Table 4.1.5.9.
Specified Concentrated Live Loads on an Area of Floor or Roof

Forming Part of Sentence 4.1.5.9.(1)

Item	Column 1	Column 2	Column 3
	Area of Floor or Roof	**Minimum Specified Concentrated Load, kN**	**Loaded Area, mm x mm**
1.	Roof surfaces	1.3	200 x 200
2.	Floors of classrooms	4.5	750 x 750
3.	Floors of offices, manufacturing *buildings*, hospital wards and *stages*	9.0	750 x 750
4.	Floors and areas used by vehicles not exceeding 4000 kg gross weight	18	120 x 120
5.	Floors and areas used by vehicles exceeding 4000 kg but not exceeding 9000 kg gross weight	36	120 x 120
6.	Floors and areas used by vehicles exceeding 9000 kg gross weight	54	250 x 600
7.	Driveways and sidewalks over areaways and *basements*	54	250 x 600

4.1.5.10. Sway Forces in Assembly Occupancies

(1) The floor assembly and other structural elements that support fixed seats in any *building* used for *assembly occupancies* accommodating large numbers of people at one time, such as grandstands, stadia and *theatre* balconies, shall be designed to resist a horizontal force equal to not less than 0.3 kN for each metre length of seats acting parallel to each row of seats, and not less then 0.15 kN for each metre length of seats acting at right angles to each row of seats, based on the assumption that these forces are acting independently of each other.

4.1.5.11. Crane-Supporting Structures and Impact of Machinery and Equipment

(1) The minimum specified load due to equipment, machinery or other objects that may produce impact shall be the sum of the weight of the equipment or machinery and its maximum lifting capacity, multiplied by an appropriate factor listed in Table 4.1.5.11.

Table 4.1.5.11.
Factors for the Calculation of Impact Loads

Forming Part of Sentence 4.1.5.11.(1)

Item	Column 1	Column 2
	Cause of Impact	**Factor**
1.	Operation of cab or radio-operated cranes	1.25
2.	Operation of pendant or hand-operated cranes	1.10
3.	Operation of elevators	(1)
4.	Supports for light machinery, shaft or motor-driven	1.20
5.	Supports for reciprocating machinery (e.g. compressors)	1.50
6.	Supports for power-driven units (e.g. piston engines)	1.50

Note to Table 4.1.5.11.:

(1) See ASME A17.1 / CSA B44, "Safety Code for Elevators and Escalators."

(2) Crane-supporting structures shall be designed for the appropriate load combinations listed in Article 4.1.3.2.

(3) Crane runway structures shall be designed to resist a horizontal force applied normal to the top of the rails equal to not less than 20% of the sum of the weights of the lifted load and the crane trolley, excluding other parts of the crane.

(4) The force described in Sentence (3) shall be equally distributed on each side of the runway and shall be assumed to act in either direction.

(5) Crane runway structures shall be designed to resist a horizontal force applied parallel to the top of the rails equal to not less than 10% of the maximum wheel loads of the crane.

4.1.5.12. Bleachers

(1) Bleacher seats shall be designed for a uniformly distributed *live load* of 1.75 kN for each linear metre or for a concentrated load of 2.2 kN distributed over a length of 750 mm, whichever produces the most critical effect on the supporting members.

(2) Bleachers shall be checked by the erector after erection to ensure that all structural members, including bracing specified in the design, have been installed.

(3) Telescopic bleachers shall be provided with locking devices to ensure stability while in use.

4.1.5.13. Helicopter Landing Areas

(1) Helicopter landing areas on roofs shall be constructed in conformance with the requirements for heliports contained in Part III of the *Canadian Aviation Regulations* made under the *Aeronautics Act* (Canada).