



City of El Cajon
Building and Fire Safety Division
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TABLE 2304.10.1
FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
Roof		
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common (2 1/2" x 0.131") 2-3" x 0.131" nails 2-3" 14 gage staples	Each end, toenail
	2-16 d common (3 1/2" x 0.162") 3-3" x 0.131" nails 3-3" 14 gage staples	End nail
Flat blocking to truss and web filler	16d common (3 1/2" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c	Face nail
2. Ceiling joists to top plate	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3 1/2" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5. Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131 nails; or 4-3" 14 gage staples, 7/16" crown	Toenail ^c
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3 1/2" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown; or	End nail
	3-10d common (3 1/2" x 0.148"); or 3-16d box (3 1/2" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Toenail

(continued)

**TABLE 2304.10.1—continued
FASTENING SCHEDULE**

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
Wall		
8. Stud to stud (not at braced wall panels)	16d common (3 ¹ / ₂ " × 0.162");	24" o.c. face nail
	10d box (3" × 0.128"); or 3" × 0.131" nails; or 3-3" 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 (3 ¹ / ₂ " × 0.162"); or	16" o.c. face nail
	16d box (3 ¹ / ₂ " × 0.135"); or	12" o.c. face nail
	3" × 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	12" o.c. face nail
10. Built-up header (2" to 2" header)	16d common (3 ¹ / ₂ " × 0.162"); or	16" o.c. each edge, face nail
	16d box (3 ¹ / ₂ " × 0.135")	12" o.c. each edge, face nail
11. Continuous header to stud	4-8d common (2 ¹ / ₂ " × 0.131"); or 4-10d box (3" × 0.128")	Toenail
12. Top plate to top plate	16d common (3 ¹ / ₂ " × 0.162"); or	16" o.c. face nail
	10d box (3" × 0.128"); or 3" × 0.131" nails; or 3" 14 gage staples, 7/16" crown	12" o.c. face nail
	8-16d common (3 ¹ / ₂ " × 0.162"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails; or 12-3" 14 gage staples, 7/16" crown	Each side of end joint, face nail (minimum 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 (3 ¹ / ₂ " × 0.162"); or	16" o.c. face nail
	16d box (3 ¹ / ₂ " × 0.135"); or 3" × 0.131" nails; or 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 ¹ / ₂ " × 0.162"); or 3-16d box (3 ¹ / ₂ " × 0.135"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common (2 ¹ / ₂ " × 0.131"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, 7/16" crown; or	Toenail
	2-16d common (3 ¹ / ₂ " × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
17. Top or bottom plate to stud	2-16d common (3 ¹ / ₂ " × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
18. Top plates, laps at corners and intersections	2-16d common (3 ¹ / ₂ " × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail

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**TABLE 2304.10.1—continued
FASTENING SCHEDULE**

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
Wall		
19. 1" brace to each stud and plate	2-8d common (2½" × 0.131"); or 2-10d box (3" × 0.128"); or 2-3" × 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
20. 1" × 6" sheathing to each bearing	2-8d common (2½" × 0.131"); or 2-10d box (3" × 0.128")	Face nail
21. 1" × 8" and wider sheathing to each bearing	3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128")	Face nail
Floor		
22. Joist to sill, top plate, or girder	3-8d common (2½" × 0.131"); or floor 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 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 (2½" × 0.131"); or 10d box (3" × 0.128"); or 3" × 0.131" nails; or 3" 14 gage staples, 7/16" crown	6" o.c., toenail
24. 1" × 6" subfloor or less to each joist	2-8d common (2½" × 0.131"); or 2-10d box (3" × 0.128")	Face nail
25. 2" subfloor to joist or girder	2-16d common (3½" × 0.162")	Face nail
26. 2" planks (plank & beam – floor & roof)	2-16d common (3½" × 0.162")	Each bearing, face nail
27. Built-up girders and beams, 2" lumber layers	20d common (4" × 0.192")	32" o.c., face nail at top and bottom staggered on opposite sides
	10d box (3" × 0.128"); or 3" × 0.131" nails; or 3" 14 gage staples, 7/16" crown	24" o.c. face nail at top and bottom staggered on opposite sides
	And: 2-20d common (4" × 0.192"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 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 (3½" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 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 (3½" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	End nail
30. Bridging or blocking to joist, rafter or truss	2-8d common (2½" × 0.131"); or 2-10d box (3" × 0.128"); or 2-3" × 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Each end, toenail

(continued)

**TABLE 2304.10.1—continued
FASTENING SCHEDULE**

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	
		Edges (inches)	Intermediate supports (inches)
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing^a			
31. $\frac{3}{8}$ " – $\frac{1}{2}$ "	6d common or deformed ($2" \times 0.113"$) (subfloor and wall)	6	12
	8d box or deformed ($2\frac{1}{2}" \times 0.113"$) (roof)	6	12
	$2\frac{3}{8}" \times 0.113"$ nail (subfloor and wall)	6	12
	$1\frac{3}{4}"$ 16 gage staple, $\frac{7}{16}"$ crown (subfloor and wall)	4	8
	$2\frac{3}{8}" \times 0.113"$ nail (roof)	4	8
	$1\frac{3}{4}"$ 16 gage staple, $\frac{7}{16}"$ crown (roof)	3	6
32. $\frac{19}{32}"$ – $\frac{3}{4}"$	8d common ($2\frac{1}{2}" \times 0.131"$); or 6d deformed ($2" \times 0.113"$)	6	12
	$2\frac{3}{8}" \times 0.113"$ nail; or 2" 16 gage staple, $\frac{7}{16}"$ crown	4	8
33. $\frac{7}{8}"$ – $1\frac{1}{4}"$	10d common ($3" \times 0.148"$); or 8d deformed ($2\frac{1}{2}" \times 0.131"$)	6	12
Other exterior wall sheathing			
34. $\frac{1}{2}"$ fiberboard sheathing ^b	$1\frac{1}{2}"$ galvanized roofing nail ($\frac{7}{16}"$ head diameter); or $1\frac{1}{4}"$ 16 gage staple with $\frac{7}{16}"$ or 1" crown	3	6
35. $\frac{25}{32}"$ fiberboard sheathing ^b	$1\frac{3}{4}"$ galvanized roofing nail ($\frac{7}{16}"$ diameter head); or $1\frac{1}{2}"$ 16 gage staple with $\frac{7}{16}"$ or 1" crown	3	6
Wood structural panels, combination subfloor underlayment to framing			
36. $\frac{3}{4}"$ and less	8d common ($2\frac{1}{2}" \times 0.131"$); or 6d deformed ($2" \times 0.113"$)	6	12
37. $\frac{7}{8}"$ – 1"	8d common ($2\frac{1}{2}" \times 0.131"$); or 8d deformed ($2\frac{1}{2}" \times 0.131"$)	6	12
38. $1\frac{1}{8}"$ – $1\frac{1}{4}"$	10d common ($3" \times 0.148"$); or 8d deformed ($2\frac{1}{2}" \times 0.131"$)	6	12
Panel siding to framing			
39. $\frac{1}{2}"$ or less	6d corrosion-resistant siding ($1\frac{7}{8}" \times 0.106"$); or 6d corrosion-resistant casing ($2" \times 0.099"$)	6	12
40. $\frac{5}{8}"$	8d corrosion-resistant siding ($2\frac{3}{8}" \times 0.128"$); or 8d corrosion-resistant casing ($2\frac{1}{2}" \times 0.113"$)	6	12

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**TABLE 2304.10.1—continued
FASTENING SCHEDULE**

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing ^a			
		Edges (inches)	Intermediate supports (inches)
Interior paneling			
41. $\frac{1}{4}$ "	4d casing ($1\frac{1}{2}$ " \times 0.080"); or 4d finish ($1\frac{1}{2}$ " \times 0.072")	6	12
42. $\frac{3}{8}$ "	6d casing (2" \times 0.099"); or 6d finish (Panel supports at 24 inches)	6	12

For SI: 1 inch = 25.4 mm.

- a. Nails spaced at 6 inches at intermediate supports where spans are 48 inches 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 rafter shall be permitted to be reduced by one nail.