



February 18, 2022

## Letter of Notice

*ASHRAE 62 – 2001 Ventilation for Acceptable Indoor Air Quality (Except addendum n)*

*RE: Use of newer editions of ASHRAE 62 Ventilation for Acceptable Indoor Air Quality (except addendum n)*

### **National Building Code of Canada 2015 (NBC 2015)**

The NBC is a model code which, when adopted or adapted by a province or territory, becomes a regulation. It is not a textbook on building design or construction. The design of a technically sound building depends upon many factors beyond simple compliance with building regulations. Such factors include the availability of knowledgeable practitioners who have received appropriate education, training and experience and who have some degree of familiarity with the principles of good building practice and experience using textbooks, reference manuals and technical guides.

### **Compliance with the NBC 2015**

Sentence 1.2.1.1.(1)[A] NBC 2015 states compliance with this Code shall be achieved by;

- a) complying with the applicable acceptable solutions in Division B of the code, or
- b) using alternative solutions that will achieve at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions.

Clause 6.2.1.1.(1)(a) NBC 2015 states heating, ventilating and air-conditioning systems, including mechanical refrigeration equipment, shall be designed, constructed and installed in conformance with good engineering practice such as that described in, but not limited to, the ASHRAE Handbooks and Standards.

### **Request**

Industry professionals have requested clarification on acceptance of use of more recent editions of ANSI/ASHRAE 62-2001 *Ventilation for Acceptable Indoor Air Quality (except addendum n)* within the jurisdiction of the City of Whitehorse as provided under the Building and Plumbing Bylaw.

### **Rational for acceptance**

There are several newer editions of the ANSI/ASHRAE 62-2001 Standard referenced in NBC 2015 Sentence 1.3.1.2.(1). Some of the benefits of the updated standard include;

- Accounts for both occupant and building sources independently when evaluating minimum ventilation rates. This has been found to increase and decrease ventilation rates depending on the occupancy.

- Accounts for distribution type by allowing ventilation rates to be increased or decreased depending on the effectiveness of the system. As an example, newer systems such as displacement ventilation systems allow reduction of airflow up to 20% as they have been found to better control contaminant levels in the space, alternatively, supply and return at high level requires an increase of 20% in ventilation to account for short cycling of air.
- Classifies air based on contaminant levels which permits or prohibits recirculation depending on sources of contamination.
- Defines intake clearances which in some applications increase the requirements over those defined in Part 6 of the NBCC; and
- Defines procedures for evaluating system efficiency in multi-zone systems to account for the air distribution from central air systems and ensure adequate ventilation is provided to each zone independently.

With adoption of the National Building Code 2015, including efficiency errata, and inclusion of National Energy Code for Buildings 2017 by bylaw there are many sustainable design practices that have been improved upon compared to the referenced standard.

### Accepted Method

Designs under a more recent edition of the referenced standard - ANSI/ASHRAE 62-2001 Ventilation for Acceptable Indoor Air Quality (except addendum n) will be accepted under the following criteria:

- A Yukon licensed Professional Engineer covering the mechanical discipline for the project shall review, sign and seal the mechanical drawings for the project.
- The Yukon licensed Professional Engineer shall identify in writing the edition of the ASHRAE 62 standard proposed to be used, and that the ventilation rates will be sufficient for the use of the occupancy intended.
- The Yukon licensed Professional Engineer shall state that the proposed standard will be used in its entirety for the scope of work of the entire project; and
- The objective of the Code to limit the probability that, as a result of the design or construction of the building or facility, a person in the building or facility will be exposed to an unacceptable risk of illness due to unsanitary conditions shall not be reduced. The risk of illness due to unsanitary conditions and function addressed in this code are those caused by;
  - OH1.1 – inadequate indoor air quality
  - F50 – to provide air suitable for breathing

Should you have any questions please contact the undersigned.



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