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Chad Chislett
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Dear Mr. Chislett,

Subject: 2020 NBC and 2023 NBC(AE) Equivalency Letter

Intertek Testing Services NA Ltd. (Intertek) has conducted a review of the following Articles of the 2020 National Building Code and National Building Code – 2023 Alberta Edition for equivalency.

- Article 4.1.5.14, *Loads on Guards and Handrails*
- Specified Loads for Guards in Article 9.8.8.2, *Loads on Guards*

The findings from the review have been summarized in the following pages.



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From 2020 NBC and 2023 NBC(AE):

Division B – Part 3 Article 4.1.5.14 – Loads on Guards and Handrails

(See Note A-4.1.5.14. and 4.1.5.15.(1).)

- 1) The minimum horizontal specified *live load* applied outward at the minimum required height of every required *guard* shall be
 - a) 3.0 kN/m for open viewing stands without fixed seats and for *means of egress* in grandstands, stadia, bleachers and arenas,
 - b) 1.0 kN applied at any point, so as to produce the most critical effect, for access ways to equipment platforms, contiguous stairs and similar areas where the gathering of many people is improbable, and
 - c) 0.75 kN/m or 1.0 kN applied at any point so as to produce the most critical effect, whichever governs, for locations other than those described in Clauses (a) and (b).
- 2) The minimum horizontal specified *live load* applied inward at the minimum required height of every required *guard* shall be half that specified in Sentence (1).
- 3) Individual elements within the *guard*, including solid panels and pickets, shall be designed for a horizontal specified *live load* of 0.5 kN applied outward over an area of 100 mm by 100 mm located at any point on the element or elements so as to produce the most critical effect.
- 4) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Part 3 when each of these elements is subjected to a horizontal 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.
- 5) The specified *live loads* required in Sentence (3) need not be considered to act simultaneously with the loads provided for in Sentences (1), (2), (6) and (7).
- 6) The minimum specified *live load* applied vertically at the top of every required *guard* shall be 1.5 kN/m and need not be considered to act simultaneously with the horizontal specified *live load* provided for in Sentences (1), (3) and (7).
- 7) Handrails and their supports shall be designed and constructed to withstand the following minimum specified *live loads*, which need not be considered to act simultaneously:
 - a) 0.9 kN applied at any point and in any direction for all handrails, and
 - b) 0.7 kN/m applied in any direction for handrails not located within *dwelling units*.

Note A-4.1.5.14. and 4.1.5.15.(1) Design of Guards. In the design of guards, due consideration should be given to the durability of the members and their connections.



Division B – Part 9 Table 9.8.8.2 – Specified Loads for Guards				
Location of Guard	Minimum Specified Loads	2020 NBC	2023 NBC(AE)	Intertek Comments
Guards within dwelling units and exterior guards serving not more than two dwelling units	Horizontal Load Applied Inward or Outward at any Point at the Minimum Required Height of the Guard	0.5 kN/m OR concentrated load of 1.0 kN applied at any point ⁽¹⁾	0.5 kN/m OR concentrated load of 1.0 kN applied at any point ⁽¹⁾	Equivalent
	Horizontal Load Applied Outward on Elements Within the Guard, Including Solid Panels and Balusters	0.5 kN applied over a maximum width of 300 mm and a height of 300 mm ⁽²⁾	0.5 kN applied over a maximum width of 300 mm and a height of 300 mm ⁽²⁾	Equivalent
	Evenly Distributed Vertical Load Applied at the Top of the Guard	1.5 kN/m	1.5 kN/m	Equivalent

Note 1: The load that creates the most critical condition shall apply.

Note 2: 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.

Based on the information shown above, Intertek confirms that Article 4.1.5.14, *Loads on Guards and Handrails* and Specified Loads for Guards in Article 9.8.8.2, *Loads on Guards*, in the 2020 NBC are equivalent to those in the 2023 NBC(AE).

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

Sincerely,

INTERTEK TESTING SERVICES NA LTD.

Reported by:

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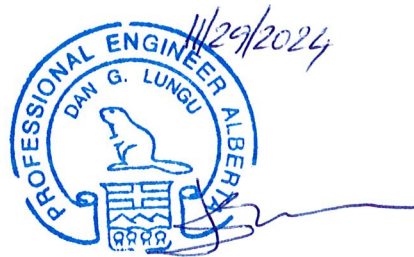
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