

2010 Edition of ASCE 7
Minimum Design Loads for Buildings and Other Structures

Errata

TABLE 4-1 Minimum Uniformly Distributed Live Loads, L_o , and Minimum Concentrated Live Loads

<i>Occupancy or Use</i>	<i>Uniform psf (kN/m²)</i>	<i>Conc. lb (kN)</i>
Apartments (see Residential)		
Access floor systems		
Office use	50 (2.4)	2,000 (8.9)
Computer use	100 (4.79)	2,000 (8.9)
Armories and drill rooms	150 (7.18) ^a	
Assembly areas and theaters		
Fixed seats (fastened to floor)	60 (2.87) ^a	
Lobbies	100 (4.79) ^a	
Movable seats	100 (4.79) ^a	
Platforms (assembly)	100 (4.79) ^a	
Stage floors	150 (7.18) ^a	
<u>Assembly areas (other)</u>	<u>100 (4.79)^a</u>	
Balconies and decks	1.5 times the live load for the occupancy area served. Not required to exceed 100 psf (4.79 kN/m ²)	
Catwalks for maintenance access	40 (1.92)	300 (1.33)
Corridors		
First floor	100 (4.79)	
Other floors, same as occupancy served except as indicated	<u>Same as occupancy served except as indicated</u>	
Dining rooms and restaurants	100 (4.79) ^a	
Dwellings (see Residential)		
Elevator machine room grating (on area of 2 in. by 2 in. (50 mm by 50 mm))		300 (1.33)
Finish light floor plate construction (on area of 1 in. by 1 in. (25 mm by 25 mm))		200 (0.89)
Fire escapes	100 (4.79)	
On single-family dwellings only	40 (1.92)	
Fixed ladders	See Section 4.5	
Garages (passenger vehicles only)	40 (1.92) ^{a,b,c}	
Trucks and buses	^c	
Handrails, guardrails, and grab bars	See Section 4.5	
Helipads	60 (2.87) ^{d,e}	^{e,f,g}
	nonreducible	
Hospitals		
Operating rooms, laboratories	60 (2.87)	1,000 (4.45)
Patient rooms	40 (1.92)	1,000 (4.45)
Corridors above first floor	80 (3.83)	1,000 (4.45)
Hotels (see Residential)		
Libraries		
Reading rooms	60 (2.87)	1,000 (4.45)
Stack rooms	150 (7.18) ^{a,h}	1,000 (4.45)
Corridors above first floor	80 (3.83)	1,000 (4.45)

TABLE 4-1 (Continued)

<i>Occupancy or Use</i>	<i>Uniform psf (kN/m²)</i>	<i>Conc. lb (kN)</i>
Manufacturing		
Light	125 (6.00) ^a	2,000 (8.90)
Heavy	250 (11.97) ^a	3,000 (13.40)
Office buildings		
File and computer rooms shall be designed for heavier loads based on anticipated occupancy		
Lobbies and first-floor corridors	100 (4.79)	2,000 (8.90)
Offices	50 (2.40)	2,000 (8.90)
Corridors above first floor	80 (3.83)	2,000 (8.90)
Penal institutions		
Cell blocks	40 (1.92)	
Corridors	100 (4.79)	
Recreational uses		
Bowling alleys, poolrooms, and similar uses	75 (3.59) ^a	
Dance halls and ballrooms	100 (4.79) ^a	
Gymnasiums	100 (4.79) ^a	
Reviewing stands, grandstands, and bleachers	100 (4.79) ^{a,k}	
Stadiums and arenas with fixed seats (fastened to the floor)	60 (2.87) ^{a,k}	
Residential		
One- and two-family dwellings		
Uninhabitable attics without storage	10 (0.48) ^l	
Uninhabitable attics with storage	20 (0.96) ^m	
Habitable attics and sleeping areas	30 (1.44)	
All other areas except stairs	40 (1.92)	
All other residential occupancies		
Private rooms and corridors serving them	40 (1.92)	
Public rooms ^a and corridors serving them	100 (4.79)	
Roofs		
Ordinary flat, pitched, and curved roofs	20 (0.96) ⁿ	
Roofs used for roof gardens	100 (4.79)	
Roofs used for assembly purposes <u>other occupancies</u>	Same as occupancy served	
Roofs used for other occupancies <u>special purposes</u>	o	o
Awnings and canopies		
Fabric construction supported by a skeleton structure	5 (0.24) nonreducible	300 (1.33) applied to skeleton structure
Screen enclosure support frame	5 (0.24) nonreducible and <u>based on the tributary area of the roof supported by the frame applied to the roof frame members only, not the screen</u>	200 (0.89) applied to supporting roof frame members only
All other construction	20 (0.96)	
Primary roof members, exposed to a work floor		
Single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs over manufacturing, storage warehouses, and repair garages		2,000 (8.9)
All other primary roof members		300 (1.33)
All roof surfaces subject to maintenance workers		300 (1.33)

TABLE 4-1 (Continued)

<i>Occupancy or Use</i>	<i>Uniform psf (kN/m²)</i>	<i>Conc. lb (kN)</i>
Schools		
Classrooms	40 (1.92)	1,000 (4.45)
Corridors above first floor	80 (3.83)	1,000 (4.45)
First-floor corridors	100 (4.79)	1,000 (4.45)
Scuttles, skylight ribs, and accessible ceilings		200 (0.89)
Sidewalks, vehicular driveways, and yards subject to trucking	250 (11.97) ^{a,p}	8,000 (35.60) ^q
Stairs and exit ways	100 (4.79)	300 ^r
One- and two-family dwellings only	40 (1.92)	300 ^r
Storage areas above ceilings	20 (0.96)	
Storage warehouses (shall be designed for heavier loads if required for anticipated storage)		
Light	125 (6.00) ^a	
Heavy	250 (11.97) ^a	
Stores		
Retail		
First floor	100 (4.79)	1,000 (4.45)
Upper floors	75 (3.59)	1,000 (4.45)
Wholesale, all floors	125 (6.00) ^a	1,000 (4.45)
Vehicle barriers	See Section 4.5	
Walkways and elevated platforms (other than exit ways)	60 (2.87)	
Yards and terraces, pedestrian	100 (4.79) ^a	

^aLive load reduction for this use is not permitted by Section 4.8 unless specific exceptions apply.

^bFloors in garages or portions of a building used for the storage of motor vehicles shall be designed for the uniformly distributed live loads of Table 4-1 or the following concentrated load: (1) for garages restricted to passenger vehicles accommodating not more than nine passengers, 3,000 lb (13.35 kN) acting on an area of 4.5 in. by 4.5 in. (114 mm by 114 mm); and (2) for mechanical parking structures without slab or deck that are used for storing passenger vehicles only, 2,250 lb (10 kN) per wheel.

^cDesign for trucks and buses shall be ~~per in accordance with~~ AASHTO LRFD Bridge Design Specifications; however, provisions for fatigue and dynamic load allowance ~~therein~~ are not required to be applied.

^dUniform load shall be 40 psf (1.92 kN/m²) where the design basis helicopter has a maximum take-off weight of 3,000 lbs (13.35 kN) or less. This load shall not be reduced.

^eLabeling of helicopter capacity shall be as required by the authority having jurisdiction.

^fTwo single concentrated loads, 8 ft (2.44 m) apart shall be applied on the landing area (representing the helicopter's two main landing gear, whether skid type or wheeled type), each having a magnitude of 0.75 times the maximum take-off weight of the helicopter and located to produce the maximum load effect on the structural elements under consideration. The concentrated loads shall be applied over an area of 8 in. by 8 in. (200 mm by 200 mm) and are not required to act concurrently ~~shall not be concurrent~~ with other uniform or concentrated live loads.

^gA single concentrated load of 3,000 lbs (13.35 kN) shall be applied over an area of 4.5 in. by 4.5 in. (114 mm by 114 mm), located so as to produce the maximum load effects on the structural elements under consideration. The concentrated load ~~need not be assumed~~ is not required to act concurrently with other uniform or concentrated live loads.

^hThe loading applies to stack room floors that support nonmobile, double-faced library book stacks subject to the following limitations: (1) The nominal book stack unit height shall not exceed 90 in. (2,290 mm); (2) the nominal shelf depth shall not exceed 12 in. (305 mm) for each face; and (3) parallel rows of double-faced book stacks shall be separated by aisles not less than 36 in. (914 mm) wide.

ⁱPiled snow from snow removal operations (e.g., piled using a truck with an attached plow) shall be based on a density of 40 pcf (6.27 kN/m³) and planned maximum depths subject to the approval of the authority having jurisdiction.

^jAs required by railroad company.

TABLE 4-1 (Continued)

^kIn addition to the vertical live loads, the design shall include horizontal swaying forces applied to each row of the seats as follows: 24 lb per linear ft of seat applied in a direction parallel to each row of seats and 10 lb per linear ft of seat applied in a direction perpendicular to each row of seats. The parallel and perpendicular horizontal swaying forces need not be applied simultaneously.

^lUninhabitable attic areas without storage are those where the maximum clear height between the joist and rafter is less than 42 in. (1,067 mm), or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 in. (1,067 mm) in height by 24 in. (610 mm) in width, or greater, within the plane of the trusses. This live load need not be assumed to act concurrently with any other live load requirement.

^mUninhabitable attic areas with storage are those where the maximum clear height between the joist and rafter is 42 in. (1,067 mm) or greater, or where there are two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 in. (1,067 mm) in height by 24 in. (610 mm) in width, or greater, within the plane of the trusses. ~~For attics constructed of trusses. At the trusses,~~ the live load need only be applied to those portions of the bottom chords where both of the following conditions are met:

- i. The attic area is accessible from an opening not less than 20 in. (508 mm) in width by 30 in. (762 mm) in length that is located where the clear height in the attic is a minimum of 30 in. (762 mm); and
- ii. The slope of the truss bottom chord is no greater than 2 units vertical to 12 units horizontal (9.5% slope).

The remaining portions of the bottom chords shall be designed for a uniformly distributed concurrent live load of not less than 10 lb/ft² (0.48 kN/m²).

ⁿWhere uniform roof live loads are reduced to less than 20 lb/ft² (0.96 kN/m²) in accordance with Section 4.8.4-2 and are applied to the design of structural members arranged so as to create continuity, the reduced roof live load shall be applied to adjacent spans or to alternate spans, whichever produces the greatest unfavorable load effect.

^oRoofs used for other special purposes shall be designed for appropriate loads as approved by the authority having jurisdiction.

^pOther uniform loads in accordance with an approved method, which contains provisions for truck loadings, shall also be considered where appropriate.

^qThe concentrated wheel load shall be applied on an area of 4.5 in. by 4.5 in. (114 mm by 114 mm).

^rMinimum concentrated load on stair treads (on area of 2 in. by 2 in. [50 mm by 50 mm]) is to be applied nonconcurrent with the uniform load.