

TABLE 16-A—UNIFORM AND CONCENTRATED LOADS

USE OR OCCUPANCY		UNIFORM LOAD ¹ (psf)	CONCENTRATED LOAD (pounds)
Category	Description	× 0.0479 for kN/m ²	× 0.004 48 for kN
1. Access floor systems	Office use	50	2,000 ²
	Computer use	100	2,000 ²
2. Armories		150	0
3. Assembly areas ³ and auditoriums and balconies therewith	Fixed seating areas	50	0
	Movable seating and other areas	100	0
	Stage areas and enclosed platforms	125	0
4. Cornices and marquees		60 ⁴	0
5. Exit facilities ⁵		100	0 ⁶
6. Garages	General storage and/or repair	100	7
	Private or pleasure-type motor vehicle storage	50	7
7. Hospitals	Wards and rooms	40	1,000 ²
8. Libraries	Reading rooms	60	1,000 ²
	Stack rooms	125	1,500 ²
9. Manufacturing	Light	75	2,000 ²
	Heavy	125	3,000 ²
10. Offices		50	2,000 ²
11. Printing plants	Press rooms	150	2,500 ²
	Composing and linotype rooms	100	2,000 ²
12. Residential ⁸	Basic floor area	40	0 ⁶
	Exterior balconies	60 ⁴	0
	Decks	40 ⁴	0
	Storage	40	0
13. Restrooms ⁹			
14. Reviewing stands, grandstands, bleachers, and folding and telescoping seating		100	0
15. Roof decks	Same as area served or for the type of occupancy accommodated		
16. Schools	Classrooms	40	1,000 ²
17. Sidewalks and driveways	Public access	250	7
18. Storage	Light	125	
	Heavy	250	
19. Stores		100	3,000 ²
20. Pedestrian bridges and walkways		100	

¹See Section 1607 for live load reductions.²See Section 1607.3.3, first paragraph, for area of load application.³Assembly areas include such occupancies as dance halls, drill rooms, gymnasiums, playgrounds, plazas, terraces and similar occupancies that are generally accessible to the public.⁴When snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design as determined by the building official. See Section 1614. For special-purpose roofs, see Section 1607.4.4.⁵Exit facilities shall include such uses as corridors serving an occupant load of 10 or more persons, exterior exit balconies, stairways, fire escapes and similar uses.⁶Individual stair treads shall be designed to support a 300-pound (1.33 kN) concentrated load placed in a position that would cause maximum stress. Stair stringers may be designed for the uniform load set forth in the table.⁷See Section 1607.3.3, second paragraph, for concentrated loads. See Table 16-B for vehicle barriers.⁸Residential occupancies include private dwellings, apartments and hotel guest rooms.⁹Restroom loads shall not be less than the load for the occupancy with which they are associated, but need not exceed 50 pounds per square foot (2.4 kN/m²).

TABLE 16-B—SPECIAL LOADS¹

USE		VERTICAL LOAD	LATERAL LOAD
Category	Description	(pounds per square foot unless otherwise noted)	
		$\times 0.0479$ for kN/m ²	
1. Construction, public access at site (live load)	Walkway, see Section 3303.6	150	
	Canopy, see Section 3303.7	150	
2. Grandstands, reviewing stands, bleachers, and folding and telescoping seating (live load)	Seats and footboards	120 ²	See Footnote 3
3. Stage accessories (live load)	Catwalks	40	
	Followspot, projection and control rooms	50	
4. Ceiling framing (live load)	Over stages	20	
	All uses except over stages	10 ⁴	
5. Partitions and interior walls, see Sec. 1611.5 (live load)			5
6. Elevators and dumbwaiters (dead and live loads)		$2 \times \text{total loads}^5$	
7. Mechanical and electrical equipment (dead load)		Total loads	
8. Cranes (dead and live loads)	Total load including impact increase	$1.25 \times \text{total load}^6$	$0.10 \times \text{total load}^7$
9. Balcony railings and guardrails	Exit facilities serving an occupant load greater than 50		50 ⁸
	Other than exit facilities		20 ⁸
	Components		25 ⁹
10. Vehicle barriers	See Section 311.2.3.5		6,000 ¹⁰
11. Handrails		See Footnote 11	See Footnote 11
12. Storage racks	Over 8 feet (2438 mm) high	Total loads ¹²	See Table 16-O
13. Fire sprinkler structural support		250 pounds (1112 N) plus weight of water-filled pipe ¹³	See Table 16-O
14. Explosion exposure	Hazardous occupancies, see Section 307.10		

¹The tabulated loads are minimum loads. Where other vertical loads required by this code or required by the design would cause greater stresses, they shall be used.

²Pounds per lineal foot ($\times 14.6$ for N/m).

³Lateral sway bracing loads of 24 pounds per foot (350 N/m) parallel and 10 pounds per foot (145.9 N/m) perpendicular to seat and footboards.

⁴Does not apply to ceilings that have sufficient total access from below, such that access is not required within the space above the ceiling. Does not apply to ceilings if the attic areas above the ceiling are not provided with access. This live load need not be considered as acting simultaneously with other live loads imposed upon the ceiling framing or its supporting structure.

⁵Where Appendix Chapter 30 has been adopted, see reference standard cited therein for additional design requirements.

⁶The impact factors included are for cranes with steel wheels riding on steel rails. They may be modified if substantiating technical data acceptable to the building official is submitted. Live loads on crane support girders and their connections shall be taken as the maximum crane wheel loads. For pendant-operated traveling crane support girders and their connections, the impact factors shall be 1.10.

⁷This applies in the direction parallel to the runway rails (longitudinal). The factor for forces perpendicular to the rail is $0.20 \times$ the transverse traveling loads (trolley, cab, hooks and lifted loads). Forces shall be applied at top of rail and may be distributed among rails of multiple rail cranes and shall be distributed with due regard for lateral stiffness of the structures supporting these rails.

⁸A load per lineal foot ($\times 14.6$ for N/m) to be applied horizontally at right angles to the top rail.

⁹Intermediate rails, panel fillers and their connections shall be capable of withstanding a load of 25 pounds per square foot (1.2 kN/m²) applied horizontally at right angles over the entire tributary area, including openings and spaces between rails. Reactions due to this loading need not be combined with those of Footnote 8.

¹⁰A horizontal load in pounds (N) applied at right angles to the vehicle barrier at a height of 18 inches (457 mm) above the parking surface. The force may be distributed over a 1-foot-square (304.8-millimeter-square) area.

¹¹The mounting of handrails shall be such that the completed handrail and supporting structure are capable of withstanding a load of at least 200 pounds (890 N) applied in any direction at any point on the rail. These loads shall not be assumed to act cumulatively with Item 9.

¹²Vertical members of storage racks shall be protected from impact forces of operating equipment, or racks shall be designed so that failure of one vertical member will not cause collapse of more than the bay or bays directly supported by that member.

¹³The 250-pound (1.11 kN) load is to be applied to any single fire sprinkler support point but not simultaneously to all support joints.