

Stephanie Terry
Mayor



CITY OF EVANSVILLE-VANDERBURGH COUNTY

BUILDING COMMISSION

1 N.W. ML King Jr. Boulevard
Room 310, Civic Center Complex
Evansville, IN 47708

Johnny McAlister Jr
Building Commissioner

Building Permitting
Phone (812) 436-7879
Email: permit@evansville.in.gov
Building Inspection
Phone (812) 436-7867
Email: inspections@evansville.in.gov

Rule 4.4. 2020 Indiana Residential Code

4/23/2020

2020 Indiana Residential Code

--DRYWALL--

SUMMARY:

HABITABLE GARAGE CEILING DRYWALL 5/8" TYPE X. SCREWS 6" O/C.

**TABLE R702.3.5
MINIMUM THICKNESS AND APPLICATION OF GYPSUM BOARD AND GYPSUM PANEL PRODUCTS**

THICKNESS OF GYPSUM BOARD OR GYPSUM PANEL PRODUCTS (inches)	APPLICATION	ORIENTATION OF GYPSUM BOARD OR GYPSUM PANEL PRODUCTS TO FRAMING	MAXIMUM SPACING OF FRAMING MEMBERS (inches o.c.)	MAXIMUM SPACING OF FASTENERS (inches)		SIZE OF NAILS FOR APPLICATION TO WOOD FRAMING ^c	
				Nails ^a	Screws ^b		
Application without adhesive							
3/8	Ceiling ^d	Perpendicular	16	7	12	13 gage, 1 1/4" long, 19/64" head; 0.098" diameter, 1 1/4" long, annular-ringed; or 4d cooler nail, 0.080" diameter, 1 3/8" long, 7/32" head.	
	Wall	Either direction	16	8	16		
1/2	Ceiling	Either direction	16	7	12	13 gage, 1 3/8" long, 19/64" head; 0.098" diameter, 1 1/2" long, annular-ringed; 5d cooler nail, 0.086" diameter, 1 5/8" long, 15/64" head; or gypsum board nail, 0.086" diameter, 1 5/8" long, 7/32" head.	
	Ceiling ^d	Perpendicular	24	7	12		
	Wall	Either direction	24	8	12		
5/8	Wall	Either direction	16	8	16	13 gage, 1 3/8" long, 19/64" head; 0.098" diameter, 1 3/8" long, annular-ringed; 6d cooler nail, 0.092" diameter, 1 7/8" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 7/8" long, 19/64" head.	
	Ceiling	Either direction	16	7	12		
	Ceiling	Perpendicular	24	7	12		
	Type X at garage ceiling beneath habitable rooms	Perpendicular	24	6	6		1 7/8" long 6d coated nails or equivalent drywall screws. Screws shall comply with Section R702.3.5.1
	Wall	Either direction	24	8	12		
3/8	Wall	Either direction	16	8	16	13 gage, 1 3/8" long, 19/64" head; 0.098" diameter, 1 3/8" long, annular-ringed; 6d cooler nail, 0.092" diameter, 1 7/8" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 7/8" long, 19/64" head.	
	Ceiling ^d	Perpendicular	16	16	16	Same as above for 3/8" gypsum board and gypsum panel products.	
1/2 or 5/8	Wall	Either direction	16	16	24	Same as above for 1/2" and 5/8" gypsum board and gypsum panel products, respectively.	
	Ceiling	Either direction	16	16	16		
	Ceiling ^d	Perpendicular	24	12	16		
Two 3/8 layers	Wall	Either direction	16	16	16	Base ply nailed as above for 1/2" gypsum board and gypsum panel products; face ply installed with adhesive.	
	Ceiling	Perpendicular	24	24	24		

For SI: 1 inch = 25.4 mm.

- a. For application without adhesive, a pair of nails spaced not less than 2 inches apart or more than 2 1/2 inches apart shall be permitted to be used with the pair of nails spaced 12 inches on center.
- b. Screws shall be in accordance with Section R702.3.5.1. Screws for attaching gypsum board or gypsum panel products to structural insulated panels shall penetrate the wood structural panel facing not less than 1/16 inch.
- c. Where cold-formed steel framing is used with a clinching design to receive nails by two edges of metal, the nails shall be not less than 5/8 inch longer than the gypsum board or gypsum panel product thickness and shall have ringed shanks. Where the cold-formed steel framing has a nailing groove formed to receive the nails, the nails shall have barbed shanks or be 5d, 13 1/2 gage, 1 3/8 inches long, 19/64-inch head for 1/2-inch gypsum board or gypsum panel product; and 6d, 13 gage, 1 7/8 inches long, 19/64-inch head for 5/8-inch gypsum board or gypsum panel product.
- d. Three-eighths-inch-thick single-ply gypsum board or gypsum panel product shall not be used on a ceiling where a water-based textured finish is to be applied, or where it will be required to support insulation above a ceiling. On ceiling applications to receive a water-based texture material, either hand or spray applied, the gypsum board or gypsum panel product shall be applied perpendicular to framing. Where applying a water-based texture material, the minimum gypsum board thickness shall be increased from 3/8 inch to 1/2 inch for 16-inch on center framing, and from 1/2 inch to 5/8 inch for 24-inch on center framing or 1/2-inch sag-resistant gypsum ceiling board shall be used.

R702.3.5 Application. Supports and fasteners used to attach gypsum board and gypsum panel products shall comply with Table R702.3.5. Gypsum sheathing shall be attached to exterior walls in accordance with Table R602.3(1). Gypsum board and gypsum panel products shall be applied at right angles or parallel to framing members. All edges and ends of gypsum

board and gypsum panel products shall occur on the framing members, except those edges and ends that are perpendicular to the framing members. Interior gypsum board shall not be installed where it is directly exposed to the weather or to water.

R702.3.5.1 Screw fastening. Screws for attaching gypsum board and gypsum panel products to wood framing shall be Type W or Type S in accordance with ASTM C1002 and shall penetrate the wood not less than 5/8 inch (15.9 mm).

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 the residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 13/8 inches (35 mm) thick, or 20 minute fire-rated doors. Pull down stairs that have a 20 minute fire rating may be installed in garage/attic separations.

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 not have 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.

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.

R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side with 1/2-inch (12.7 mm) gypsum board.

**TABLE R302.6
DWELLING-GARAGE SEPARATION**

SEPARATION	MATERIAL
From the residence and attics	Not less than 1/2-inch gypsum board or equivalent applied to the garage side
From habitable rooms above the garage	Not less than 5/8-inch Type X gypsum board or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than 1/2-inch gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 1/2-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

THIS IS WHERE YOU CAN GET THE CODES:

2020 Indiana Residential Code (free, fully integrated, read-only digital copy)

<https://codes.iccsafe.org/content/document/1562>

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