

**INTERPRETATION IC 90.1-2007-10 OF
ANSI/ASHRAE/IESNA STANDARD 90.1-2007
Energy Standard for Buildings Except Low-Rise Residential Buildings**

Date Approved: March 30, 2012

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IESNA Standard 90.1-2007, Section 5.4.3.4, regarding vestibules and Exceptions f and g.

Background: Vestibule criteria Exceptions f and g to Section 5.4.3.4 seem to contradict each other, in some instances, when dealing with identical spaces.

Section 5.4.3.4 states:

5.4.3.4 Vestibules. Building entrances that separate *conditioned space* from the exterior shall be protected with an enclosed vestibule, with all *doors* opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior *doors* to open at the same time. Interior and exterior *doors* shall have a minimum distance between them of not less than 7 ft when in the closed position. The exterior envelope of conditioned vestibules shall comply with the requirements for a conditioned space. The interior and exterior envelope of unconditioned vestibules shall comply with the requirements for a semiheated space.

Exceptions:

- a. *Building entrances* with revolving *doors*.
- b. *Doors* not intended to be used as a *building entrance*.
- c. *Doors* opening directly from a *dwelling unit*.
- d. *Building entrances* in buildings located in climate zone 1 or 2.
- e. *Building entrances* in buildings located in climate zone 3 or 4 that are less than four stories above grade and less than 10,000 ft² in area.
- f. *Building entrances* in buildings located in climate zone 5, 6, 7, or 8 that are less than 1000 ft² in area.
- g. *Doors* that open directly from a *space* that is less than 3000 ft² in area and is separate from the *building entrance*.

Question: Do the vestibule requirements for the same 2,500 ft² space differ if it is a stand-alone facility ("building") versus a multi-use facility where the same retail space ("tenant") is connected with a residential tower, but with separate entrances?

Example: It appears that under Exception f a stand-alone "Safeway" of 2,500 ft² would require a vestibule (being a "building", over 1,000 ft²), but under Exception g, the identical 2,500 ft² "Safeway" on the ground floor of a residential tower would qualify as a "small retail space" (under 3,000 ft² and separate from the *building entrance* (tower lobby)) and the vestibule would not be required.

(If this is about stack effect in either case, then can this be clarified because limiting a "building" to 1,000 ft² would automatically limit its height, but a 3,000 ft² ground floor retail space can have a 30 foot high ceiling, resulting in the same stack effect as a 1,000 ft² (2-3 storey) building.)

Interpretation: The vestibule requirements for identical 2,500 ft² facilities differ under exceptions f and g. Under exception f, when a 2,500 ft² facility is a stand-alone facility, it is deemed a "building", therefore requiring a vestibule, but under exception g, when the identical facility is attached to a residential tower for example, it appears to be deemed a "tenant" and a vestibule is not required.

Question: Is this interpretation correct?

Answer: Yes, for buildings in climate zones 5 through 8.