FASTENING SCHEDULE

2016 CALIFORNIA BUILDING CODE TABLE 2304.10.1

The following are general requirements of the fastening schedule based on the 2016 CA Building Code. This handout is intended to provide only general information, for further information contact the Building & Safety Division.

	ELEMENT/CONNECTION	FASTENER	LOCATION
		ROOF	
1.	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3 - 8d common (2½" × 0.131") 3-10d box (3"x0.128") 3 - 3" × 0.131" nails 3 - 3" 14 gage staples, 7/16" crown	Toenail each end
	Blocking between rafters or truss not at the wall top plate, to rafter or truss	2 - 8d common (2½" × 0.131") 2 - 3" × 0.131" nails 2 - 3" 14 gage staples	toenail each end
		2-16d common (3 ½"x0.162") 3-3"x0.131" nails 3-3" 14 gage staples	end nail
	Flat blocking to truss and web filler	16d common (3 ½"x0.162") @6" o.c. 3-3"x0.131" nails @ 6" o.c. 3-3" 14 gage staples @ 6" o.c.	Face nail
2.	Ceiling joists to top plate	3-8d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	Toenail each joist
3.	Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (Table and Section2308.7.3.1)	3-16d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Face nail
4.	Ceiling joists attached to parallel rafter (heel joint) (Table and Section2308.7.3.1)	Table 2308.7.3.1	Face nail
5.	Collar tie to rafter	3-10d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Face nail
6.	Rafter or roof truss to top plate (Table and section 2308.7.5)	3-10 common 3-16d box 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Toenail [c]
7.	Roof rafters to ridge valley or hip rafters; or roof rafter to 2" ridge beam	2-16d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	End nail
		3-10d common 3-16d box 4-10d box 4-3"x0.131" nails 4- 3" 14 gage staples, 7/16" crown	Toenail
		WALL	
8.	Stud to Stud (not at braced wall panels)	16d common	24" o.c. face nail
		10d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	16" o.c. face nail
9.	Stud to stud and abutting studs at intersecting wall corners (at **braced wall panels**)	16d common	16" o.c. face nail
		16d box	12" o.c. face nail
		3"x0.131" nails 3" 14 gage staples, 7/16" crown	12" o.c. face nail
10.	Built-up header	16d common	16" o.c. each edge, face nail
		16d box	12" o.c. each edge, face nail
11.	Continuous header to stud	4-8d common 4-10d box	Toenail
12.	Top plate to top plate	16d common	16" o.c. face nail
		10d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	12" o.c. face nail
13.	Top plate to top plate, at end joints	8-16d common 12-10d box 12-3"x0.131" nails 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (min 24" lap splice length each side of end joint)
14.	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common	16" o.c. face nail
		16d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	12" o.c. face nail
15.	Bottom plate to joist, rim joist, band joist or blocking at **braced wall panels**	2-16d common 3-16d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16.	Stud to top or bottom plate	4-8d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Toenail
		2-16d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	End nail
17.	Top or bottom plate to stud	2-16d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	End nail
18.	Top plates, laps at corners and intersections	2-16d common 3-10d box 3- 3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	Face nail
19.	1" brace to each stud and plate	2-8d common 2-10d box 2- 3"x0.131" nails 2- 3" 14 gage staples, 7/16" crown	Face nail
20.	1"x6" sheathing to each bearing	2-8d common 2-10d box	Face nail
21.	1"8" and wider sheathing to each bearing	3-8d common 3-10d box	Face nail
		FLOOR	
22.	Joist to sill, top plate, or girder	3-8d common 3-10d box 3-3"x0.131" nails 3-3" 14 gage staples, 7/16" crown	Toenail
23.	Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common 10d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	6" o.c., toenail
24.	1"x6" subfloor or less to each joist	2-8d common 2-10d box	Face nail
25.	2" subfloor to joist or girder	2-16d common	Face nail
26.	2" plank	2-16d common	Each bearing, face nail
27.	Built up girders and beams, 2" lumber layers	20d common	32" o.c. face nail at top and bottom staggered on opposite sides
		10d box 3"x0.131" nails 3" 14 gage staples, 7/16" crown	24" o.c. face nail at top and bottom staggered on opposite sides
		And 2-20d common 3-10dbox 3- 3"x0.131" nails 3- 3" 14 gage staples, 7/16" crown	Ends and at each splice, face nail
28.	Ledger strip supporting joists or rafters	3-16d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	Each joist or rafter, face nail
29.	Joist to band joist or rim joist	3-16d common 4-10d box 4-3"x0.131" nails 4-3" 14 gage staples, 7/16" crown	End nail
30.	Bridging or blocking to joist, rafter or truss	2-8d common 2-10d box 2-3"x0.131" nails 2-3" 14 gage staples, 7/16" crown	Each end, toenail
		WOOD STRUCTURAL PANS, SUB FLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING [a]	
31.	3/8"-1/2"	6d common or deformed (2"x0.113") (subfloor and wall)	6" edge 12" intermediate supports
		8d box or deformed (roof)	
		2 3/8"x0.113" nail (subfloor and wall)	
		1 ¼" 16 gage staple, 7/16" crown	4" edge
		2 3/8" x0.113" nail (roof)	8" intermediate supports
		1 ¾"16 gage staple, 7/16" crown (roof)	3" edge 6" intermediate supports
32.	19/32" –3/4"	8d common 6d deformed	6" edge 12" intermediate supports
		2 3/8"x0.113 nail	4" edge
		2" 16" gage staple, 7/16" crown	8" intermediate supports
33.	7/8" – 1/4"	10d common 8d deformed	6" edge 12" intermediate supports
		OTHER EXTERIOR WALL SHEATHING	
34.	1/2" fiberboard sheathing[b]	1 ½" galvanized roof nail 1 ¼" 16 gage staple with 7/16" or 1" crown	3" edge 6" intermediate supports
35.	25/32" fiberboard sheathing [b]	1 ¾" galvanized roof nail 1 ½" 16 gage staple with 7/16" or 1" crown	3" edge 6" intermediate supports
		WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING	
36.	¼" and less	8d common 6d deformed	6" edge 12" intermediate supports
37.	7/8"-1"	8d common 8d deformed	6" edge 12" intermediate supports
38.	1 1/8"-1 ¼"	10d common 8d deformed	6" edge 12" intermediate supports
		PANEL SIDING TO FRAMING	
39.	½" or less	6d corrosion-resistant siding 6d corrosion-resistant casing	6" edge 12" intermediate supports
40.	5/8"	8d corrosion-resistant siding 8d corrosion-resistant casing	6" edge 12" intermediate supports
		INTERSIOR PANELING	
41.	¼"	4d casing 4d finish	6" edge 12" intermediate supports
42.	3/8"	6d casing 6d finish	6" edge 12" intermediate supports

For SI: 1 inch = 25.4 mm.

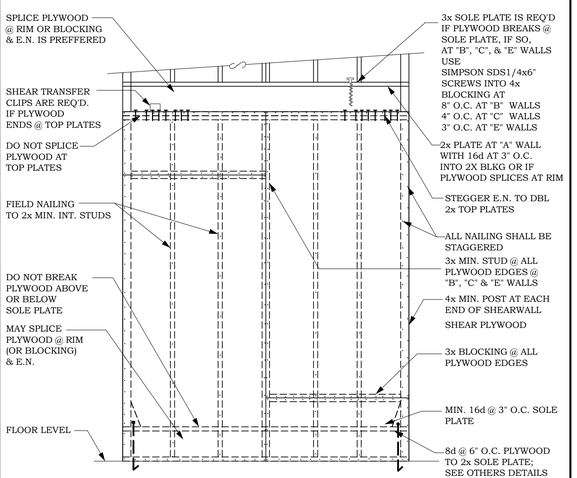
a. Nails spaced at 6 inches at intermediate supports where spans are 48" or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.

b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).

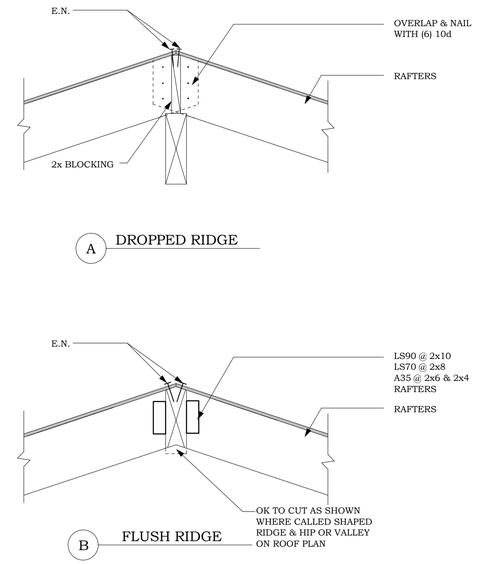
c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafters shall be permitted to be reduced by one nail.

** See Table 2304.10.1 for more information

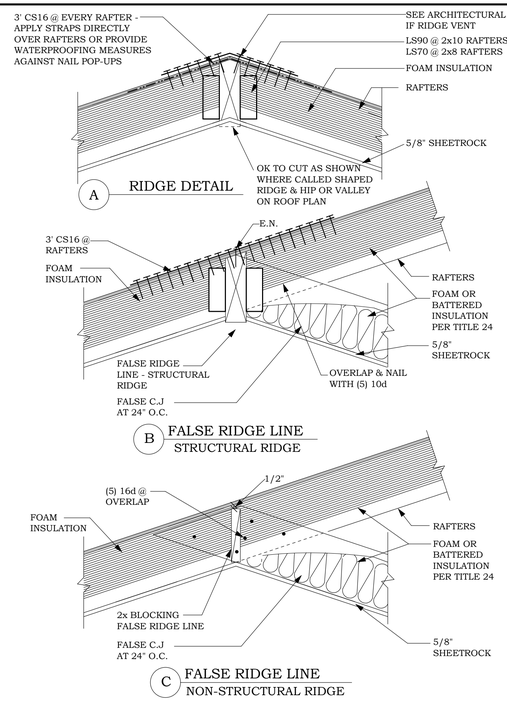
1 NAILING/FASTENING SCHEDULE



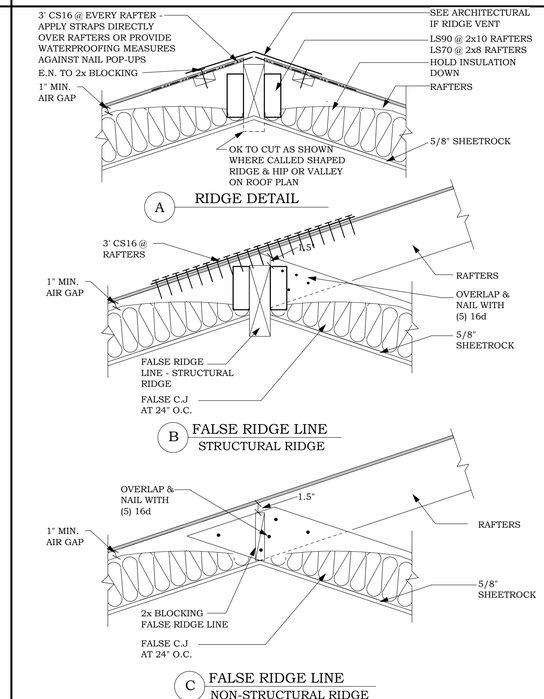
2 TYPICAL SHEARWALL DETAIL



3 RIDGE DETAIL @ NON-VAULTED CEILING



4-1 RIDGE @ VAULTED CEILING
FOAM INSULATION



4-2 RIDGE @ VAULTED CEILING
BATT INSULATION

ATA ENGINEERING
Ali Adib, P.E.
1202 Main Street, Redwood City, CA 94063
Tel. 650.363.2338, Fax 650.363.2031, email: ata@ataeng.net

STRUCTURAL DETAILS

REGISTERED PROFESSIONAL ENGINEER ALI ADIB NO. CE49976 Exp. 6-30-19 CIVIL STATE OF CALIFORNIA

PLANS ARE FAVORABLY REVIEWED FOR COMPLIANCE WITH STRUCTURAL CALCULATIONS ONLY

REMODEL/ADDITION:
DALTON RESIDENCE
3900 CHRISTIAN DRIVE
BELMONT, CA 94002

DATE: 05-07-18

SD-3

OF SHEETS