



Loading On Guards

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

9.8.8.2. Loading on Guards (See Note A-9.8.8.2.)

(1) Except as provided in Sentences (2), (3), (5) and (6) guards shall be designed to resist the specified loads prescribed in Table 9.8.8.2.

(2) The size of the opening between two adjacent vertical elements within a guard shall not exceed the limits required by Sentence 9.8.8.5.(1) when each of these elements is subjected to a specified live load of 0.1 kN applied in opposite directions in the in-plane direction of the guard so as to produce the most critical effect.

(3) For guards within dwelling units and within houses with a secondary suite including their common spaces and for exterior guards serving not more than two dwelling units, where the width and spacing of balusters are such that three balusters can be engaged by a load imposed over a 300 mm width, the load shall be imposed so as to engage three balusters.

(4) None of the specified loads specified in Table 9.8.8.2. need be considered to act simultaneously.

(5) For guards within dwelling units and within houses with secondary suite including their common spaces and for exterior guards serving not more than two dwelling units, Table 9.8.8.2. need not apply where the guard construction has been demonstrated to provide effective performance.

(6) Guards constructed in accordance with the requirements in MMAH Supplementary Standard SB7, “Guards for Housing and Small Buildings” shall be deemed to satisfy the requirements of Sentence (1).

9.8.8.7. Glass in Guards

(1) Glass in guards shall be

(a) safety glass of the laminated or tempered type conforming to CAN/CGSB-12.1, “Safety Glazing”, or

(b) wired glass conforming to CAN/CGSB-12.11-M, “Wired Safety Glass”.



OBJECTIVE

Guards installed in dwelling units or on exterior stairs serving not more than 2 dwelling units must meet the loading requirement in Table 9.8.8.2. Guards that are not designed in accordance with Supplementary Standard SB-7 (SB-7) are required to conform to Part 4 of the Building Code. SB-7 is specifically for guards consisting of wood components, therefore, guards consisting of glass or metal such as steel or aluminum must be professional engineered. Proof of the engineered design must be submitted to the building inspector prior to installation.

Horizontal loads applied inward on elements within the guards such as solid panels (glass, wood, etc) and pickets, must be applied over a maximum width and height of 300 mm (11¾ in); meaning that if loads are applied on balusters (pickets) three pickets will be engaged. Refer to the table below for the design load.

TABLE 9.8.8.2. - SPECIFIED LOADS FOR GUARDS

| LOCATION OF GUARD | MINIMUM DESIGN LOADS | | |
|--|--|--|--|
| | HORIZONTAL LOAD APPLIED INWARD OR OUTWARD AT ANY POINT AT THE MINIMUM REQUIRED HEIGHT OF THE GUARD | HORIZONTAL LOAD APPLIED OUTWARD ON ELEMENTS WITHIN THE GUARD, INCLUDING SOLID PANELS AND BALUSTERS | EVENLY DISTRIBUTED VERTICAL LOAD APPLIED AT THE TOP OF THE GUARD |
| GUARDS WITHIN DWELLING UNITS AND EXTERIOR GUARDS SERVING NOT MORE THAN 2 DWELLING UNITS | 0.5 kN/m OR CONCENTRATED LOAD OF 1.0 kN APPLIED AT ANY POINT (1) | 0.5 kN/m APPLIED OVER A MAXIMUM WIDTH OF 300mm AND A HEIGHT OF 300mm (2) | 1.5 kN/m |
| GUARDS SERVING ACCESS WAYS TO EQUIPMENT PLATFORMS AND SIMILAR AREAS WHERE THE GATHERING OF MANY PEOPLE IS IMPROBABLE | CONCENTRATED LOAD OF 1.0 kN APPLIED AT ANY POINT | CONCENTRATED LOAD OF 0.5 kN APPLIED OVER AN AREA OF 100mm BY 100mm LOCATED AT ANY POINT ON THE ELEMENT OR ELEMENTS SO AS TO PRODUCE THE MOST CRITICAL EFFECT | 1.5 kN/m |
| ALL OTHER GUARDS | 0.75 kN/m OR CONCENTRATED LOAD OF 1.0 kN APPLIED AT ANY POINT (1) | CONCENTRATED LOAD OF 0.5 kN APPLIED OVER AN AREA OF 100mm BY 100mm LOCATED AT ANY POINT ON THE ELEMENT OR ELEMENTS SO AS TO PRODUCE THE MOST CRITICAL EFFECT | 1.5 kN/m |

NOTES TO TABLE 9.8.8.2:

- (1) THE LOAD THAT CREATES THE MOST CRITICAL CONDITION SHALL APPLY.
- (2) SEE SENTENCE (3).