

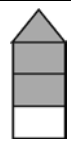



TABLE R602.3 (5)  
SIZE, HEIGHT AND SPACING OF WOOD STUDS<sup>a</sup>

STUD SIZE (inches)	BEARING WALLS					NONBEARING WALLS	
	Laterally unsupported stud height <sup>a</sup> (feet)	Maximum spacing when supporting a roof-ceiling assembly or a habitable attic assembly, only (inches)	Maximum spacing when supporting one floor, plus a roof-ceiling assembly or a habitable attic assembly (inches)	Maximum spacing when supporting two floors, plus a roof-ceiling assembly or a habitable attic assembly (inches)	Maximum spacing when supporting one floor height <sup>a</sup> (inches)	Laterally unsupported stud height <sup>a</sup> (feet)	Maximum spacing (inches)
							
2 × 3 <sup>b</sup>	—	—	—	—	—	10	16
2 × 4	10	24 <sup>c</sup>	16 <sup>c</sup>	—	24	14	24
3 × 4	10	24	24	16	24	14	24
2 × 5	10	24	24	—	24	16	24
2 × 6	10	24	24	16	24	20	24

**Exceptions: R602.3.1**

- Utility grade studs shall not be spaced more than 16 inches (406 mm) on center.

**R602.2 Grade.** Studs shall be a minimum No. 3, standard or stud grade lumber.

Exception: Bearing studs not supporting floors and non-bearing studs shall be permitted to be utility grade lumber, provided the studs are spaced in accordance with Table R602.3(5).

**R403.1.6 Foundation anchorage.** All wood sill plates shall be anchored to the foundation with minimum 1/2-inch-diameter (12.7 mm) anchor bolts spaced a maximum of 6 feet (1829 mm) on center or approved anchors or anchor straps spaced as required to provide equivalent anchorage to 1/2-inch-diameter bolts. (e.g., Pinshot)

**R602.3.4 Bottom (sole) plate.** Studs shall have full bearing on a nominal 2-by (51 mm) or larger plate or sill having a width not less than to the width of the studs.

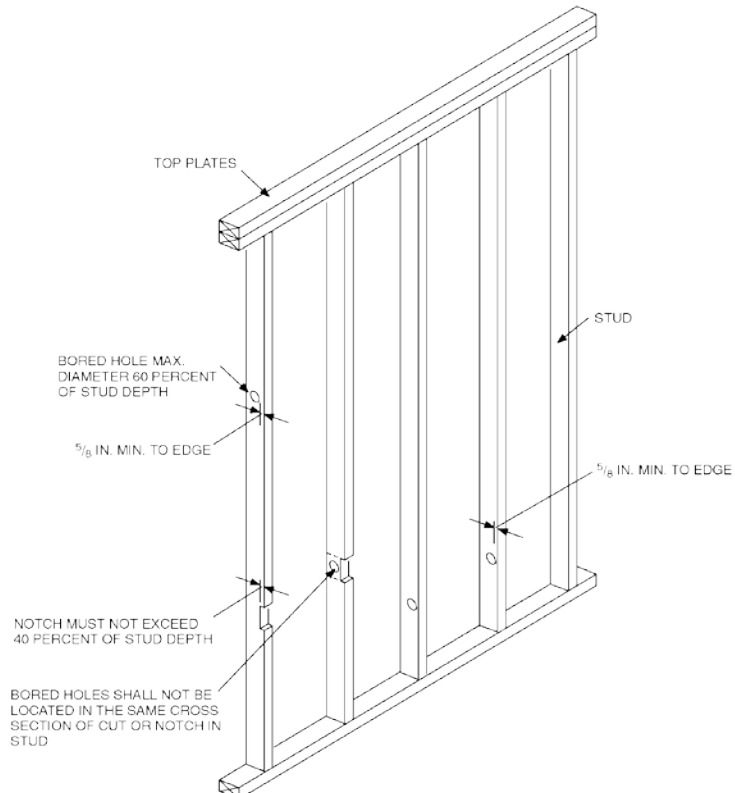
**R602.7.4 Nonbearing walls.** Load-bearing headers are not required in interior or exterior nonbearing walls. A single flat 2-inch by 4-inch (51 mm by 102 mm) member shall be permitted to be used as a header in interior or exterior nonbearing walls for openings up to 8 feet (2438 mm) in width if the vertical distance to the parallel nailing surface above is not more than 24 inches (610 mm). For such nonbearing headers, cripples or blocking are not required above the header.

**R602.5 Interior nonbearing walls.** Interior nonbearing walls shall be permitted to be constructed with 2-inch by 3-inch (51 mm by 76 mm) studs spaced 24 inches (610 mm) on center or, where not part of a braced wall line, 2-inch by 4-inch (51 mm by 102 mm) flat studs spaced at 16 inches (406 mm) on center. Interior nonbearing walls shall be capped with not less than a single top plate. Interior non-bearing walls shall be fire-blocked in accordance with Section R602.8.

**R602.6 Drilling and notching of studs.** Drilling and notching of studs shall be in accordance with the following:

- Notching: Studs in nonbearing partitions shall be permitted to be notched to a depth not to exceed 40 percent of a single stud width.
- Drilling. Any stud shall be permitted to be bored or drilled, provided that the diameter of the resulting hole is not more than 60 percent of the stud width, the edge of the hole is not more than 5/8 inch (16 mm) to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing

partitions drilled over 40 percent and up to 60 percent shall be doubled with not more than two successive doubled studs bored. See Figure R602.6 (2). Exception: Use of approved stud shoes is permitted where they are installed in accordance with the manufacturer’s recommendations.



**FIGURE R602.6 (2)**  
**NOTCHING AND BORED HOLE LIMITATIONS FOR INTERIOR NONBEARING WALLS**

Nailing Schedule on next page

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER <sup>a, b, c</sup>	SPACING AND LOCATION
<b>Roof</b>			
1	Blocking between ceiling joists or rafters to top plate	4-8d box (2½" × 0.113") or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Toe nail
2	Ceiling joists to top plate	4-8d box (2½" × 0.113"); or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps over partitions [see Sections R802.3.1, R802.3.2 and Table R802.5.1(9)]	4-10d box (3" × 0.128"); or 3-16d common (3½" × 0.162"); or 4-3" × 0.131" nails	Face nail
4	Ceiling joist attached to parallel rafter (heel joint) [see Sections R802.3.1 and R802.3.2 and Table R802.5.1(9)]	Table R802.5.1(9)	Face nail
5	Collar tie to rafter, face nail or 1½" × 20 ga. ridge strap to rafter <sup>4</sup>	4-10d box (3" × 0.128"); or 3-10d common (3" × 0.148"); or 4-3" × 0.131" nails	Face nail each rafter
6	Rafter or roof truss to plate	3-16d box nails (3½" × 0.135"); or 3-10d common nails (3" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss <sup>i</sup>
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-16d (3½" × 0.135"); or 3-10d common (3½" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail
		3-16d box 3½" × 0.135"); or 2-16d common (3½" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail
<b>Wall</b>			
8	Stud to stud (not at braced wall panels)	16d common (3½" × 0.162")	24" o.c. face nail
		10d box (3" × 0.128"); or 3" × 0.131" nails	16" o.c. face nail
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (3½" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail
		16d common (3½" × 0.162")	16" o.c. face nail
10	Built-up header (2" to 2" header with ½" spacer)	16d common (3½" × 0.162")	16" o.c. each edge face nail
		16d box (3½" × 0.135")	12" o.c. each edge face nail
11	Continuous header to stud	5-8d box (2½" × 0.113"); or 4-8d common (2½" × 0.131"); or 4-10d box (3" × 0.128")	Toe nail
12	Top plate to top plate	16d common (3½" × 0.162")	16" o.c. face nail
		10d box (3" × 0.128"); or 3" × 0.131" nails	12" o.c. face nail
13	Double top plate splice for SDCs A-D <sub>2</sub> with seismic braced wall line spacing < 25"	8-16d common (3½" × 0.162"); or 12-16d box (3½" × 0.135"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
	Double top plate splice SDCs D <sub>0</sub> , D <sub>1</sub> , or D <sub>2</sub> ; and braced wall line spacing ≥ 25"	12-16d (3½" × 0.135")	