

## CHAPTER 3 BUILDING PLANNING

### SECTION R302.5 2015 Edition IRC Interpretation 03-16 Issued 5-19-2016 RE\_15\_03\_16

#### **R302.5 Dwelling-garage opening/and penetration protection.**

Openings and penetrations through the walls or ceilings separating the *dwelling* from the garage shall be in accordance with Sections R302.5.1 through R302.5.3.

**R302.5.1 Opening protection.** Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a selfclosing device.

**R302.5.2 Duct penetration.** Ducts in the garage and ducts penetrating the walls or ceilings separating the *dwelling* from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other *approved* material and shall have no openings into the garage.

**R302.5.3 Other penetrations.** Penetrations through the separation required in Section R302.6 shall be protected as required by Section R302.11, Item 4.

#### **REFERENCED SECTIONS**

**R302.6 Dwelling-garage fire separation.** The garage shall be separated as required by Table R302.6. Openings in garage walls shall comply with Section R302.5. Attachment of gypsum board shall comply with Table R702.3.5. The wall separation provisions of Table R302.6 shall not apply to garage walls that are perpendicular to the adjacent *dwelling unit* wall.

**R302.11 Fireblocking.** In combustible construction, fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories, and between a top *story* and the roof space. Fireblocking shall be provided in wood-frame construction in the following locations:

1. In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows:
  - 1.1. Vertically at the ceiling and floor levels.
  - 1.2. Horizontally at intervals not exceeding 10 feet (3048 mm).
2. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
3. In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with Section R302.7.
4. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an *approved* material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E 136 requirements.
5. For the fireblocking of chimneys and fireplaces, see Section R1003.19.
6. Fireblocking of cornices of a two-family *dwelling* is required at the line of *dwelling unit* separation.



**Q1:** Section R302.5 addresses dwelling-garage opening and penetration protection. These include openings directly from a garage into the residence (Section R302.5.1), duct penetrations (Section R302.5.2), and other penetrations (Section R302.5.3) as further described by Section R302.11, Item 4, which addresses through penetrations of vents, pipes, ducts, cables, and wires. Are membrane penetrations other than the ones specifically mentioned in Section R302.11, Item 4 allowed in the ceiling separating the garage from a habitable room above?

**A1:** Yes.

Section R302.5.3 requires “all other penetrations” to be protected in accordance with Section R302.11, Item 4. Even though Section R302.11, Item 4 specifically mentions only vents, pipes, ducts, cables, and wires, other penetrations are allowed provided the annular space around “the penetration” is fireblocked with an approved material to resist the free passage of flame and products of combustion. The material filling the annular space is not required to meet the ASTM E136 requirements.

**Q2:** Section R302.5 addresses dwelling-garage opening and penetration protection. These include openings directly from a garage into the residence (Section R302.5.1), duct penetrations (Section R302.5.2), and other penetrations (Section R302.5.3) as further described by Section R302.11, Item 4, which addresses through penetrations of vents, pipes, ducts, cables, and wires. Are electrical boxes or recessed lighting fixtures permitted in the ceiling membrane separating the garage from a habitable room above?

**A2:** Yes.

Section R302.5.3 requires “all other penetrations” to be protected in accordance with Section R302.11, Item 4. Even though Section R302.11, Item 4 specifically mentions only vents, pipes, ducts, cables, and wires, other penetrations are allowed provided the annular space around “the penetration” is fireblocked with an approved material to resist the free passage of flame and products of combustion. The material filling the annular space is not required to meet the ASTM E136 requirements.

---