

**TABLE 720.1(3) MINIMUM PROTECTION FOR FLOOR AND ROOF SYSTEMS<sup>a, q</sup>**

FLOOR OR ROOF CONSTRUCTION	ITEM NUMBER	CEILING CONSTRUCTION	THICKNESS OF FLOOR OR ROOF SLAB (inches)				MINIMUM THICKNESS OF CEILING (inches)			
			4 hour	3 hour	2 hour	1 hour	4 hour	3 hour	2 hour	1 hour
1. Siliceous aggregate concrete	1-1.1	Slab (no ceiling required). Minimum cover over nonprestressed reinforcement shall not be less than $\frac{3}{4}$ " <sup>b</sup> .	7.0	6.2	5.0	3.5	-	-	-	-
2. Carbonate aggregate concrete	2-1.1		6.6	5.7	4.6	3.2	-	-	-	-
3. Sand-lightweight concrete	3-1.1		5.4	4.6	3.8	2.7	-	-	-	-
4. Lightweight concrete	4-1.1		5.1	4.4	3.6	2.5	-	-	-	-
5. Reinforced concrete	5-1.1	Slab with suspended ceiling of vermiculite gypsum plaster over metal lath attached to $\frac{3}{4}$ " cold-rolled channels spaced 12" on center. Ceiling located 6" minimum below joists.	3	2	-	-	1	$\frac{3}{4}$	-	-
	5-2.1	$\frac{3}{8}$ " Type X gypsum wallboard <sup>c</sup> attached to 0.018 inch (No. 25 carbon sheet steel gage) by $\frac{7}{8}$ " deep by $2\frac{5}{8}$ " hat-shaped galvanized steel channels with 1"-long No. 6 screws. The channels are spaced 24" on center, span 35" and are supported along their length at 35" intervals by 0.033" (No. 21 galvanized sheet gage) galvanized steel flat strap hangers having formed edges that engage the lips of the channel. The strap hangers are attached to the side of the concrete joists with $\frac{5}{32}$ " by $1\frac{1}{4}$ " long power-driven fasteners. The wallboard is installed with the long dimension perpendicular to the channels. All end joints occur on channels and supplementary channels are installed parallel to the main channels, 12" each side, at end joint occurrences. The finished ceiling is located	-	-	$2\frac{1}{2}$	-	-	-	$\frac{5}{8}$	-