

**INTERPRETATION IC 62.2-2022-1 OF
ANSI/ASHRAE STANDARD 62.2-2019
Ventilation and Acceptable Indoor Air Quality in Residential Buildings**

Approval Date: January 19, 2024

Request from: Max Sherman, EPB Consulting Group, Moraga, CA.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 62.2-2022, Section 4 and IC 62.2-2016-6 relating to the operational meaning of the term “outdoor air” with particular emphasis as it relates to exhaust systems.

Background: Section 4 of the standard defines the requirements for dwelling-unit ventilation systems regardless of what kind of building the units are in (e.g. single-family or multifamily). IC 62.2-2016-6 states without comment that “For attached dwelling units complying with section 4.1, air from adjacent spaces cannot be credited toward outdoor air required by Section 4.1.” The only credit mentioned in Section 4.1 is the infiltration credit (4.1.2), which cannot be taken for multifamily buildings, but can be taken for single-family buildings. This credit lowers the fan ventilation air requirement from Section 4.1.1 for all mechanical ventilation system types.

4.1 Ventilation Rate. A mechanical exhaust system, supply system, or combination thereof shall be designed and provided with the capacity to deliver outdoor air ventilation to the whole dwelling-unit at a continuous rate not less than specified in Section 4.1.1.

Both Section 4.1 and Section 4.3 are required (among others) for compliance with section 4. The ventilation airflow of an exhaust system to meet the Section 4.1 requirement is not the infiltrating/make-up flow but rather the flow through the exhaust fan as per Section 4.3 (note underlining):

4.3 Airflow Measurement. The mechanical ventilation airflows required by this section shall be measured according to the ventilation equipment manufacturer’s instructions, or by using a flow hood, flow grid, or other airflow measuring device at the mechanical ventilation fan’s inlet terminals/grilles, outlet terminals/grilles, or in the connected ventilation ducts. Balanced mechanical ventilation system airflow shall be the average of the supply fan and exhaust fan airflows. Ventilation airflow of systems with multiple operating modes shall be tested in all modes designed to meet this section.

The following definitions from the standard are relevant:

air, outdoor: air from outside the building.

infiltration: uncontrolled inward leakage of air through the dwelling unit boundary.

ventilation: the process of supplying outdoor air to or removing indoor air from a dwelling by natural or mechanical means. Such air may or may not have been conditioned.

The term “adjacent spaces” is not listed in the definitions but examples are given in the first paragraph of Section 6.1. Section 6.1 reads as follows (note underlined text):

6.1 Adjacent Spaces and Transfer Air. Measures shall be taken to minimize air movement across envelope components to dwelling units from adjacent spaces such as garages, unconditioned crawlspaces, unconditioned attics, and other dwelling units. Dwelling-unit boundary wall, ceiling, and floor penetrations shall be sealed, as shall any

vertical chases adjacent to dwelling units. Doors between dwelling units and common hallways shall be gasketed or made substantially airtight.

Supply and balanced ventilation systems shall be designed and constructed to provide ventilation air directly from the outdoors. Balanced mechanical ventilation system airflow shall be the average of the supply fan and the return fan.

The Standard makes a distinction between outdoor air that comes directly from outdoors and that which does not. The second paragraph of Section 6.1 (above) implies that exhaust systems may get their infiltrating air *indirectly* from outdoors.

Interpretation No. 1: For dwelling-unit mechanical exhaust systems, whose flow rate is that specified in Section 4.1.1, compliance does not require determination of the source of ventilation air assuming all other requirements are met.

Question No. 1: Is Interpretation Number 1 correct?

Answer No. 1: Yes.

Comments: This is true where dwelling-unit mechanical exhaust systems are permitted by the standard.

Interpretation No. 2: The full infiltration credit allowed by Section 4.1.2 may be taken, even if some of the infiltrating air passes through adjacent spaces.

Question No. 2: Is Interpretation Number 2 correct?

Answer No. 2: Yes.

Comments: This response assumes that the full infiltration credit considers that Aext may be less than 1.

Interpretation No. 3: Air which comes into the dwelling unit from adjacent spaces through the dwelling unit boundary meets the definition of infiltration, regardless of whether it qualifies for any infiltration credit from Section 4.1.2.

Question No. 3: Is Interpretation Number 3 correct?

Answer No. 3: Yes.

Interpretation No. 4: Enclosed corridors adjacent to a dwelling unit are considered adjacent spaces to that dwelling unit whether or not there is a door between the corridor and the dwelling unit.

Question No. 4: Is Interpretation Number 4 correct?

Answer No. 4: Yes.

Interpretation No. 5: Air which comes into a detached dwelling unit from adjacent spaces through the dwelling-unit boundary may be counted as ventilation air, even though it does not come *directly* from outdoors.

Question No. 5: Is Interpretation Number 5 correct?

Answer No.5: Yes

Comments:

air, outdoor: air from outside the building.

air, ventilation: outdoor air delivered to the dwelling unit that is intended to dilute airborne contaminants.