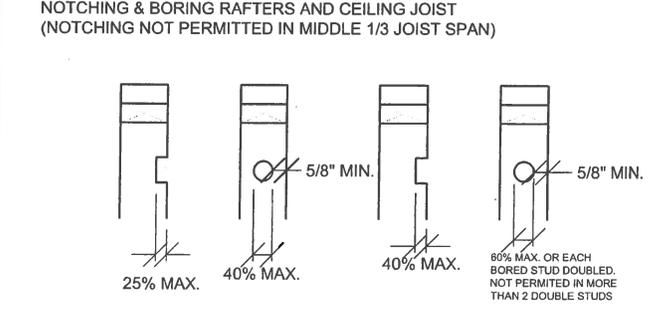
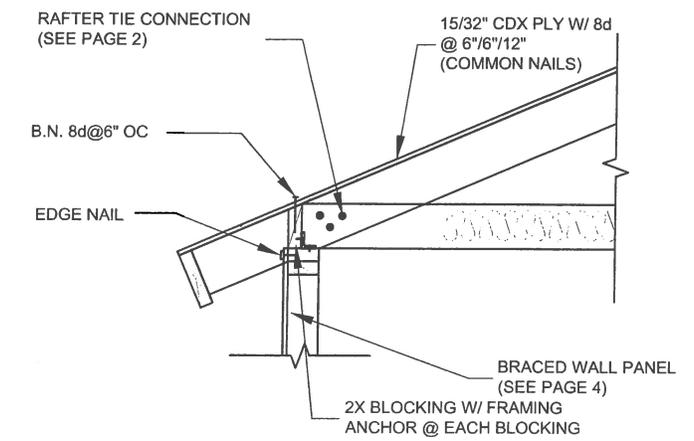
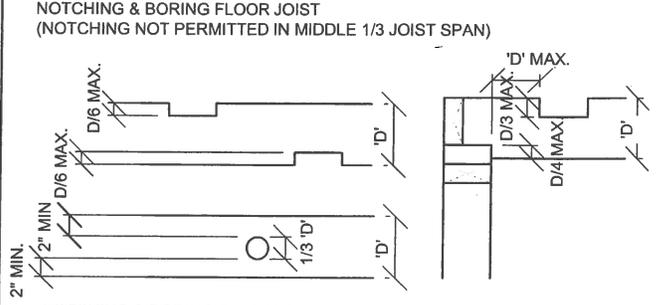
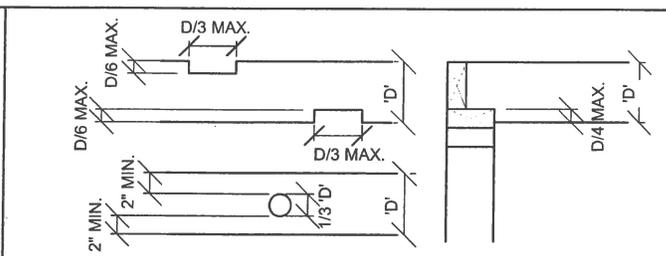
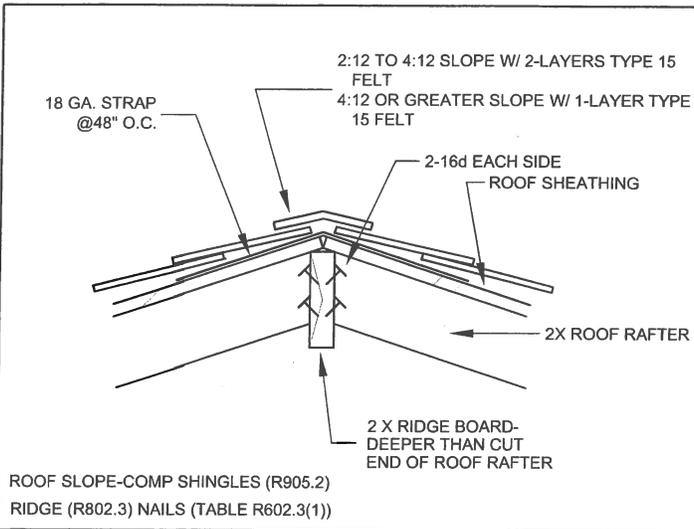


ROOF RAFTER SPANS (DF-LARCH #2) Dead load 10 psf / Live load 20 psf (Ceiling attached to rafters, L/Δ = 240) [Table R802.5.1(2)]			CEILING JOIST SPANS (DF-LARCH #2) [Table R802.4(1) & R802.4(2)]			
Rafter Size	Spacing	Allowable span	Joist Size	Spacing	Allowable span	
					Dead load 5 psf/ Live load 10 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"

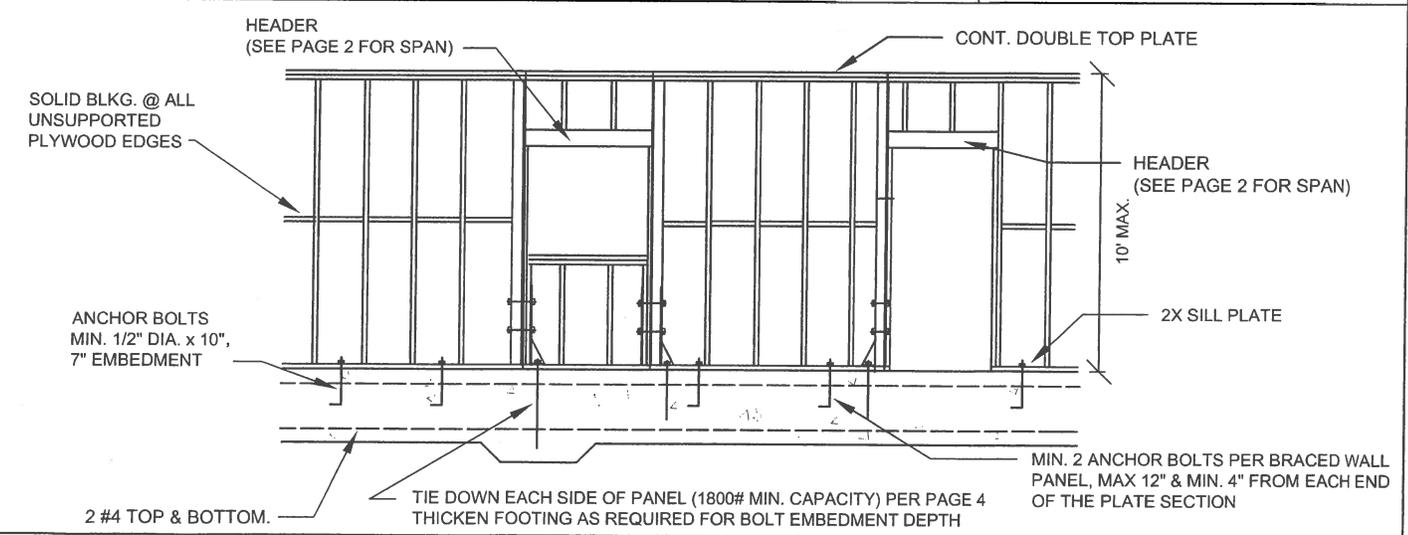
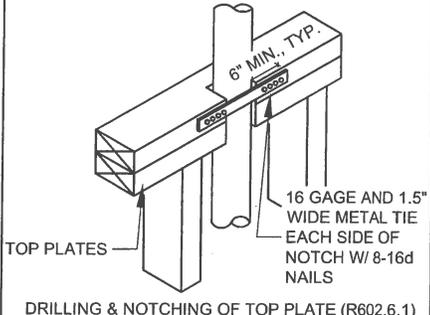
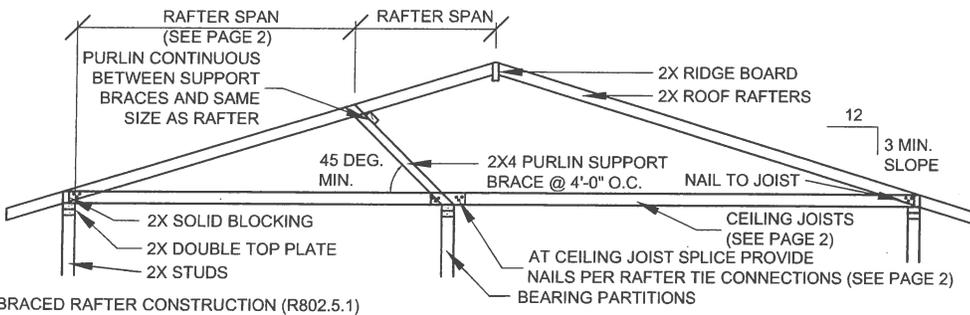
FLOOR JOIST SPANS (DF-LARCH #2) Dead load 10 psf / Live load 40 psf [Table R502.3.1(2)]			GIRDER AND HEADER SPANS FOR EXTERIOR BEARING WALLS (DF-LARCH #2) [Table R502.5(1)] NJ = Number of jacks studs required to support each end.			RAFTER TIE CONNECTIONS Roof live load 20 psf [(Table R802.5.1(9)) Required 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.										
Joist size	Spacing	Allowable span	Size	20' Building width	28' Building width	RAFTER SLOPE	TIE SPACING	ROOF SPAN(FT.)								
								12	20	28						
2x6	24"	8'-1"	2-2x6	5'-5" w/ 1 NJ	4'-8" w/ 1 NJ	3:12	12	4	6	8						
	16"	9'-9"	2-2x8	6'-10" w/ 1 NJ	5'-11" w/ 2 NJ			5	8	10						
	12"	10'-9"	2-2x10	8'-5" w/ 2 NJ	7'-3" w/ 2 NJ			7	11	15						
2x8	24"	10'-3"	2-2x12	9'-9" w/ 2 NJ	8'-5" w/ 2 NJ			4:12	12	3	5	6				
	16"	12'-7"	3-2x12	12'-2" w/ 2 NJ	10'-7" w/ 2 NJ					4	6	8				
	12"	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.							5:12	16	3	4	5		
2x10	24"	12'-7"	Size	20' Building width	28' Building width	24	4					7	9			
	16"	15'-5"												2-2x6	4'-6" w/ 1 NJ	3'-11" w/ 1 NJ
	12"	17'-9"	2-2x8	5'-9" w/ 1 NJ	5'-0" w/ 2 NJ											
2x12	24"	14'-7"	2-2x10	7'-0" w/ 2 NJ	6'-1" w/ 2 NJ			12	16					3	5	6
	16"	17'-10"	2-2x12	8'-1" w/ 2 NJ	7'-0" w/ 2 NJ											
	12"	20'-7"	3-2x12	10'-2" w/ 2 NJ	8'-10" w/ 2 NJ											

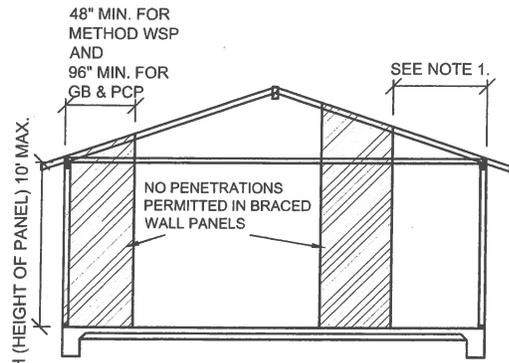
ALLOWABLE SPANS AND LOADS FOR WOOD STRUCTURAL PANELS FOR ROOF & SUBFLOOR SHEATHING (Dead load 10 psf; Panel continuous over two or more spans w/ long dimension perpendicular to supports; Applies to panels 24" or wider) [Table R503.2.1.1(1)]						
Sheathing		Roof				Subfloor
Span rating	Min. panel thickness (in.)	Max. span (in.)		Load (psf)		Max. span (in.)
		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	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
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")	24" 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	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

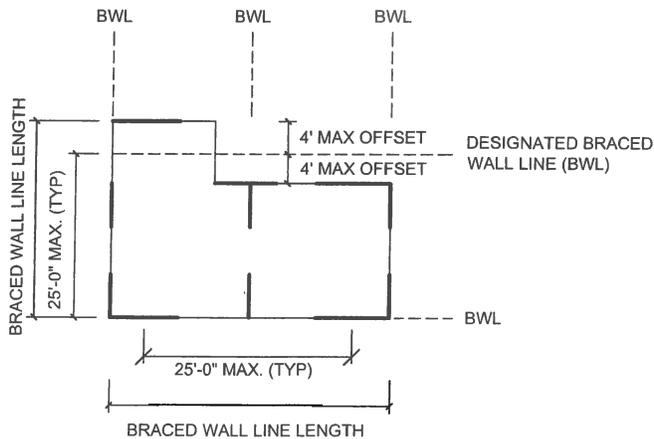


NOTCHING & BORING:
FLOOR JOISTS (R502.8.1)
RAFTERS/CEILING (R802.7.1)
WALL STUDS (R602.6)





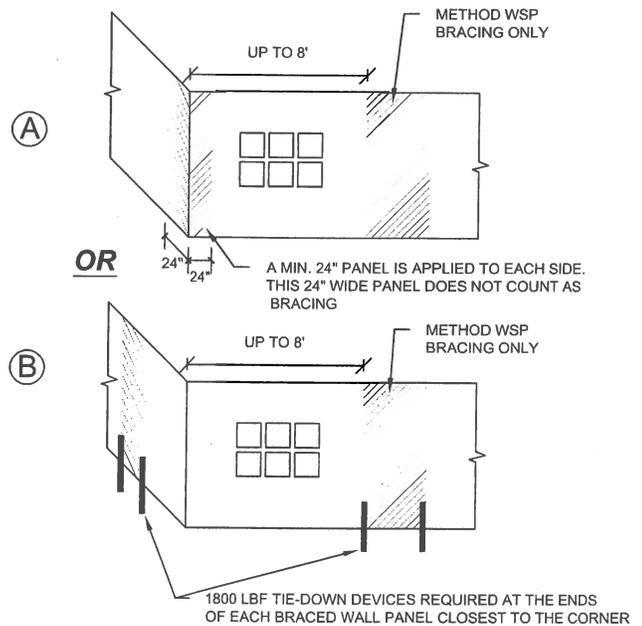
MIN. 2 BRACED WALL PANELS ARE REQUIRED IN EACH BRACED WALL LINE



NOTES:

1. 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:



2. 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

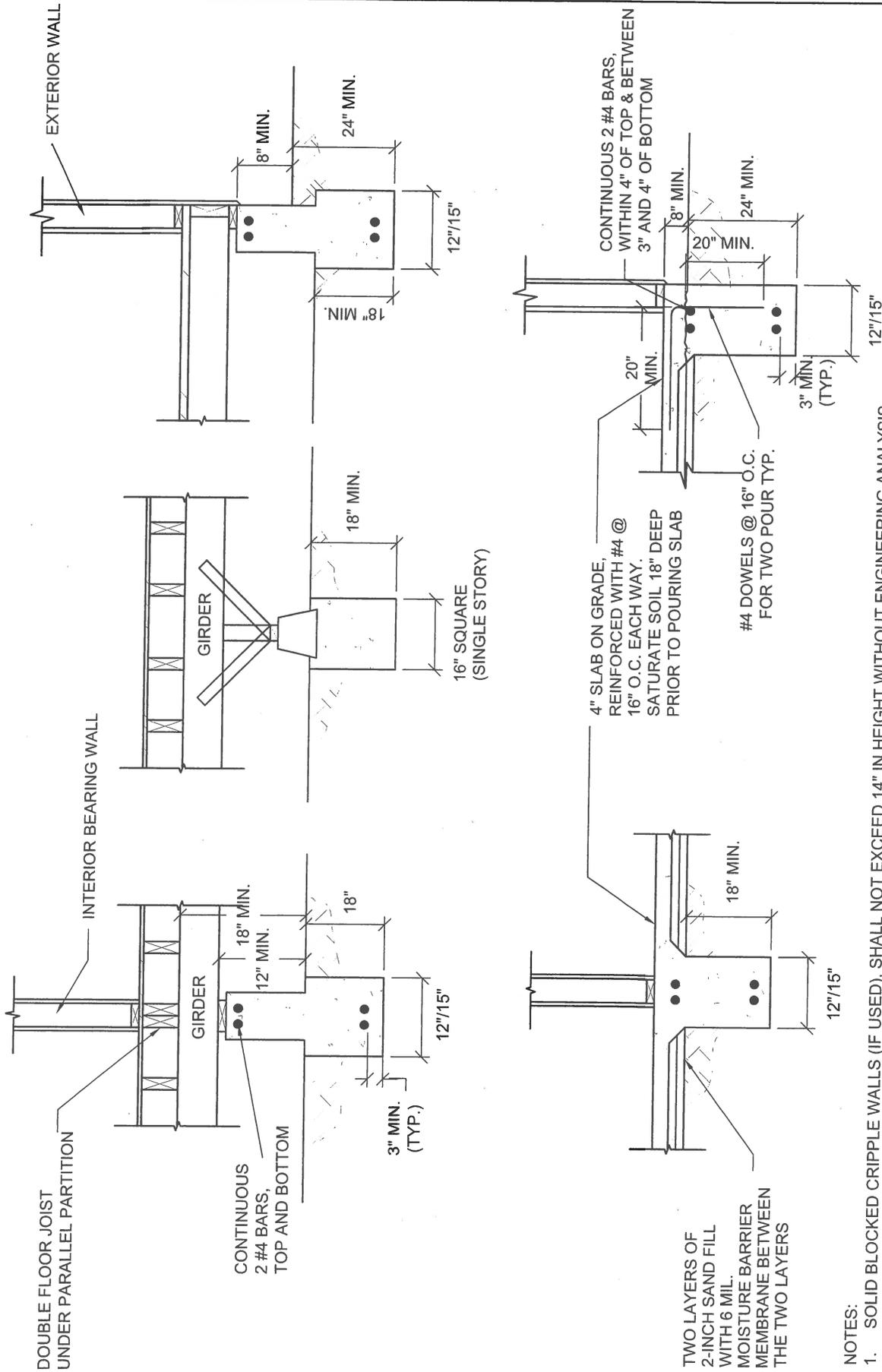
Seismic Design Category (SDC)	Story Location	Braced Wall Line Length	Methods GB ^b and PCP ^c	Method WSP ^d
SDC D ₀ or D ₁		10	8	4
		20	12	4
		30	18	6
		40	24	8
		50	30	10
SDC D ₂		10	8	4
		20	16	5
		30	24	7.5
		40	32	10
		50	40	12.5

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

- Based on Table R602.10.1.2(2) of the 2011 County of Los Angeles Residential Code.
- 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.
- 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.
- 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.
- 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

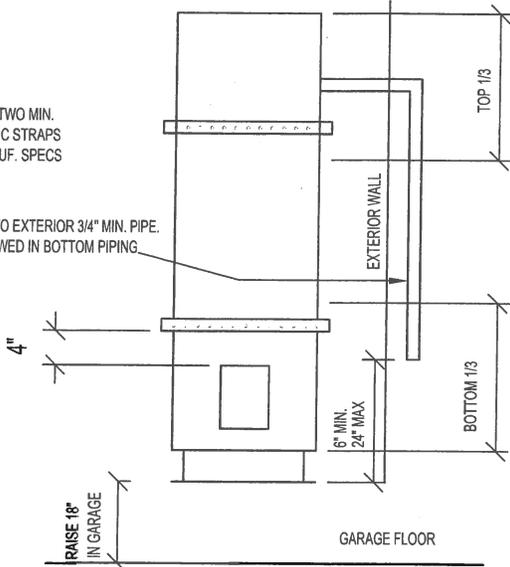


NOTES:

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.

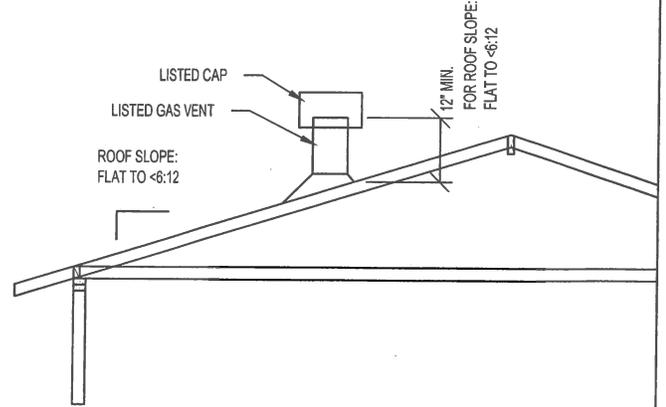
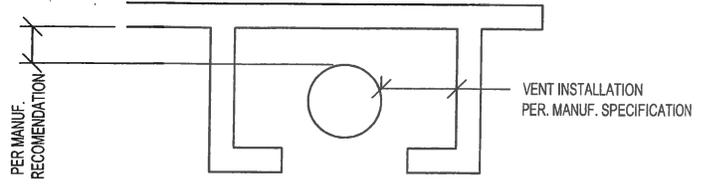
SEISMIC STRAPS: TWO MIN. APPROVED SEISMIC STRAPS APPLIED PER MANUF. SPECS

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

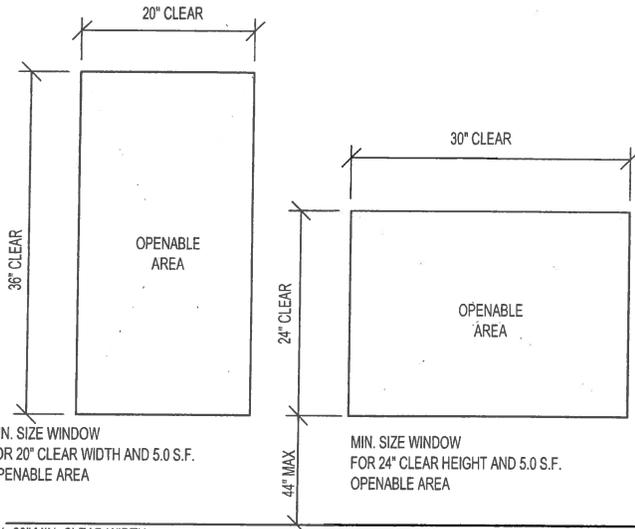


NOTE: NO GAS-FIRED WATER HEATER ALLOWED IN BEDROOMS, BATHROOMS, CLOTHES CLOSETS, OR ANY SPACE OPENING INTO A BEDROOM OR BATHROOM.

WATER HEATER (MC307.1, PC508.2)



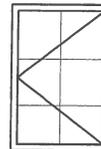
VENT (PC510.6.2)



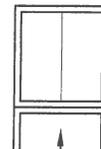
MIN. SIZE WINDOW FOR 20" CLEAR WIDTH AND 5.0 S.F. OPENABLE AREA

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

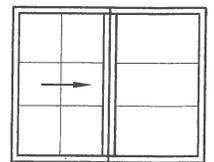
FLOOR LEVEL



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

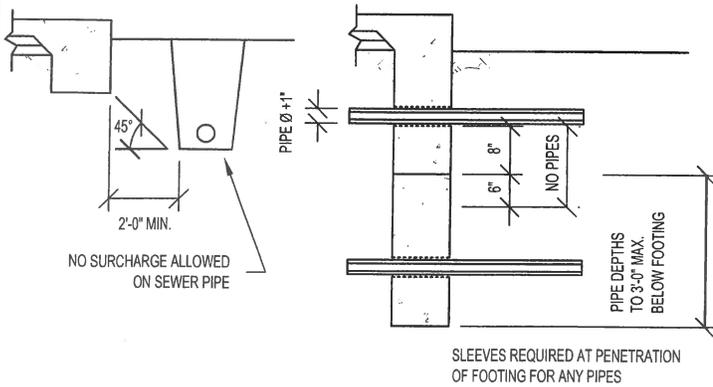


SLIDER:
4-0 X 4-0
5-0 X 3-6
6-0 X 3-0
SLIDER/ FIXED COMBO:
8-0 X 4-0
10-0 X 4-0
12-0 X 3-0

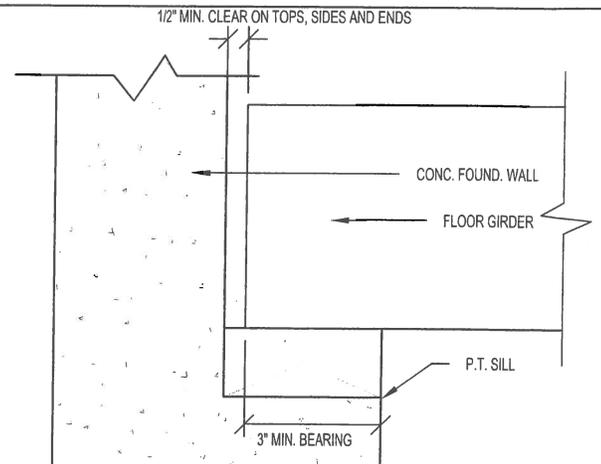
NOTE: SIZES ARE TAKEN FROM DATA SUPPLIED BY WINDOW MANUFACTURERS. HOWEVER, THESE ARE GENERAL DIMENSIONS AND MUST BE VERIFIED WITH ACTUAL WINDOWS INSTALLED TO MEET MINIMUM EGRESS REQUIREMENTS.

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)



TRENCHES AT FOOTINGS



GIRDER (R317.1 / R502.6)

EMERGENCY ESCAPE /
RESCUE WINDOW (SEE PAGE 6)

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.

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 AND SMOKE ALARMS ARE REQUIRED FOR ALTERATIONS, REPAIRS OR ADDITIONS WHERE A PERMIT VALUATION EXCEEDS \$1,000 (R314 & R315):
 - 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)

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 (PC 411.7)

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

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

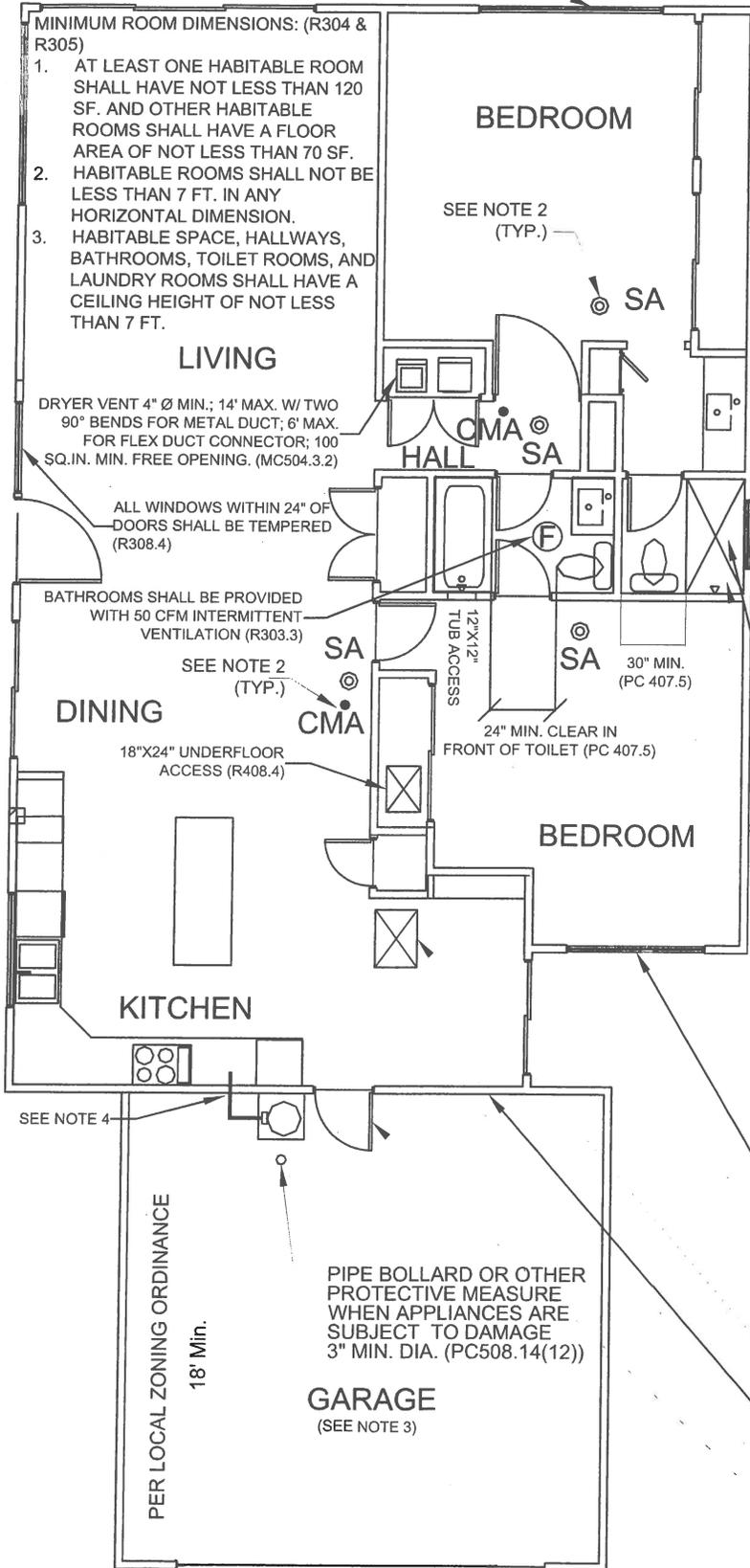
GLAZING SHALL MEET THE FOLLOWING:
U-FACTOR = 0.40 MAX, SHGC - 0.40 MAX.
GLAZING AREA LIMITS:
20% MAX OF TOTAL FLOOR AREA.
5% MAX OF THAT CAN BE WEST FACING.
(CLIMATE ZONE 8, 9, 14 ONLY)
OTHERWISE PROVIDE TITLE 24 ENERGY CALCS.

22" X 30" ATTIC ACCESS OR LARGER. MIN 30"X30" PLATFORM. (R807.1, MC 904.11)

1/2" GYPSUM BOARD TO ROOF LINE (TABLE R302.6)

DOOR SHALL BE A SELF-CLOSING & SELF-LATCHING 1-3/8" THICK SOLID WOOD OR HONEYCOMB CORE STEEL DOOR OR 20-MIN. FIRE RATED DOOR. (R302.5.1)

NOTE: THE GARAGE SHALL NOT OPEN INTO A SLEEPING ROOM.



RESIDENTIAL REQUIREMENTS (SEE NOTE 1)