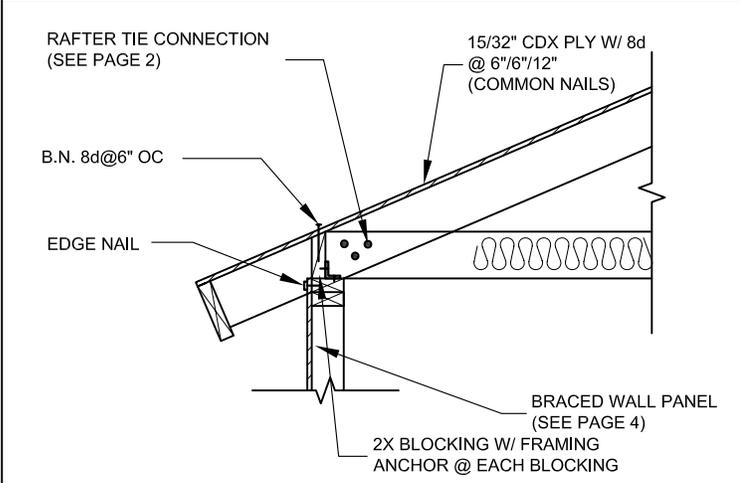
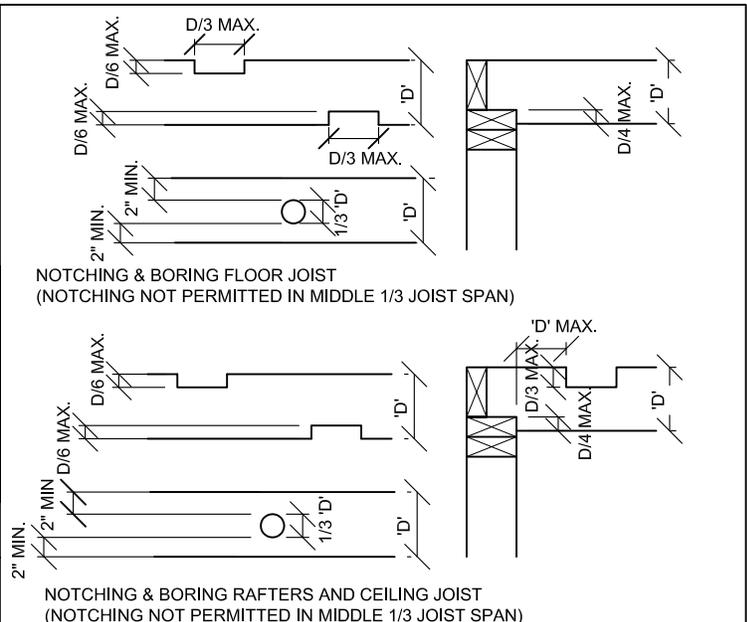
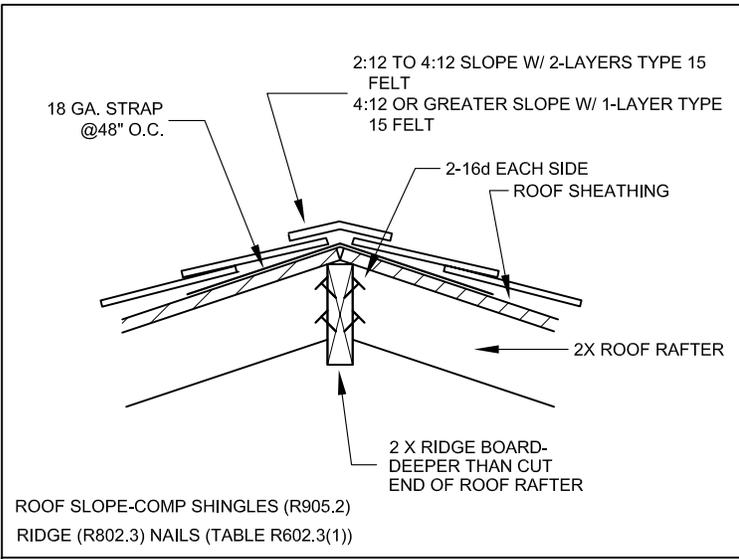
- Notes:
- Anchor bolts: 1/2" Ø x 10"; minimum 7" embedment, with minimum 2 anchor bolts per plate section, located not more than 12" or less than 4" from each end of the section.
 - All foundation plates or sills and sleepers on a concrete or masonry slab, which is in direct contact with earth, and sills that rest on concrete or masonry foundations, shall utilize preservative treated wood (AWPA U1 & field-cut ends, notches and drilled holes shall be field treated (AWPA M4).
 - Minimum concrete Strength: 2500psi
 - Bearing walls and braced wall panels require continuous footings.
 - Soil report is required if the proposed construction is located in a liquefaction, landslide, Alquist-Priolo, Sierra Madre or other earthquake fault zone.
 - Where interior walls are shear wall panels, wall framing and sheathing shall extend to the roof sheathing.
 - Under floor spaces shall be ventilated by openings into the under-floor space walls. Such openings shall have a net area of not less than 1 sq. ft. for each 150 sq. feet of under-floor area. Openings shall be located within 3 ft. of each corner of the building and provide cross ventilation. The openings shall be approximately equally distributed along the length of at least two sides. Corrosion resistant mesh w/ 1/4" openings.
 - The net free ventilating area of enclosed attics & enclosed rafter spaces shall not be less than 1/150 of the space ventilated and shall have cross ventilation for each separate space.
 - For projects in Very High Fire Hazard Severity Zone (VHFHSZ): see VHFHSZ Plan Review List.
 - Provide a minimum of 1" airspace between insulation and the roof sheathing.
 - Exterior walls of dwellings and accessory structures closer than 5 ft. (non-sprinklered) / 3 ft. (sprinklered) to the property line shall be 1-hour fire-resistance-rated construction.
 - No openings other than approved foundation vents shall be permitted in the exterior walls of dwellings and accessory buildings where the exterior walls are less than 3-ft. to the property line.
 - The area of exterior wall openings of non-sprinklered dwellings and accessory buildings located ≥ 3-ft. and < 5-ft. to the property line shall be limited to 25% of the wall area. The area of exterior wall openings is unlimited when exterior walls are located ≥ 5-ft. for non-sprinklered buildings and ≥ 3-ft. for sprinklered buildings.
 - Footings on or adjacent to slopes shall meet the requirements of Section R403.1.7.
 - Exterior plaster (stucco) walls shall be provided with corrosion-resistant weep screeds.

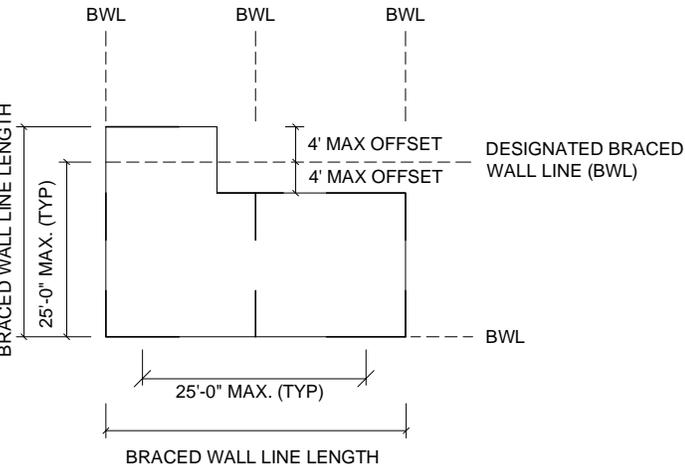
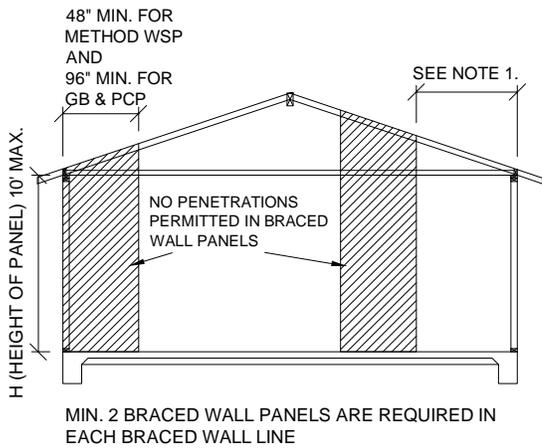
ROOF RAFTER SPANS (DF-LARCH #2) Dead load 10 psf / Live load 20 psf (Ceiling attached to rafters, L/Δ = 240) [Table R802.5.1(2)]			CEILING JOIST SPANS (DF-LARCH #2) [Table R802.4(1) & R802.4(2)]			
Rafter Size	Spacing	Allowable span	Joist Size	Spacing	Allowable span	Allowable span
					Dead load 5 psf/ Live load 10 psf	Dead load 10 psf/ Live load 20 psf
2x6	24"	11'-9"	2x4	24"	9'-10"	7'-2"
	16"	14'-1"		16"	11'-3"	8'-9"
	12"	15'-6"		12"	12'-5"	9'-10"
2x8	24"	14'-10"	2x6	24"	14'-10"	10'-6"
	16"	18'-2"		16"	17'-8"	12'-10"
	12"	20'-5"		12"	19'-6"	14'-10"
2x10	24"	18'-2"	2x8	24"	18'-9"	13'-3"
	16"	22'-3"		16"	23'-0"	16'-3"
	12"	25'-8"		12"	25'-8"	18'-9"
2x12	24"	21'-0"	2x10	24"	22'-11"	16'-3"
	16"	25'-9"		16"	26'-0"	19'-10"
	12"	26'-0"		12"	26'-0"	22'-11"

FLOOR JOIST SPANS (DF-LARCH #2) Dead load 10 psf / Live load 40 psf [Table R502.3.1(2)]			GIRDER AND HEADER SPANS FOR EXTERIOR BEARING WALLS (DF-LARCH #2) [Table R502.5(1)] NJ = Number of jacks studs required to support each end.			RAFTER TIE CONNECTIONS Roof live load 20 psf [(Table R802.5.1(9))] <small>Required number of 16d common nails per connection, wood members shall be of sufficient size to prevent splitting due to nailing. Split members shall be removed and replaced.</small>				
Joist size	Spacing	Allowable span	Size	20' Building width	28' Building width	RAFTER SLOPE	TIE SPACING	ROOF SPAN(FT.)		
								12	20	28
2x6	24" 16" 12"	8'-1" 9'-9" 10'-9"	2-2x6	5'-5" w/ 1 NJ	4'-8" w/ 1 NJ	3:12	12	4	6	8
			2-2x8	6'-10" w/ 1 NJ	5'-11" w/ 2 NJ			5	8	10
			2-2x10	8'-5" w/ 2 NJ	7'-3" w/ 2 NJ			7	11	15
			2-2x12	9'-9" w/ 2 NJ	8'-5" w/ 2 NJ			8	10	14
2x8	24" 16" 12"	10'-3" 12'-7" 14'-2"	GIRDER AND HEADER SPANS FOR INTERIOR BEARING WALLS (DF-LARCH #2) [Table R502.5(2)] NJ = Number of jacks studs required to support each end.			4:12	12	3	5	6
			2-2x6	4'-6" w/ 1 NJ	3'-11" w/ 1 NJ			4	6	8
			2-2x8	5'-9" w/ 1 NJ	5'-0" w/ 2 NJ			5	8	12
			2-2x10	7'-0" w/ 2 NJ	6'-1" w/ 2 NJ			6	8	12
2x10	24" 16" 12"	12'-7" 15'-5" 17'-9"	2-2x6	4'-6" w/ 1 NJ	3'-11" w/ 1 NJ	5:12	12	3	4	5
			2-2x8	5'-9" w/ 1 NJ	5'-0" w/ 2 NJ			4	5	6
			2-2x10	7'-0" w/ 2 NJ	6'-1" w/ 2 NJ			5	6	7
			2-2x12	8'-1" w/ 2 NJ	7'-0" w/ 2 NJ			6	7	8
2x12	24" 16" 12"	14'-7" 17'-10" 20'-7"	2-2x6	4'-6" w/ 1 NJ	3'-11" w/ 1 NJ	5:12	12	3	4	5
			2-2x8	5'-9" w/ 1 NJ	5'-0" w/ 2 NJ			4	5	6
			2-2x10	7'-0" w/ 2 NJ	6'-1" w/ 2 NJ			5	6	7
			2-2x12	8'-1" w/ 2 NJ	7'-0" w/ 2 NJ			6	7	8

ALLOWABLE SPANS AND LOADS FOR WOOD STRUCTURAL PANELS FOR ROOF & SUBFLOOR SHEATHING (Dead load 10 psf; Panel continuous over two or more spans w/ long dimension perpendicular to supports; Applies to panels 24" or wider) [Table R503.2.1.1(1)]						
Sheathing		Roof				Subfloor
Span rating Roof / floor span	Min. panel thickness (in.)	Max. span (in.)		Load (psf)		Max. span (in.) Panel edges with tongue and groove joints or with blocking
		Edge support (2x blocking)	No edge support	Total load	Live load	
24/0	3/8	24	20	40	30	0
24/16	7/16	24	24	50	40	16
32/16	15/32, 1/2	32	28	40	30	16
40/20	19/32, 5/8	40	32	40	30	20
48/24	23/32, 3/4	48	36	45	35	24

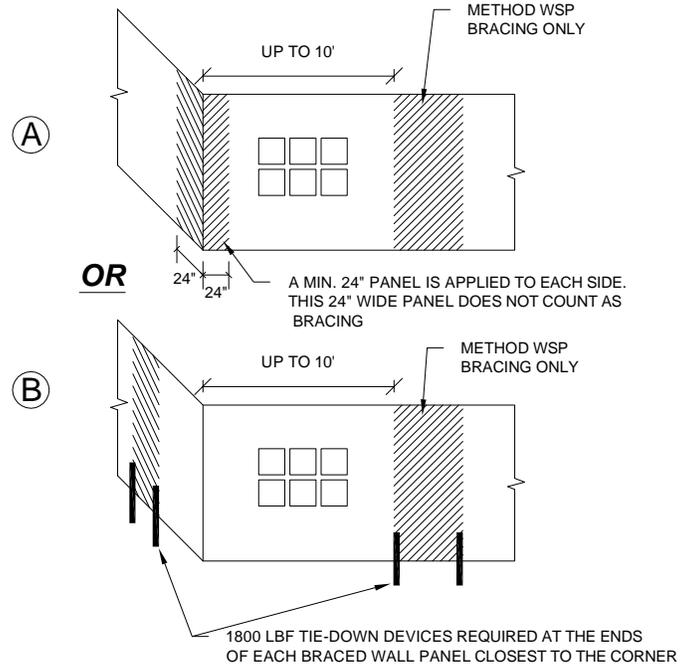
FASTENER SCHEDULE [Table R602.3(1)]			
Connection	Roof	Fastener	Remarks
Blocking between joists or rafters to top plate		3-8d (2-1/2" x 0.113")	Toe nail
Ceiling joists to plate		3-8d (2-1/2" x 0.113")	Toe nail
Ceiling joists not attached to parallel rafter, laps over partitions		3-10d (3" x 0.128")	Face nail
Rafter to plate		2-16d (3-1/2" x 0.135")	Toe nail
Rafter or roof truss to plate		3-16d box nail (3-1/2" x 0.135") or 3-10d common nails (3" x 0.148")	Toe nail
Roof rafter to ridge, valley or hip rafters:			
Toe nail		4-16d (3-1/2" x 0.135")	
Face nail		3-16d (3-1/2" x 0.135")	
	Wall		
Built-up corner studs		10d (3" x 0.128")	face nail 24" o.c.
Abutting studs at intersecting wall corners		16d (3-1/2" x 0.135")	face nail 12" o.c.
Built-up header, two pieces with 1/2" spacer		16d (3-1/2" x 0.135")	16" o.c. along each edge
Continued header, two pieces		16d (3-1/2" x 0.135")	16" o.c. along each edge
Continuous header to stud		4-8d (2-1/2" x 0.113")	Toe nail
Double studs		10d (3" x 0.128")	Face nail 24" o.c.
Double top plates		10d (3" x 0.128")	Face nail 24" o.c.
Double top plates, min. 48 inch offset of end joints		8-16d (3-1/2" x 0.135")	Face nail in lapped area
Sole plate to joist or blocking		16d (3-1/2" x 0.135")	Face nail 16" o.c.
Sole plate to joist or blocking at braced wall panels		3-16d (3-1/2" x 0.135")	16" o.c.
Stud to sole plate		3-8d (2-1/2" x 0.113") or 2-16d (3-1/2" x 0.135")	Toe nail
Top or sole plate stud		2-16d (3-1/2" x 0.135")	End nail
Top plates, lap at corners and intersections		2-10d (3" x 0.128")	Face nail
	Floor		
Joist to sill or girder		3-8d (2-1/2" x 0.113")	Toe nail
Rim joist to top plate (roof application also)		8d (2-1/2" x 0.113")	Toe nail 6" o.c.
Built-up girders and beams, 2-inch lumber layers		10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
Ledger strip supporting joists or rafters		3-16d (3-1/2" x 0.135")	At each joist or rafter





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:



- MIXING BRACING METHODS WITHIN A BRACED WALL LINE IS NOT PERMITTED.

**INTERMITTENT BRACING METHODS BASED ON SEISMIC DESIGN CATEGORY
(AS A FUNCTION OF BRACED WALL LINE LENGTH)^a**

ROOF/CEILING DEAD LOAD = 15 PSF WALL HEIGHT = 10 FT FLOOR DEAD LOAD = 10 PSF BRACED WALL LINE SPACING = 25 FT SOIL CLASS D			MINIMUM TOTAL LENGTH (feet) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE ^e	
Seismic Design Category (SDC)	Story Location	Braced Wall Line Length	Methods GB ^b and PCP ^c	Method WSP ^d
SDC D ₀ or D ₁		10	8	4
		20	12	4
		30	18	6
		40	24	8
		50	30	10
SDC D ₂		10	8	4
		20	16	5
		30	24	7.5
		40	32	10
		50	40	12.5

For SI: 1 foot = 304.8 mm, 1 pound per square foot = 47.89 Pa.

a. Based on Table R602.10.3(3) of the 2014 County of Los Angeles Residential Code.

b. GB = 1/2" minimum thickness gypsum board with 1 1/2" galvanized roofing nail or 1 1/4 screws, Type W or S for exterior sheathing, or 5d cooler nail, 0.086" diameter, 1 5/8" long, 15/64" head for interior sheathing. Maximum spacing of fasteners shall be at 7" on center, at panel edges including top and bottom plates. When Method GB panels are applied to only one face of a braced wall panel, the minimum total length of braced wall panel in the Table shall be doubled.

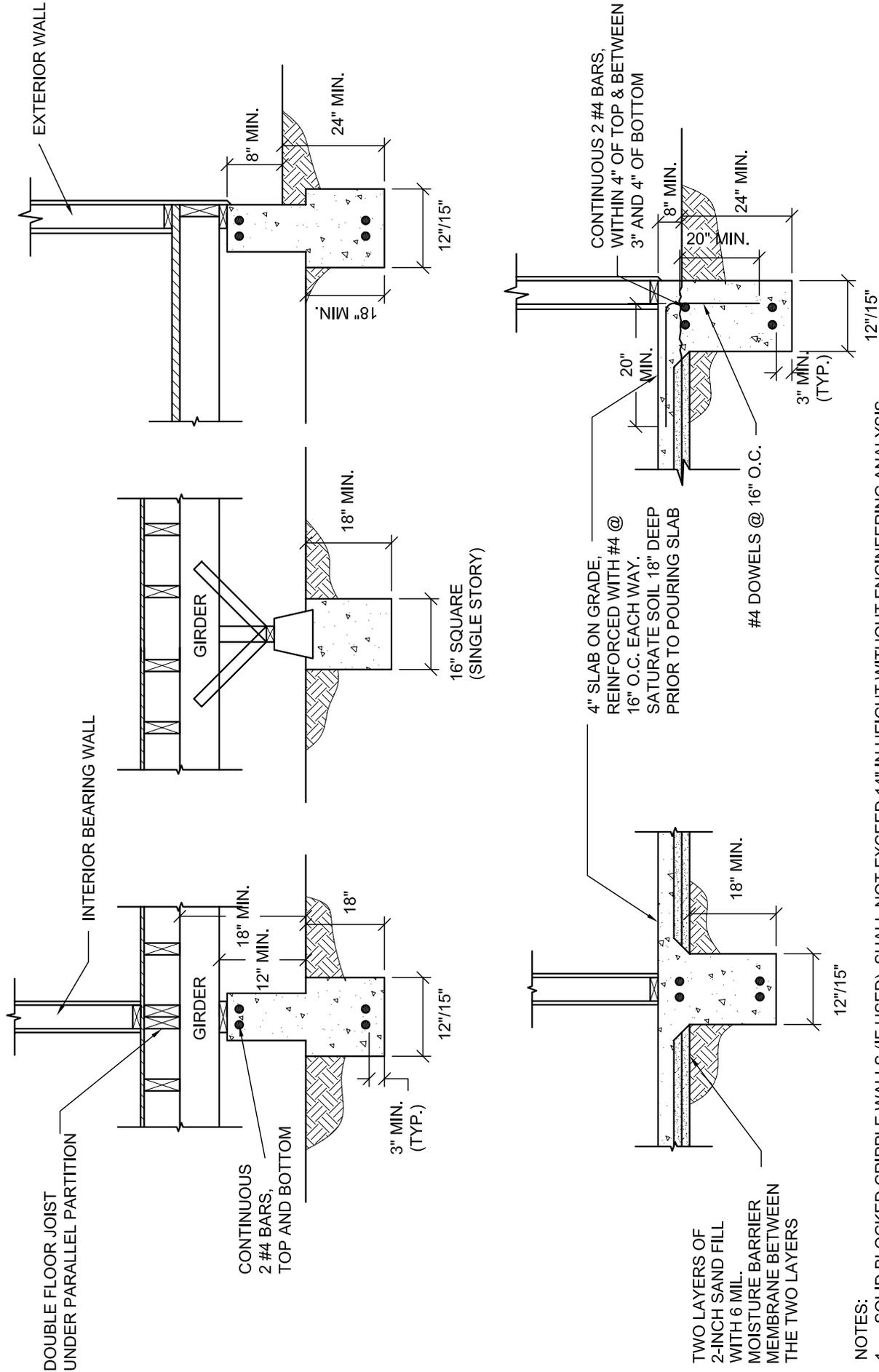
c. PCP = 7/8" minimum thickness portland cement plaster with 1 1/2", 11 gage, 7/16" head nails at 6" spacing. (For maximum 16" stud spacing only.) Gypsum wall board (1/2" minimum thickness) shall be installed on the side of the wall opposite the bracing material, except if the minimum total length of braced wall panel in the Table is multiplied by a factor of 1.5.

d. WSP = 15/32" minimum thickness wood structural panel with 8d common (2 1/2" x 0.131) nails at 6" spacing (panel edge) at 12" spacing (intermediate supports), 3/8" edge distance to panel edge. Gypsum wall board (1/2" minimum thickness) shall be installed on the side of the wall opposite the bracing material, except if the minimum total length of braced wall panel in the Table is multiplied by a factor of 1.5.

e. Method GB and PCP braced wall panel h/w ratio shall not exceed 1:1.



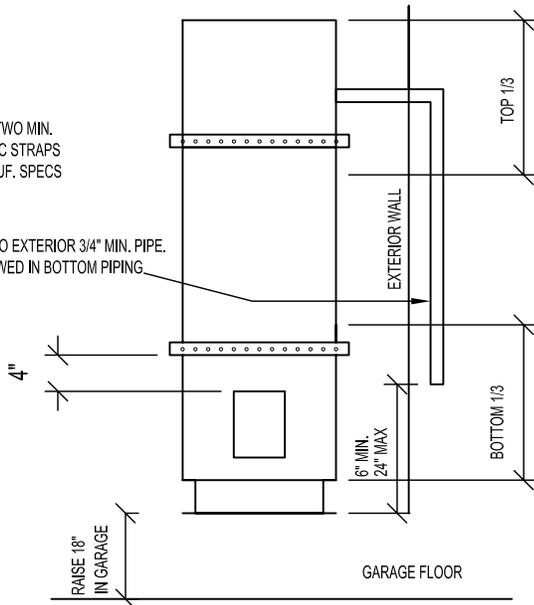
FOUNDATION SYSTEM ON EXPANSIVE SOIL FOR 1 OR 2 STORY R-3/ ACCESSORY U OCCUPANCIES



- NOTES:
1. SOLID BLOCKED CRIPPLE WALLS (IF USED), SHALL NOT EXCEED 14" IN HEIGHT WITHOUT ENGINEERING ANALYSIS.
 2. PERIMETER WALLS, INTERIOR BEARING WALLS AND POSTS SUPPORTED ON CONTINUOUS FOUNDATIONS.
 3. 12"/15" - MIN. FOOTING FOR SUPPORTING ONE AND TWO FLOORS RESPECTIVELY.
 4. SHEAR TRANSFER DETAILS AND OTHER REQUIREMENTS NOT SHOWN FOR CLARITY.

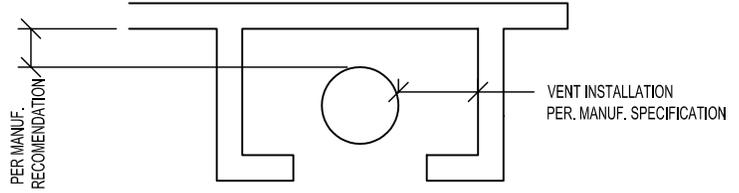
SEISMIC STRAPS: TWO MIN.
APPROVED SEISMIC STRAPS
APPLIED PER MANUF. SPECS

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

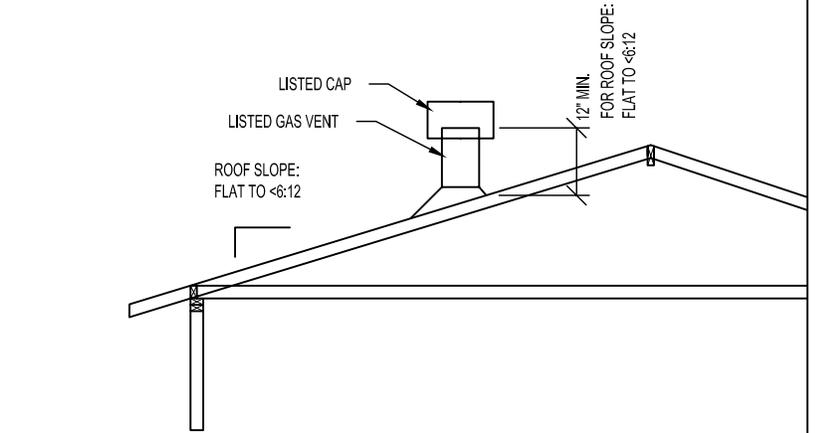


NOTE: NO GAS-FIRED WATER HEATER ALLOWED IN BEDROOMS, BATHROOMS, CLOTHES CLOSETS, OR ANY SPACE OPENING INTO A BEDROOM OR BATHROOM.

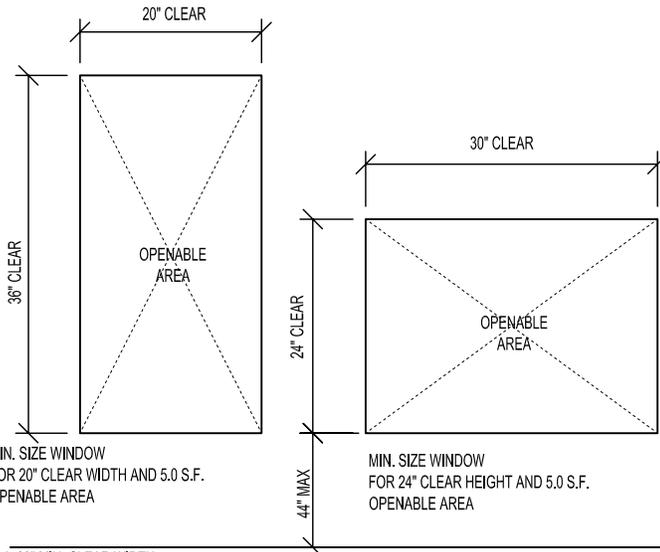
WATER HEATER (MC307.1, PC508.2)



VENT INSTALLATION
PER. MANUF. SPECIFICATION



VENT (PC510.6.2)



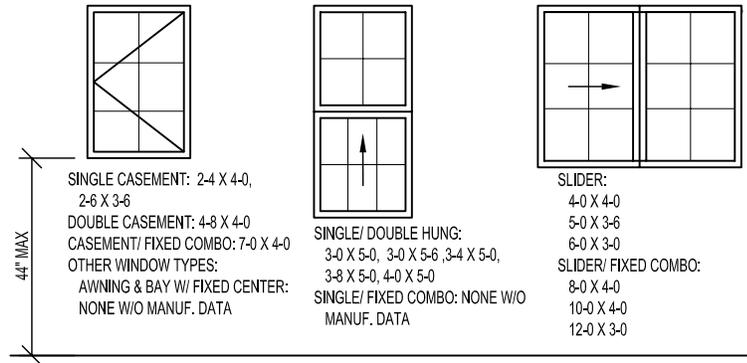
MIN. SIZE WINDOW
FOR 20" CLEAR WIDTH AND 5.0 S.F.
OPENABLE AREA

MIN. SIZE WINDOW
FOR 24" CLEAR HEIGHT AND 5.0 S.F.
OPENABLE AREA

FLOOR LEVEL

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)

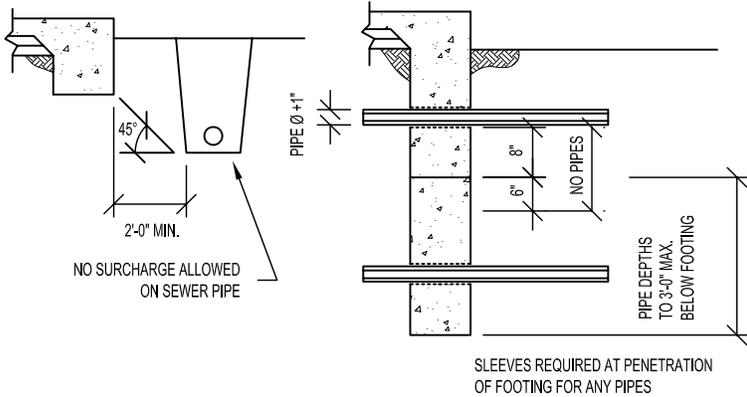


SINGLE CASEMENT: 2-4 X 4-0,
2-6 X 3-6
DOUBLE CASEMENT: 4-8 X 4-0
CASEMENT/ FIXED COMBO: 7-0 X 4-0
OTHER WINDOW TYPES:
AWNING & BAY W/ FIXED CENTER:
NONE W/O MANUF. DATA

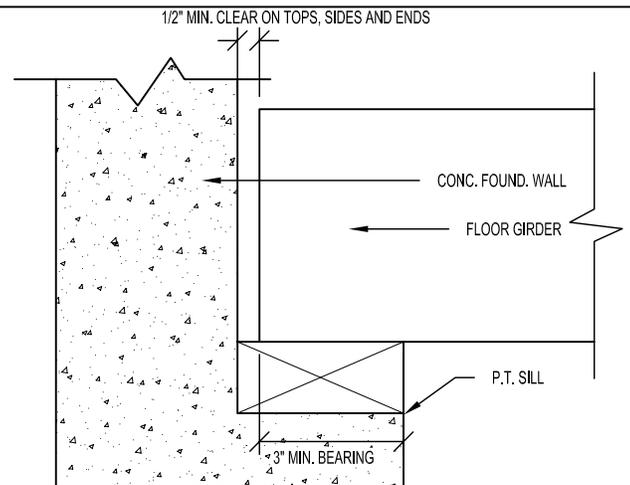
SINGLE/ DOUBLE HUNG:
3-0 X 5-0, 3-0 X 5-6, 3-4 X 5-0,
3-8 X 5-0, 4-0 X 5-0
SINGLE/ FIXED COMBO: NONE W/O
MANUF. DATA

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.



TRENCHES AT FOOTINGS



GIRDER (R317.1 / R502.6)

