

2308.4.4.1 Openings in floor diaphragms in Seismic Design Categories B, C, D and E. Openings in horizontal diaphragms in *Seismic Design Categories B, C, D and E* with a dimension that is greater than 4 feet (1219 mm) shall be constructed with metal ties and blocking in accordance with this section and Figure 2308.4.4.1(1). Metal ties shall be not less than 0.058 inch [1.47 mm (16 galvanized gage)] in thickness by 1½ inches (38 mm) in width and shall have a yield stress not less than 33,000 psi (227 Mpa). Blocking shall extend not less than the dimension of the opening in the direction of the tie and blocking. Ties shall be attached to blocking in accordance with the manufacturer's instructions but with not less than eight 16d common nails on each side of the header-joist intersection.

Openings in floor diaphragms in *Seismic Design Categories D and E* shall not have any dimension exceeding 50 percent of the distance between braced wall lines or an area greater than 25 percent of the area between orthogonal pairs of braced wall lines [see Figure 2308.4.4.1(2)]; or the portion of the structure containing the opening shall be designed in accordance with accepted engineering practice to resist the forces specified in Chapter 16, to the extent such irregular opening affects the performance of the conventional framing system.

2308.4.4.2 Vertical offsets in floor diaphragms in Seismic Design Categories D and E. In *Seismic Design Categories D and E*, portions of a floor level shall not be vertically offset such that the framing members on either side of the offset cannot be lapped

or tied together in an *approved* manner in accordance with Figure 2308.4.4.2 unless the portion of the structure containing the irregular offset is designed in accordance with accepted engineering practice.

Exception: Framing supported directly by foundations need not be lapped or tied directly together.

2308.4.5 Joists supporting bearing partitions. Bearing partitions parallel to joists shall be supported on beams, girders, doubled joists, walls or other bearing partitions. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load.

2308.4.6 Lateral support. Floor and ceiling framing with a nominal depth-to-thickness ratio not less than 5 to 1 shall have one edge held in line for the entire span. Where the nominal depth-to-thickness ratio of the framing member exceeds 6 to 1, there shall be one line of bridging for each 8 feet (2438 mm) of span, unless both edges of the member are held in line. The bridging shall consist of not less than 1-inch by 3-inch (25 mm by 76 mm) lumber, double nailed at each end, or equivalent metal bracing of equal rigidity, full-depth solid blocking or other *approved* means. A line of bridging shall be required at supports where equivalent lateral support is not otherwise provided.

2308.4.7 Structural floor sheathing. Structural floor sheathing shall comply with the provisions of Section 2304.8.1.

2308.4.8 Under-floor ventilation. For under-floor ventilation, see Section 1202.4.

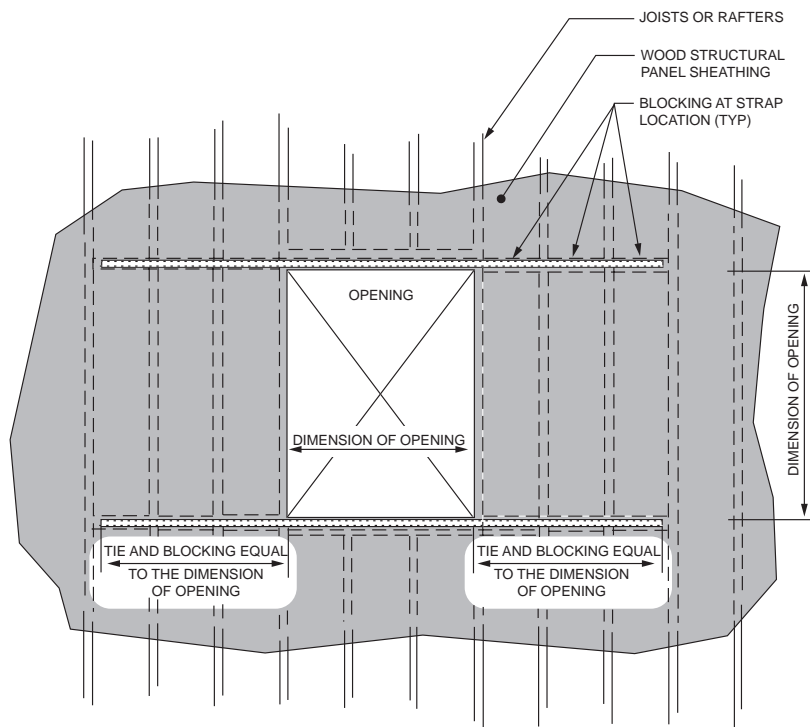


FIGURE 2308.4.4.1(1)
OPENINGS IN FLOOR AND ROOF DIAPHRAGMS