

**Interpretation IC 170-2013-15 of  
ANSI/ASHRAE/ASHE Standard 170-2013  
Ventilation of Health Care Facilities**

Date Approved: June 26, 2018

**Request from:** Curtis Boudreau, Mechanical Engineer, 2114 Wayne Street, Anchorage, AK 99504.

**Reference:** This request for interpretation refers to the requirements in ANSI/ASHRAE/ASHE Standard 170-2013, Section 7 and Table 7.1, regarding air change rate calculations.

**Background:** It has been my assumption that in calculating airflow rates using ASHRAE/ASHE Standard 170-2013 Table 7.1, the volume of rooms is calculated by utilizing the finished ceiling height. However, I found that this is not specifically stated or externally referenced in ASHRAE/ASHE 170-2013.

Additionally, this assumption does not appear to provide a consistent standard as the finished ceiling height requires that rooms with elevated ceilings have added levels of ventilation. Per ASHRAE /ASHE 170-2013 Section 7, the purpose of the ventilation system is to protect against discomfort, airborne transmission of contagions, and odors. The production of these 3 items being protected against does not correspond with ceiling height and therefore would result in a varying level of air quality if finish ceiling height is used in this calculation.

Since ASHRAE/ASHE Table 7.1 is based on room volume, it would follow that in order to maintain a consistent standard of minimum air quality, the volume calculation should be based on a standardized height rather than the variable finished ceiling height.

Furthermore, medical spaces typically receive intermittent levels of contamination as staff and patients are frequently moving between rooms and medical procedures typically require limited amounts of time. The additional room volume added by elevated ceiling height allows more time for contaminants to be released into the room before reaching maximum acceptable levels, thereby reducing contamination concentrations in some cases.

**Interpretation:** It is my interpretation that the intent of ASHRAE/ASHE Standard 170-2013 is met by utilizing a standard height of 8 feet when calculating air changes per hour using Table 7.1, even if the room finished ceiling height is higher than 8 feet.

**Question:** Is this interpretation correct?

**Answer:** No.