

**2308.3.1.1 Braced wall line sill plate anchorage in Seismic Design Category D.** Sill plates along *braced wall lines* in buildings assigned to *Seismic Design Category D* shall be anchored with not less than  $\frac{1}{2}$ -inch (12.7 mm) diameter anchor bolts with steel plate washers between the foundation sill plate and the nut, or approved anchor straps load-rated in accordance with Section 2304.10.3 and spaced to provide equivalent anchorage. Plate washers shall be not less than 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. The hole in the plate washer is permitted to be diagonally slotted with a width of up to  $\frac{3}{16}$  inch (4.76 mm) larger than the bolt diameter and a slot length not to exceed  $1\frac{3}{4}$  inches (44 mm), provided that a standard cut washer is placed between the plate washer and the nut.

**2308.3.1.2 Braced wall line sill plate anchorage in Seismic Design Category E.** Sill plates along braced wall lines in buildings assigned to *Seismic Design Category E* shall be anchored with not less than  $\frac{5}{8}$ -inch diameter (15.9 mm) anchor bolts with steel plate washers between the foundation sill plate and the nut, or approved anchor straps load-rated in accordance with Section 2304.10.3 and spaced to provide equivalent anchorage. Plate washers shall be not less than 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. The hole in the plate washer is permitted to be diagonally slotted with a width of up to  $\frac{3}{16}$  inch (4.76 mm) larger than the bolt diameter and a slot length not to exceed  $1\frac{3}{4}$  inches (44 mm), provided that a standard cut washer is placed between the plate washer and the nut.

**2308.4 Floor framing.** Floor framing shall comply with this section.

**2308.4.1 Girders.** Girders for single-story construction or girders supporting loads from a single floor shall be not less than 4 inches by 6 inches (102 mm by 152 mm) for spans 6 feet (1829 mm) or less, provided that girders are spaced not more than 8 feet (2438 mm) on center. Other girders shall be designed to support the loads specified in this code. Girder end joints shall occur over supports.

Where a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches (76 mm) of bearing.

**2308.4.1.1 Allowable girder spans.** The allowable spans of girders that are fabricated of dimension lumber shall not exceed the values set forth in Table 2308.4.1.1(1) or 2308.4.1.1(2).

**2308.4.2 Floor joists.** Floor joists shall comply with this section.

**2308.4.2.1 Span.** Spans for floor joists shall be in accordance with Table 2308.4.2.1(1) or 2308.4.2.1(2) or the AWC STJR.

**2308.4.2.2 Bearing.** The ends of each joist shall have not less than  $1\frac{1}{2}$  inches (38 mm) of bearing on wood or metal, or not less than 3 inches (76 mm) on masonry, except where supported on a 1-inch by 4-inch (25 mm by 102 mm) ribbon strip and nailed to the adjoining stud.

**2308.4.2.3 Framing details.** Joists shall be supported laterally at the ends and at each support by solid blocking except where the ends of the joists are nailed to a header, band or rim joist or to an adjoining stud or by other means. Solid blocking shall be not less than 2 inches (51 mm) in thickness and the full depth of the joist. Joist framing from opposite sides of a beam, girder or partition shall be lapped not less than 3 inches (76 mm) or the opposing joists shall be tied together in an approved manner. Joists framing into the side of a wood girder shall be supported by framing anchors or on ledger strips not less than 2 inches by 2 inches (51 mm by 51 mm).

**2308.4.2.4 Notches and holes.** Notches on the ends of joists shall not exceed one-fourth the joist depth. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span. Holes bored in joists shall not be within 2 inches (51 mm) of the top or bottom of the joist and the diameter of any such hole shall not exceed one-third the depth of the joist.

**2308.4.3 Engineered wood products.** Engineered wood products shall be installed in accordance with manufacturer's recommendations. Cuts, notches and holes bored in trusses, structural composite lumber, structural glued-laminated members or I-joists are not permitted except where permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered in the design of the member by a *registered design professional*.

**2308.4.4 Framing around openings.** Trimmer and header joists shall be doubled, or of lumber of equivalent cross section, where the span of the header exceeds 4 feet (1219 mm). The ends of header joists more than 6 feet (1829 mm) in length shall be supported by framing anchors or joist hangers unless bearing on a beam, partition or wall. Tail joists over 12 feet (3658 mm) in length shall be supported at the header by framing anchors or on ledger strips not less than 2 inches by 2 inches (51 mm by 51 mm).