

**INTERPRETATION IC 62.1-2007-17 OF
ANSI/ASHRAE STANDARD 62.1-2007
VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY**

Approved 1/23/2010

Request from: Tanner L. Shaw (tshaw@x-nth.com), X-nth, 5215 Ponderosa Way, Las Vegas, NV 89118.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 62.1-2007, Sections 3, 6 and Table 6-1, regarding minimum ventilation rates in breathing zone for spaces which are not occupiable.

Background: There have been questions among design engineers on how to apply Table 6-1 to storage room, electrical equipment rooms and elevator machine rooms, as well as similar spaces such as communication and data rooms. Ventilation rates for Storage Room (0.12 cfm/ft², 0 cfm/person), Electrical Equipment Rooms (0.06 cfm/ft², 0 cfm/person) and Elevator Machine Rooms (0.12 cfm/ft², 0 cfm/person) are now included in Table 6-1, 62.1-2007, whereas 62.1-2004 did not include these spaces in Table 6-1. These spaces are typically unoccupied spaces therefore did not require ventilation air be provided per 62.1-2004.

Under 62.1-2007, Table 6-1 'Minimum Ventilation Rates in Breathing Zones' lists the ventilation air quantity requirements within a "Breathing Zone". The table is utilized to calculate the Breathing Zone Outdoor Airflow V_{bz} which is explained as "design outdoor airflow required in the breathing zone of the occupiable space or spaces in a zone, i.e, the breathing zone outdoor airflow..." in Section 6.2.2.1. In addition, Section 3 defines and **occupiable space** as "an enclosed space intended for human activities, excluding those spaces intended primarily for other purposes, such as storage rooms and equipment rooms, that are only occupied occasionally and for short periods of time." Section 3 also defines **breathing zone** as "the region within an occupied space between planes 3 and 72 in. (75 and 1800 mm) above the floor and more than 2 ft (600 mm) from the walls or fixed air-conditioning equipment."

Typically these spaces are provided cooling via separate (e.g., split DX) systems with no outside air and not connected to common air handling unit systems that have outside air. This is done to allow for 24 hour cooling required for just these spaces without starting a larger AC system, ultimately saving energy. Routing OA to these units or starting the larger system would increase the energy usage of the building to provide outdoor air to a non-occupied space.

Interpretation No.1: Based on the definitions provided for **occupiable spaces** and **breathing zone** listed in Section 3, and the calculation of Breathing Zone Outdoor Airflow in Section 6.2.2.1 for "...the occupiable space or spaces" it would be inferred that electrical rooms and similar spaces would not require the per square foot ventilation air indicated in Table 6-1 to be delivered to the space due to the fact they are unoccupied the majority of the time and used primarily for other purposes.

Question No.1: Is this interpretation correct?

Answer No.1: Yes

Comments: Addendum d to 62.1-2007 addresses the language that is the subject of this interpretation, and will be published in Standard 62.1-2010.

Interpretation No.2: Based on the definitions provided for *occupiable spaces* and *breathing zone* listed in Section 3, and the calculation of Breathing Zone Outdoor Airflow in Section 6.2.2.1 for "...the occupiable space or spaces" it would be inferred that storage rooms and similar spaces would not require the per square foot ventilation air indicated in Table 6-1 to be delivered to the space due to the fact they are unoccupied the majority of the time and used primarily for other purposes.

Question No.2: Is this interpretation correct?

Answer No.2: Yes

Comments: Addendum d to 62.1-2007 addresses the language that is the subject of this interpretation, and will be published in Standard 62.1-2010. Only "occupiable" storage rooms require ventilation.

Interpretation No.3: Based on the definitions provided for *occupiable spaces* and *breathing zone* listed in Section 3, and the calculation of Breathing Zone Outdoor Airflow in Section 6.2.2.1 for "...the occupiable space or spaces" it would be inferred that telecommunication/data rooms and similar spaces would not require the per square foot ventilation air indicated in Table 6-1 to be delivered to the space due to the fact they are unoccupied the majority of the time and used primarily for other purposes.

Question No.3: Is this interpretation correct?

Answer No.3: Yes

Comments: Addendum d to 62.1-2007 addresses the language that is the subject of this interpretation, and will be published in Standard 62.1-2010. Note, "telephone/data entry" spaces are considered to be occupied, but "telephone closets" are not.

Interpretation No.4: Based on the definitions provided for *occupiable spaces* and *breathing zone* listed in Section 3, and the calculation of Breathing Zone Outdoor Airflow in Section 6.2.2.1 for "...the occupiable space or spaces" it would be inferred that elevator equipment rooms and similar spaces would not require the per square foot ventilation air indicated in Table 6-1 to be delivered to the space due to the fact they are unoccupied the majority of the time and used primarily for other purposes.

Question No.4: Is this interpretation correct?

Answer No.4: Yes

Comments: Addendum d to 62.1-2007 addresses the language that is the subject of this interpretation, and will be published in Standard 62.1-2010.

Interpretation No.5: Regardless of the definitions provided for *occupiable spaces* and *breathing zone* listed in Section 3, and the calculation of Breathing Zone Outdoor Airflow in Section 6.2.2.1 for "...the occupiable space or spaces", electrical rooms, storage rooms,

telecommunication/data rooms, elevator equipment rooms, and similar spaces would require the per square foot ventilation air indicated in Table 6-1 to be delivered to the space as delivered constantly even though they are unoccupied the majority of the time and used primarily for other purposes.

Question No.5: Is this interpretation correct?

Answer No.5: No

Comments: Addendum d to 62.1-2007 addresses the language that is the subject of this interpretation, and will be published in Standard 62.1-2010.