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Subject: Equivalency Letter for loading requirements for handrails and guards per 2015, 2018, and 2021 versions of IBC and IRC

Dear Chad Chislett,

Intertek Testing Services NA Ltd. (Intertek) has reviewed the applicable sections relevant to load requirements for handrails and guards of the 2015 and 2018 version of the International Building Code (IBC) and International Residential Code (IRC) to determine if they have remained the same in the current edition of 2021 IBC and 2021 IRC.

Intertek has reviewed and summarized Section 1607.9.1 of the 2021 IBC, as follows:

- 1) Handrails and guards shall be designed to resist a linear load of 50 pounds per linear foot (plf) (0.73 kN/m) applied in any direction along the handrail or top rail.  
Exceptions:
  - a) For one- and two-family dwellings, only the single concentrated load required by Section 1607.9.1.1 (point 2 below) shall be applied.
  - b) In Group I-3, F, H and S occupancies, for areas that are not accessible to the general public and that have an occupant load less than 50, the minimum load shall be 20 pounds per foot (0.29kN/m).
- 2) Handrails and guards shall be designed to resist a concentrated load of 200 pounds (0.89 kN), applied in any direction at any point on the handrail or top rail and to transfer the load through the supports to the structure to produce the maximum load effect on the element being considered.
- 3) Balusters, panel fillers and guard infill components, including all rails except the handrail and the top rail, shall be designed to resist a concentrated load load of 50 pounds (0.22 kN) on an area not to exceed 12 in. by 12 in. (305 mm by 305 mm) including openings and space between rails and located so as to produce the maximum load effect.

The relevant handrails and guards section number was updated in the 2021 version of the IBC to Section 1607.9.1. Previous versions of the IBC, 2015 and 2018, referenced Section 1607.8.1. The loading requirements have remained the same for 2015, 2018, and 2021 of the IBC.



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The loading requirements for the IRC listed in Table R301.5 are the same as point 2 and 3 listed above for IBC; loading per point 1 is not required for IRC. The loading requirements have remained the same for 2015, 2018, and 2021 of the IRC.

If you have any questions regarding this letter report, please do not hesitate to contact the undersigned.

Sincerely,

**INTERTEK TESTING SERVICES NA, INC.**

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