

TABLE 721.1(3)—continued
MINIMUM PROTECTION FOR FLOOR AND ROOF SYSTEMS^{a, q}

FLOOR OR ROOF CONSTRUCTION	ITEM NUMBER	CEILING CONSTRUCTION	THICKNESS OF FLOOR OR ROOF SLAB (inches)				MINIMUM THICKNESS OF CEILING (inches)			
			4 hours	3 hours	2 hours	1 hour	4 hours	3 hours	2 hours	1 hour
28. Wood I-joist (minimum I-joist depth 9 ¹ / ₄ " with a minimum flange depth of 1 ¹ / ₂ " and a minimum flange cross-sectional area of 2.25 square inches; minimum web thickness of 3 ³ / ₈ ") @ 24" o.c. Unfaced fiberglass insulation or mineral wool insulation is installed between the I-joists supported on the upper surface of the flange by stay wires spaced 12" o.c.	28-1.1	Base layer of 5 ⁵ / ₈ " Type C gypsum wallboard attached directly to I-joists with 1 ⁵ / ₈ " Type S drywall screws spaced 12" o.c. with ends staggered. Minimum 0.0179" thick hat-shaped 7 ⁷ / ₈ -inch furring channel 16" o.c. (channels doubled at wallboard end joints), placed perpendicular to the joist and attached to each joist by 1 ⁵ / ₈ " Type S drywall screws after the base layer of gypsum wallboard has been applied. The middle and face layers of 5 ⁵ / ₈ " Type C gypsum wallboard applied perpendicular to the channel with end joints staggered. The middle layer is fastened with 1" Type S drywall screws spaced 12" o.c. The face layer is applied parallel to the middle layer but with the edge joints offset 24" from those of the middle layer and fastened with 1 ⁵ / ₈ " Type S drywall screws 8" o.c. The joints shall be taped and covered with joint compound.	—	—	—	Varies	—	—	2 ³ / ₄	—
29. Channel-shaped 18 gage steel joists (minimum depth 8") spaced a maximum 24" o.c. supporting tongue-and-groove wood structural panels (nominal minimum 3 ³ / ₄ " thick) applied perpendicular to framing members. Structural panels attached with 1 ⁵ / ₈ " Type S-12 screws spaced 12" o.c.	29-1.1	Base layer 5 ⁵ / ₈ " Type X gypsum board applied perpendicular to bottom of framing members with 1 ¹ / ₈ " Type S-12 screws spaced 12" o.c. Second layer 5 ⁵ / ₈ " Type X gypsum board attached perpendicular to framing members with 1 ⁵ / ₈ " Type S-12 screws spaced 12" o.c. Second layer joints offset 24" from base layer. Third layer 5 ⁵ / ₈ " Type X gypsum board attached perpendicular to framing members with 2 ³ / ₈ " Type S-12 screws spaced 12" o.c. Third layer joints offset 12" from second layer joints. Hat-shaped 7 ⁷ / ₈ -inch rigid furring channels applied at right angles to framing members over third layer with two 2 ³ / ₈ " Type S-12 screws at each framing member. Face layer 5 ⁵ / ₈ " Type X gypsum board applied at right angles to furring channels with 1 ¹ / ₈ " Type S screws spaced 12" o.c.	—	—	Varies	—	—	—	3 ³ / ₈	—

(continued)