44933 N. Fern Avenue Lancaster, CA 93534 (661)723-6144 www.cityoflancasterca.org

WOOD FRAME PRESCRIPTIVE PROVISIONS FOR ONE-STORY RESIDENTIAL WOOD CONSTRUCTION

(FORMERLY TYPE V)

The purpose of this Wood Frame Prescriptive Provisions (WFPP) Information Bulletin is to assist owners, builders and others to meet the general requirements and specifications prescribed in the 2022 California Residential Code (CRC) for building one- and two-family dwellings, townhouses, and attached and detached Accessory Dwelling Units (ADUs) not more than one story in height with light frame wood construction. This document is not applicable for walls and foundations where solid brick or stone veneers occur.

Light-frame wood frame construction is a type of construction where vertical and horizontal structural elements are primarily formed by a system of repetitive wood framing members. It is the least restrictive construction type permitted by the CRC and CBC. The WFPP Information Bulletin is for information and reference only and is not a substitute for accurate construction documents (i.e., drawings, plan specifications, etc.) prepared for each proposed construction project. Additional construction documents may be required when the scope of work exceeds the limits of light frame wood construction as prescribed by the CRC.

When portions of a building or structure are constructed of other than light-frame wood construction, exceed the limits of this WFPP Information Bulletin, or as required by other local ordinances, these portions and the supporting load path shall be designed by a registered design professional licensed in the State of California. This WFPP Information Bulletin may not be suitable in all cases. Where the proposed construction is located on a site with a slope steeper than 10% or has adverse soil conditions (e.g., expansive soil, liquefaction, flood hazard, etc.), a registered design professional licensed in the State of California should be consulted. The use of this WFPP Information Bulletin is permitted at the discretion of the Building Official on a case-by-case basis.

An automatic fire sprinkler system shall be installed in new one and two-family dwellings and townhouses per CRC R313.2. Installation of a fire sprinkler system is also required in additions and alterations where the main residence is sprinklered and for all additions over 1,200 square feet per LA County Fire Department.

All work must comply with the California Energy Code (CEC) requirements for the climate zone 14.

For new construction and additions/alterations that increase the conditioned space, a minimum of 65-percent of construction and demolition waste shall be recycled or salvaged for reuse per 4.408.1 of the California Green Building Standards Code (CALGreen). Refer to the Lancaster Municipal Code for further requirements. For newly constructed one- or two- family dwellings with an attached private garage, provide accommodation for future installation and use of an electric vehicle charger per 4.106.4.1 of CALGreen.

For newly constructed one or two-family dwellings, a photo voltaic (9PV) system shall be installed per 150.1(c)14 of the California Energy Code. A separate permit is required for PV systems.

DPW0551 03-23 PAGE 1 OF 9

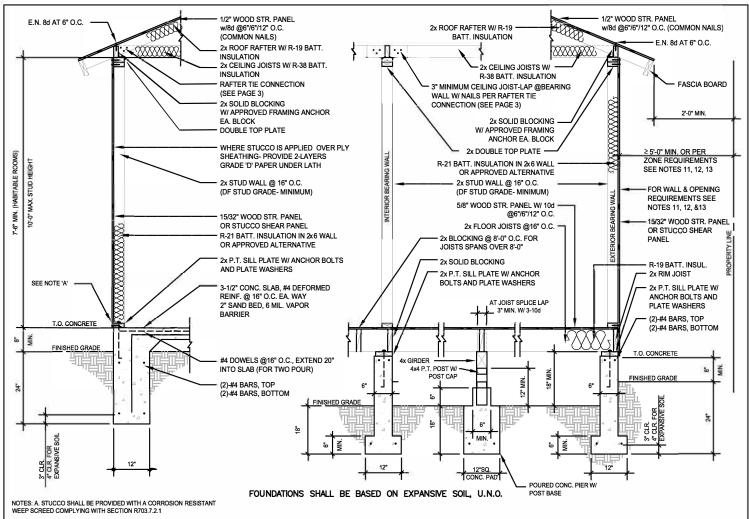


CITY OF LANCASTER BUILDING AND SAFETY

WOOD FRAME PRESCRIPTIVE PROVISIONS FOR ONE STORY RESIDENTIAL CONSTRUCTION (FORMERLY TYPE V)

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 NOT A SUBSTITUTE FOR ACCURATE DRAWINGS PREPARED FOR EACH CONSTRUCTION PROJECT



WALL SECTION: SLAB-ON-GRADE CONSTRUCTION

WALL SECTION: RAISED FLOOR CONSTRUCTION

NOTES:

- Anchor bolts: ½" x 10" embedded 7" and spaced maximum 6' with 0.229"x3"x3" plate washers, minimum 2 anchor bolts per piece, located not more than 12" or less than 7 bolt diameters from each end piece.

 All foundation plates or sills and sleepers on a concrete or masonry slab, which is in direct contact with the 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 AWWPA M4. Fasteners, including nuts and washers, in preservative treated wood or fire-retardant wood shall be hot-dipped, zinc-coated galvanized steel or stainless steel.
- Minimum concrete strength: 2,500 psi.
- Exterior walls, bearing walls, and braced wall panels require continuous footings (R403.1).
- Soils report is required if the proposed construction is located in a liquefaction, landslide, or earthquake fault zone.
- Where interior walls are shear walls, wall framing and sheathing shall shall extend to the roof sheathing.
- Under floor areas shall be ventilated by openings into the under-floor pace walls. Such openings shall have a net area of not less than 1 square foot for each 150 square 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 edge of at least two sides. Corrosion resistant mesh w/k^* 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.
- 9. Projects located in the Very High Fire Hazard Security Zone (VHFHSZ) must also incorporate the requirements of Section R337 into the design. 10. Provide a minimum of 1" airspace between the insulation and roof sheathing.
- 11. Exterior walls of dwellings and accessory structures closer than 5 ft. (non-sprinklered)/3 ft. (sprinklered) to the property line shall be 1-hr 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.
- 13. 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. (Tables R302.1(1) & R302.1(2))
- 14. Footings on or adjacent to slopes shall meet the requirements of Section R403.1.7.
- 15. Exterior plaster (stucco) walls shall be provided with corrosion-resistant weep screeds (Section R703.7.2.1).
- 16. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.

		Cit	y of Lanca	ster∙Wo	ood Frame Pres	criptive Provisi	ons		
ALLOWABLE SPANS FOR DF #2 ROOF RAFTERS (DF-LARCH) Dead Load 10 psf / Live Load 20 psf			ALLO'		FOR DF #2 CEILING JOIS [Table R802.5.1(1) & R802.	ALLOWABLE SPANS FOR DF #2 FLOOR JOISTS (DF-LARCH) Dead Load 10 psf / Live Load 40 psf			
(Ceiling attache	ed to rafters, L/∆ = 240)	[Table R802.4.1(2)]	CEILING JOIST		ALLOWABLE SPAN	ALLOWABLE SPAN ALLOWABLE SPAN		Δ = 360) [Table R502.3.1(2)]
RAFTER SIZE	SPACING	ALLOWABLE SPAN	SIZE	SPACING	DL 5 psf/ LL 10 psf (no storage)	DL 10 psf/ LL 20 psf (li ght storage)	FLOOR JOIST SIZE	SPACING	ALLOWABLE SPAN
	24"	11'-11"		24"	9'-10"	7'-3"		24"	8'-3"
2x6	16"	14'-1"	2x6	16"	11'-3"	8'-11"	2x6	16"	9'-9"
	12"	15'-6"		12"	12'-5"	9'-10"		12"	10'-9"
	24"	15'-1"		24"	15'-0"	10'-8"		24"	10'-5"
2x8	16"	18'-5"	2x8	16"	17'-8"	13'-0"	2x8	16"	12'-9"
	12"	20'-5"		12"	19'-6"	15'-0"		12"	14'-2"
	24"	18'-5"		24"	19'-1"	13'-6"		24"	12'-9"
2x10	16"	22'-6"	2x10	16"	23'-4"	16'-6"	2x10	16"	15'-7"
	12"	26'-0"		12"	25'-8"	19'-1"		12"	18'-0"
	24"	21'-4"		24"	23'-3"	16'-5"		24"	14'-9"
2x12	16"	26'-0"	2x12	16"	26'-0"	20'-2"	2x12	16"	18'-1"
	12"	26'-0"		12"	26'-0"	23'-3"		12"	20'-11"

ALLOW	ALLOWABLE SPANS FOR DF #2 HEADERS FOR EXTERIOR BEARING WALLS [Table R602.7(1)]									
SIZE	12' Bullding Width	NJ	24' Bullding Width	NJ	36' Bullding Width	NJ				
2-2x6	6'-0"	1	4'-7"	1	3'-10"	1				
2-2x8	7'-7"	1	5'-9"	2	4'-10"	2				
2-2x10	9'-0"	1	6'-10"	2	5'-9"	2				
2-2x12	10'-7"	2	8'-1"	2	6'-10"	2				
3-2x8	9'-5"	1	7'-3"	1	6'-1"	1				
3-2x10	11'-3"	1	8'-7"	2	7'-3"	2				
3-2x12	13'-2"	1	10'-1"	2	8'-6"	2				

a. Building width is measured perpendicular to ridge.

b. NJ = Number of jack studs required to support each end.

ALLOWABLE SPANS FOR DF #2 GIRDERS FOR EXTERIOR BEARING WALLS SUPPORTING ONE FLOOR ONLY [Table R602.7(1)]								
	PARTITIO	ONS (CENTER E	BEARING)	NO PAR	TITIONS (CLEA	R SPAN)		
SIZE	12' Building Width	24' Bu il ding Width	36' Building Width	12' Building Width	24' Building Width	36' Bu il ding Width		
2-2x6	4'-10"	3'-9"	3'-3"	4'-4"	3'-4"	2'-10"		
2-2x8	6'-1"	4'-10"	4'-1"	5'-6"	4'-3"	3'-7"		
2-2x10	7'-3"	5'-8"	4'-10"	6'-7"	5'-0"	4'-2"		
2-2x12	8'-6"	6'-8"	5'-8"	7'-9"	5'-11"	4'-11"		
3-2x8	7'-8"	6'-0"	5'-1"	6'-11"	5'-3"	4'-5"		
3-2x10	9'-1"	7'-2"	6'-1"	8'-3"	6'-3"	5'-3"		
3-2x12	10'-8"	8'-5"	7'-2"	9'-8"	7'-5"	6'-2"		

a. Building width is measured perpendicular to ridge.b. Minimum 4x post.

ALLOWABLE SPANS FOR DF #2 GIRDERS AND HEADERS FOR INTERIOR BEARING WALLS [Table R602.7(2)]

ι								
SIZE	12' Bullding Width	NJ	24' Bullding Width	NJ	36' Bullding Width	NJ		
2-2x6	6'-1"	1	4'-4"	1	3'-6"	1		
2-2x8	7'-9"	1	5'-5"	1	4'-5"	2		
2-2x10	9'-2"	1	6'-6"	2	5'-3"	2		
2-2x12	10'-9"	1	7'-7"	2	6'-3"	2		
3-2x8	9'-8"	1	6'-10"	1	5'-7"	1		
3-2x10	11'-5"	1	8'-1"	1	6'-7"	2		
3-2x12	13'-6"	1	9'-6"	2	7'-9"	2		

a. Building width is measured perpendicular to ridge.

b. NJ = Number of jack studs required to support each end.

RAFTER TIE CONNECTION							
Roof Live Load 20 psf [Table R802.5.2(1)]							

1100 E110 E000 E1 [1 000 100 E10 E1 17]									
	Minimum number of 16d common nails at rafter tie connection								
Rafter Slope	Tie Spacing	Roof Span (ft.)							
Natier Stope	(in.)	12	24	36					
	12	3	5	8					
3:12	16	4	7	10					
	24	5	10	15					
	12	3	4	6					
4:12	16	3	5	8					
	24	4	8	11					
	12	3	3	5					
5:12	16	3	4	6					
	24	3	6	9					

a. 10d common nails shall be permitted to be substituted for 16d common nails when the required number of nails is taken as
 1.2 time the number of 16d common nails, rounded up to the next full nail.

ALLOWABLE SPANS AND LOADS FOR WOOD STRUCTURAL PANEL SHEATHING AND SINGLE-FLOOR GRADES CONTINUOUS OVER TWO OR MORE SPANS WITH STRENGTH AXIS PERPENDICIJI AR TO SUPPORTS NOTE: APPLIES TO PANELS 24" OR WIDER IT able R503 2.1.1(1)

MORE SPANS WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS. NOTE: APPLIES TO PANELS 24" OR WIDER [Table RS03.2.1.1(1)]							
SHEA	THING		RC	OF		SUBFLOOR	
	MINIMUM NOMINAL			LOADS (psf at maximum span)		MAXIMUM SPAN (in.)	
SPAN RATING	PANEL THICKNESS (in.)	WITH EDGE SUPPORT	WITHOUT EDGE SUPPORT	TOTAL LOAD	LIVE LOAD	Panel edges with tongue & groove or with blocking	
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	

a. Allowable live load values at spans of 16 inches on center and 24 inches on center taken from reference standard APA E30, APA Engineered Wood Construction Guide. Refer to reference standard for allowable spans not listed in table.

General Notes:

- If spans exceed dimensions noted on tables, engineered drawings and calculations will be required.

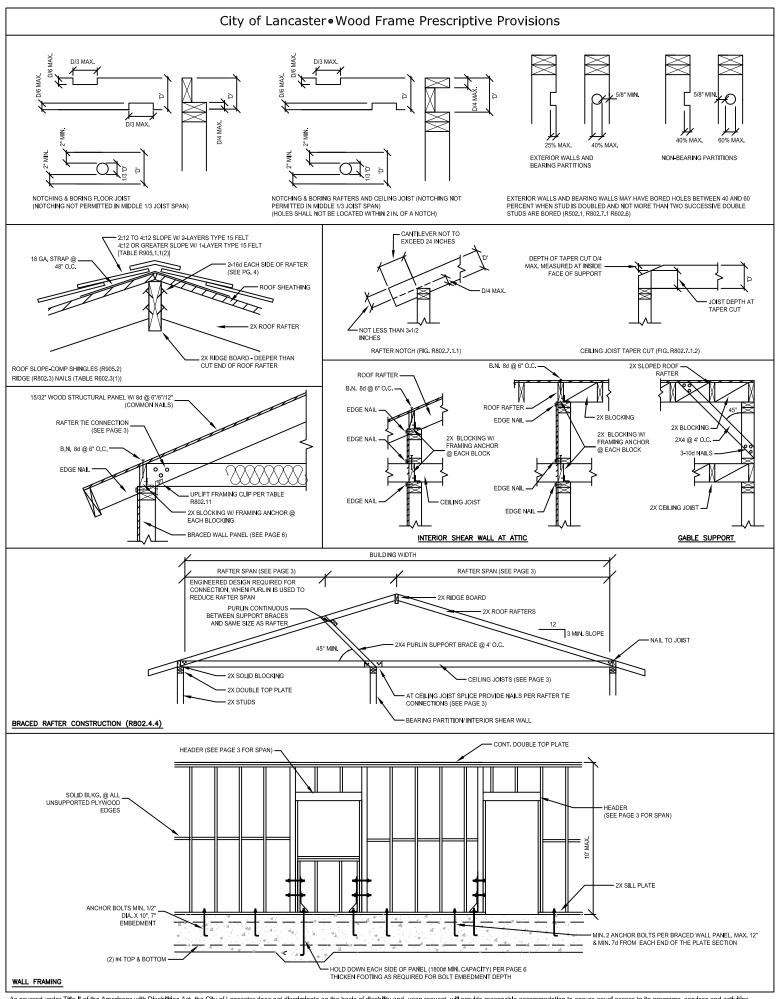
 Spans listed in above tables are based upon California Residential Code (CRC) Tables, see tables for additional information.

 With headers and girders, single framing member sizes may be used, if sectional properties are shown to be the same or greater than double framing member sizes listed in tables, refer to ANSI AWC NDS 2018: National Design Specifications for Wood Construction, with 2018 NDS Supplement

b. Roof span is measured between exterior walls or between exterior wall and roof purlin when interior bearing wall is used.

City of Lancaster • Wood Frame Prescriptive Provisions

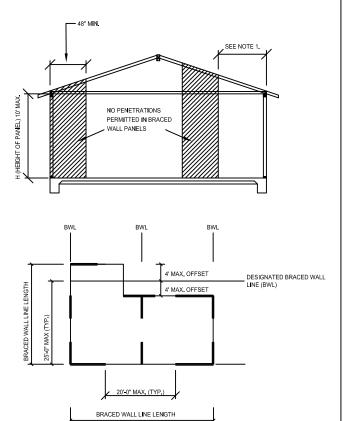
	FASTENING SCHEDULE [Table R602.3(1)]	
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
	ROOF	
Blocking between ceiling joists and top plates	4-8d box (2-1/2" x 0.113")	Toe nail
Ceiling joists to top plate	4-8d box (2-1/2" x 0.113")	Per joist, toe nail
Ceiling joist not attached to parallel rafter, laps over partitions	4-10d box (3" x 0.128")	Face nail
Collar tie to rafter, face nail	4-10d box (3" x 0.128") or 3-10d common (3" x 0.148") or 4-3" x 0.131" nails	Face nail each rafter
Rafter or roof truss to plate	3-16d box (3-1/2" x 0.135") or 3-10d common (3" x 0.148")	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
Roof rafters to ridge, valley or or hip rafters or roof rafter to minimum 2" ridge beam	4-16d box (3-1/2" x 0.135") or 3-10d common (3" x 0.148")	Toe nail
nage beam	3-16d box (3-1/2" x 0.135") or 2-16d common (3-1/2" x 0.162")	End nail
	WALL	
Stud to stud (not at braced wall panels)	16d common (3-1/2" x 0.162")	24" o.c. face nail
	10d box (3" x 0.128")	16" o.c. face nail
Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (3-1/2" x 0.135")	12" o.c. face nail
waii paneis)	16d common (3-1/2" x 0.162")	16" o.c. face nail
Built-up header (2" to 2" header with 1/2" spacer)	16d box (3-1/2" x 0.135")	12" o.c. each edge face nail
	16d common (3-1/2" x 0.162")	16" o.c. each edge face nail
Continuous header to stud	5-8d box (2-1/2" x 0.113")	Toe nail
Top plate to top plate	10d box (3" x 0.128")	12" o.c. face nail
	16d common (3-1/2" x 0.162")	16" o.c. face nail
Double top plate splice	8-16d common (3-1/2" x 0.162")	Face nail on ea. side of end joint (min. 24" lap splice length ea. side of end joint)
Bottom plate to joist, rim joist, band joist or blocking (not at braced wall	16d box (3-1/2" x 0.135")	12" o.c. face nail
panels)	16d common (3-1/2" x 0.162")	16" o.c. face nail
Bottom plate to joist, rim joist, band joist or blocking (at braced wall panels)	3-16d box (3-1/2" x 0.135")	3 each 16" o.c. face nail
pariers)	2-16d common (3-1/2" x 0.162")	2 each 16" o.c. face nail
Top or bottom plate to stud	4-8d box (2-1/2" x 0.113") or 3-16d box (3-1/2" x 0.135") or 4-8d common (2-1/2" x 0.131")	Toe nail
	3-16d box (3-1/2" x 0.135") or 2-16d common (3-1/2" x 0.162") or 3-10d box (3" x 0.128")	End nail
Top plates, laps at corners and intersection	3-10d box (3" x 0.128") or 2-16d common (3-1/2" x 0.162")	Face nail
	FLOOR	
Joist to sill, top plate or girder	4-8d box (2-1/2" x 0.113") or 3-8d common (2-1/2" x 0.131") or 3-10d box (3" x 0.128")	Toe nail
Rim joist, band joist or blocking to sill or top plate (roof applications	8d box (2-1/2" x 0.113")	4" o.c. toe nail
also)	8d common (2-1/2" x 0.131") or 10d box (3" x 0.128")	6" o.c. toe nail
Band or rim joist to joist	3-16d common (3-1/2" x 0.162") or 4-10d common (3" x 0.128")	End nail
Built up girders and beams, 2-inch lumber layers	20d common (4" x 0.192")	Nail each layer as follows: 32" o.c. at top and bottom and staggered
	10d box (3" x 0.128")	24" o.c. face nail at top and bottom staggered on opposite sides
	And: 3-20d common (4" x 0.192") or 3-10d box (3" x 0.128")	Face nail at ends and at each splice
Ledger strip supporting joists or rafters	4-16d box (3-1/2" x 0.135") or 3-16d common (3-1/2" x 0.162") or 4-10d box (3" x 0.128")	At each joist or rafter, face nail
	2-10d box (3" x 0.128")	Each end, toe nail



As covered under Title II of the Americans with Disabilities Act, the City of Lancaster does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

DPW0551 PAGE 5 OF 9

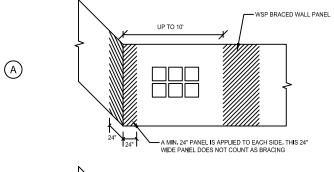
City of Lancaster • Wood Frame Prescriptive Provisions

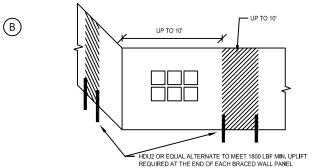


BRACED WALL PANEL REQUIREMENTS (R602.10)

- 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 WSP, THE BRACED WALL PANEL SHALL BE PERMITTED TO BEGIN NO MORE THAN 10 FEET FROM EACH END OF THE BRACED WALL LINE PROVIDED:



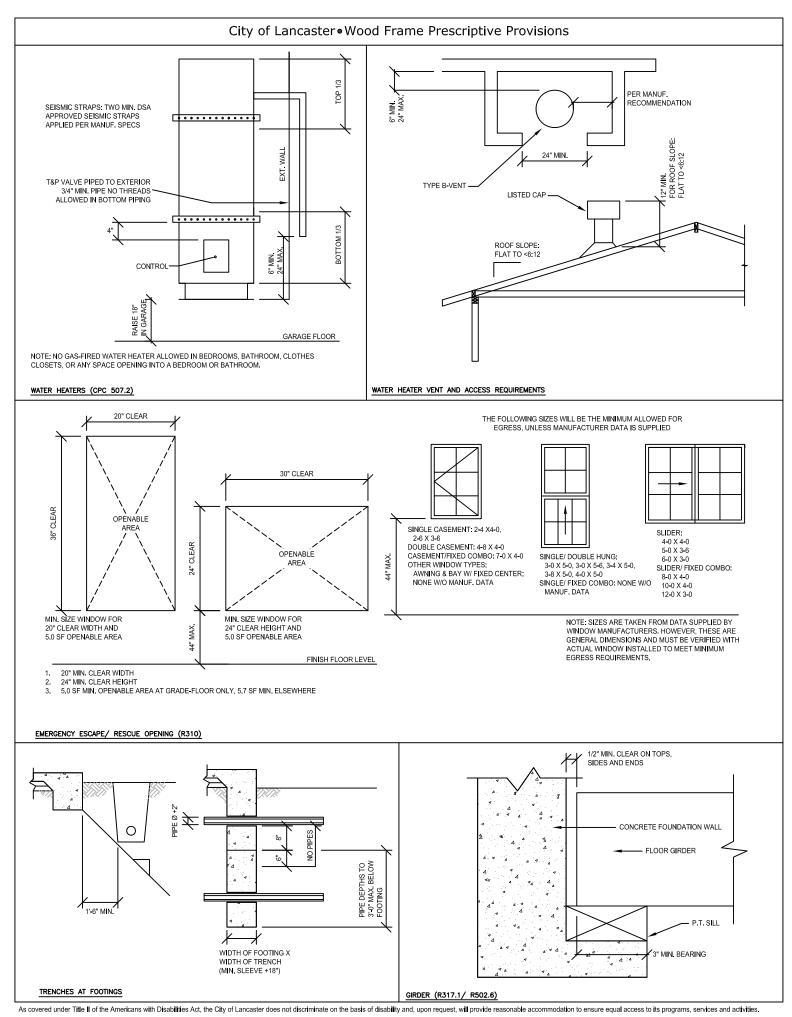


- MIXING BRACING METHODS WITHIN A BRACED WALL LINE IS NOT PERMITTED.
- INTERIOR BRACED WALL PANEL SHALL BE LOCATED NOT MORE THAN 10 FEET FROM THE END OF A BRACED WALL LINE AS DEMONSTRATED IN FIGURE R602.10.2 OF THE CRC.
- HOLD DOWN DEVISE SHALL BE APPROVED BY CURRENT EVALUATION SERVICE REPORT (ESR) OR A NATIONALLY RECOGNIZED AGENCY REPORT WITH 25% CAPACITY REDUCTION (2400#)

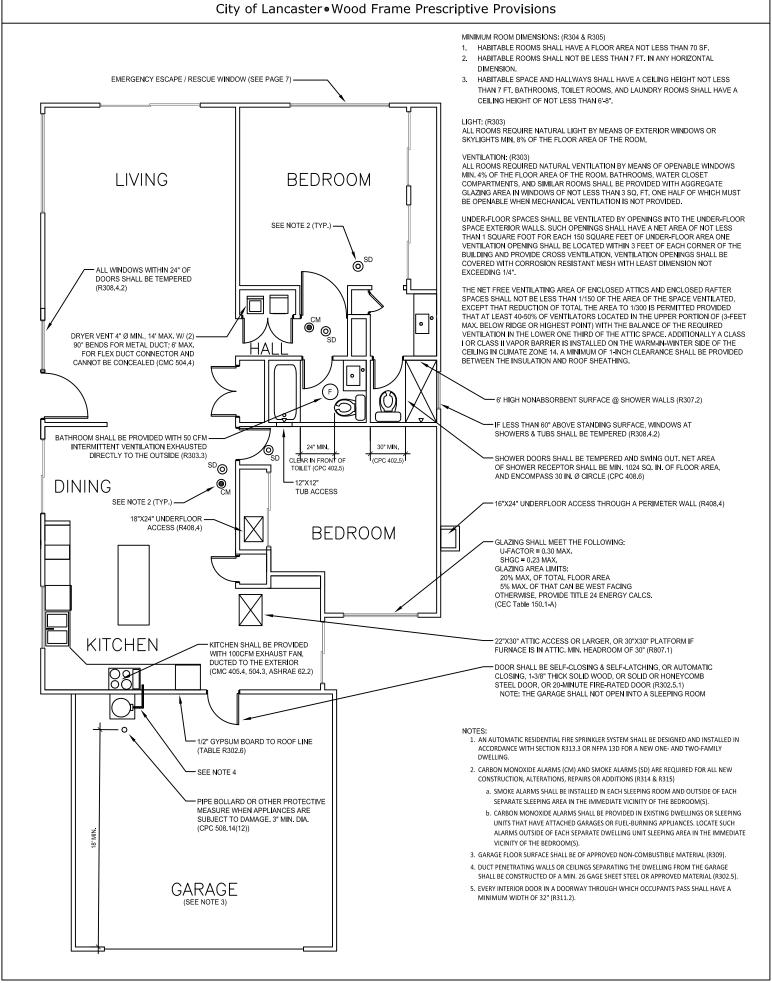
ROOF/CEILING DEAD LOAD = 15 psf WALL HEIGHT = 10 ft FLOOR DEAD LOAD = 10 psf BRACED WALL LINE SPACING ≤ 25 ft		MINIMUM TOTAL LENGTH OF BRACED WALL PANELS REQUIRED ALONG EACH WALL LINE (FT)		
SEISMIC DESIGN CATEGORY (SDC)	STORY LOCATION	BRACED WALL LINE LENGTH	METHOD WSP (WOOD STRUCTURAL PANEL)	
	^	10	4	
		20	5	
SDC ₂		30	7.5	
		40	10	
		50	12.5	

a. Method WSP (Wood Structural Panel) = 15/32" minimum thickness wood structural panel with 8d common (2-1/2 in. X 0.131 in.) nails at 6 in. spacing along panel edges, 12 in. spacing at intermediate supports, and 3/8" distance to panel edge/ 1/2" minimum thickness gypsum wall board shall be installed on the side of the wall opposite the bracing material, except when the minimum total length of braced wall panel in the Table is

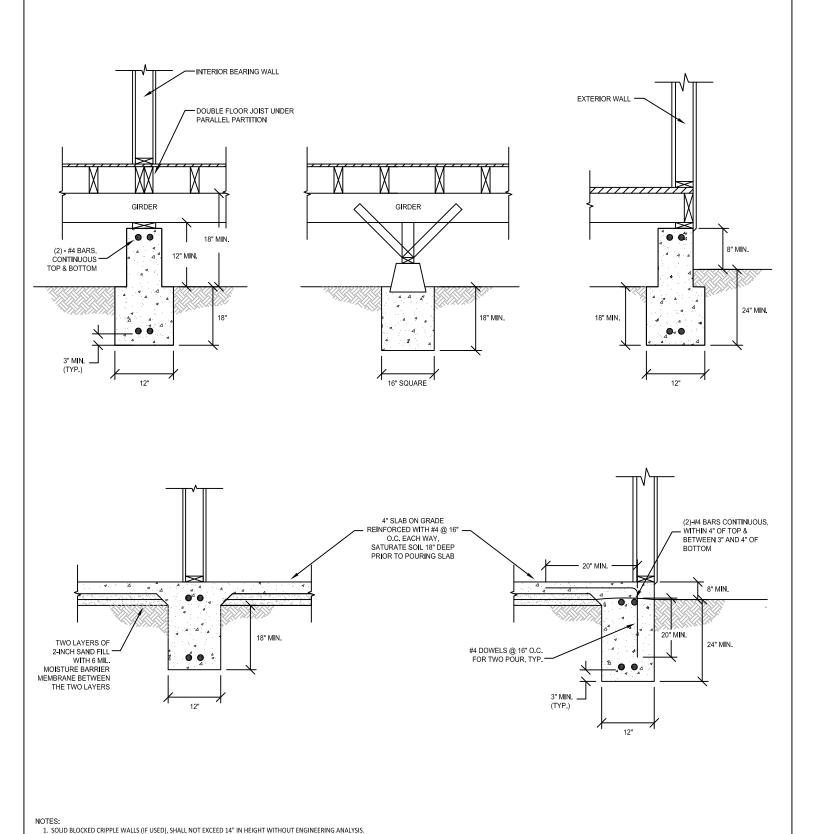
b. Multiply required braced wall panel lengths specified in the Table by 1.2 when combined Roof Ceiling Dead Load is between 15 psf and 25 psf.



5000554



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



As covered under Title II of the Americans with Disabilities Act, the City of Lancaster does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

2. PERIMETER WALLS, INTERIOR BEARING WALLS AND POSTS SUPPORTED ON CONTINUOUS FOUNDATIONS.

3. SHEAR TRANSFER DETAILS AND OTHER REQUIREMENTS NOT SHOWN FOR CLARITY.