

Building Ventilation Standards

This bulletin clarifies that the minimum requirements for building ventilation with respect to Section 6.3. of the 2025 VBBL is the ASHRAE 62-2001 standard.

Application

This Bulletin clarifies the requirements for ventilation design of buildings under Section 6.3. of the 2025 Building By-law. The initial publication of the 2025 Building By-law does not correctly identify ASHRAE 62-2001 as the minimum applicable standard for ventilation design, as the references to ventilation in Part 6 were not correctly associated with the ASHRAE 62-2001 standard.

The affected rows in Table 1.3.1.2. should read as follows:

ASHRAE	ANSI/ASHRAE 62-2001 (except addendum n)	Ventilation for Acceptable Indoor Air Quality (except Addendum n)	6.3.1.1.(2) 6.3.1.1.(3) 10.2.2.3.(1) A-9.25.5.2.
ASHRAE	ANSI/ASHRAE 62.1-2016	Ventilation for Acceptable Indoor Air Quality	6.3.2.2.(1)

Table 1.: Ref.: 2025 VBBL, Division B of Book I (General) Table 1.3.1.2.

Technical Basis

Over successive editions, ASHRAE 62.1. has permitted reduced ventilation rates to promote with corresponding greater efficiencies. However, reduced ventilation rates have a direct impact on the ability of the ventilation system to effectively remove Carbon Dioxide (CO₂) and other airborne contaminants from the interior occupied spaces.

On March 19, 2021 Health Canada released their indoor air quality (IAQ) findings for CO₂ and other contaminants, thereby introducing new baseline parameters for consideration by the building industry, which has significant implications for building ventilation design.

Carbon Dioxide has long been recognized as a suitable proxy for monitoring interior air quality from a practical standpoint. Health Canada's guidelines establish a maximum long-term exposure limit of 1 000 ppm for CO₂ based on 24-hour average. Performance models utilizing ASHRAE 62.1 ventilation rate have shown that the Health Canada limits of 1,000ppm are exceeded in some scenarios.



Figure 1.: Modelled ASHRAE 62.1-2016 Ventilation performance.

Given the potential to exceed published health guidelines, it is the position of the Chief Building Official that for the purposes of building ventilation design, ASHRAE 62-2001 (except Addendum n) represents the applicable minimum design for building ventilation which is reflective of Health Canada guidelines for acceptable long-term CO₂ exposure.

This was reflected in prior versions of the VBBL, and was intended to be fully carried forwards into the 2025 VBBL, excepting that updates to Table 1.3.1.2. under ASHRAE 62-2001 did not correctly reflect this intent. However, updates in Part 10 of the 2025 VBBL for buildings complying with ASHRAE 90.1 do correctly reference ASHRAE 62-2001. Staff intend to formalize this errata through by-law amendment in the near future.

Professionals designing building mechanical systems are responsible for the safety and wellbeing of the occupants of the building, and it is therefore expected that designers consider this concern and design the building ventilation system accordingly.

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