

ADDENDA

**ANSI/ASHRAE/ASHE Addenda j, q, and t to
ANSI/ASHRAE/ASHE Standard 170-2008**

Ventilation of Health Care Facilities

Approved by the ASHRAE Standards Committee on October 2, 2012; by the ASHRAE Board of Directors on October 26, 2012; by the American Society for Healthcare Engineering of the American Hospital Association on September 22, 2012; and by the American National Standards Institute on October 27, 2012.

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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

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- c. offering constructive criticism for improving the Standard, or
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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum adds filtration requirements for certain types of residential health care facilities.

***Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.*

Addendum j to Standard 170-2008

Add the following new definition to Section 3.

3. DEFINITIONS

nursing facility: a facility that provides resident care, treatment, and services areas (including skilled nursing, subacute care, and Alzheimer's and other dementia facilities).

Revise Table 6-1 as shown; the rest of the table remains unchanged.

Table 6-1 Minimum Filter Efficiencies

Space Designation (According to Function)	Filter Bank Number 1 (MERV) ^a	Filter Bank Number 2 (MERV) ^a
Skilled nursing facilities <u>Nursing Facility</u>	13 7	N/R

Revise Table 7-1 as shown; the rest of the table remains unchanged.

Table 7-1 Design Parameters

Function of Space
SKILLED-NURSING FACILITY

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FOREWORD

This addendum provides additional information to the designer concerning other potential pharmacy requirements that may be imposed by state pharmacy regulations. The addendum also provides clarification concerning a configuration of air intake not explicitly described previously. This addendum also addresses radiant heating systems utilizing wall panels.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum q to Standard 170-2008

Revise Section 6.3.1 as shown. [Section 6.3.1 was revised by Addendum b to 170-2008 currently published for free on the ASHRAE Web site at www.ashrae.org/standards-research-technology/standards-addenda.]

6.3.1 Outdoor Air Intakes.

6.3.1.1 General. Outdoor air intakes for air-handling units shall be located a minimum of 25 feet (8 m) from cooling towers and all exhaust and vent discharges. Outdoor air intakes shall be located such that the bottom of the air intake is at least six feet (2 m) above grade. All intakes shall be designed to prevent the entrainment of wind-driven rain, shall contain features for draining away precipitation, and shall be equipped

with a birdscreen of mesh no smaller than 0.5 inch (13 mm). New facilities with moderate-to-high risk of natural or man-made extraordinary incidents shall locate air intakes away from public access.

6.3.1.2 Relief Air. Exception: Relief air is exempt from the 25-foot (8-meter) separation requirement. Relief air is defined as the Class 1 air (for further information see ASHRAE 62.1) that could be returned to the air-handling unit from the occupied spaces but is being discharged to the outdoors to maintain building pressurization (such as during air-side economizer operation).

6.3.1.3 Roof Locations. Intakes on top of buildings shall be located with the bottom of the air intake a minimum of three feet (1 m) above roof level.

6.3.1.4 Areaways. In the case of an areaway, the bottom of the air intake opening shall be at least 6 ft (2 m) above grade. The bottom of the air intake opening from the areaway into the building shall be at least 3 ft (1 m) above the bottom of the areaway. (See Figure A-3 in Informative Annex A.)

Revise Section 6.5.3 as shown. [Section 6.5.3 was revised by Addendum h to 170-2008 currently published for free on the ASHRAE Web site at www.ashrae.org/standards-research-technology/standards-addenda.]

6.5.3 Radiant Heating Systems. If radiant heating is provided for an *airborne infection isolation room*, a protective environment room, a wound intensive care unit (burn unit), or a room for any class of surgery, either flat and smooth radiant ceiling or wall panels with exposed cleanable surfaces or radiant floor heating shall be used. Gravity-type heating or cooling units, such as radiators or convectors, shall not be used in operating rooms and other special care areas.

Revise Note b of Table 7-1 as shown. See Standard 170-2008 for the remaining portions of Table 7-1 and other footnotes not repeated here.

TABLE 7-1 Design Parameters

Function of Space	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by Means of Room Units (a)	RH(k), %	Design Temperature (l), °F/°C
DIAGNOSTIC AND TREATMENT							
Pharmacy (b)	Positive	2	4	N/R	N/R	N/R	N/R

Note: N/R = no requirement

Table 7-1 Notes:

b. Pharmacy compounding areas may have additional air change, differential pressure, and filtering requirements beyond the minimum of this table depending on the type of pharmacy, the regulatory requirements (which may include adoption of USP 797), the associated level of risk of the work (see USP 797), and the equipment utilized in the spaces.

Add a new Section A3 to Informative Annex A with the figure included here.

A3. AIR INTAKE OPENING FOR AREAWAY

Figure A-3 illustrates the provisions of Section 6.3.1.4 for air intake openings for areaways.

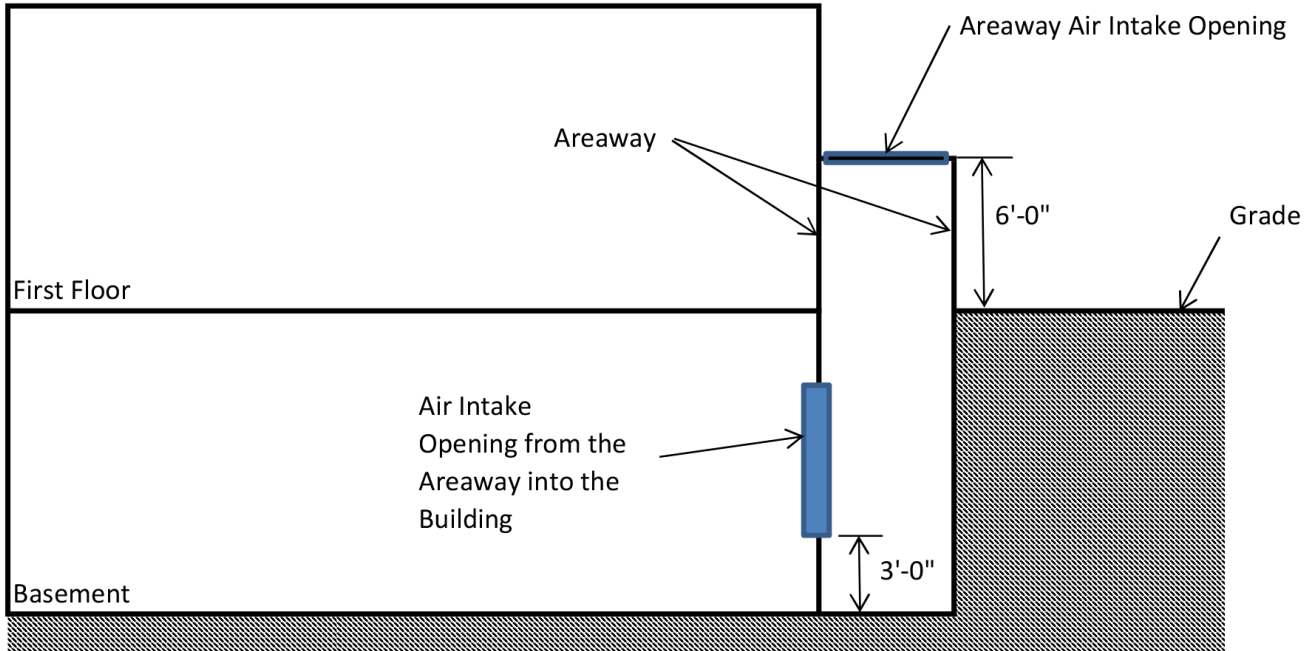


Figure A-3 Provisions for Areaways

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum updates references to Guidelines for Design and Construction of Health Care Facilities.

***Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.*

Addendum t to Standard 170-2008

Change the first paragraph of the Foreword of ANSI/ASHRAE/ASHE Standard 170-2008 as shown. The revised foreword is included for informational purposes only and is not part of the standard.

FOREWORD

ANSI/ASHRAE/ASHE Standard 170, Ventilation of Health Care Facilities, is one of a family of documents that offers guidance, regulation, and mandates to designers of health care facilities. It is first and foremost a mandatory minimum requirement and, as such, may not offer the state-of-the-art best practice of health care ventilation design. Other publications, such as the ASHRAE HVAC Design Manual for Hospitals and Clinics, may provide more depth and detail for the designer. In addition, the health care designer must refer to any design requirements from the appropriate jurisdiction

that has authority. Many jurisdictions use or refer to Guidelines for Design and Construction of Hospitals and Health Care Facilities, published by the Facilities Guidelines Institute (FGI) American Institute of Architects (AIA). Where practical, the committee was cognizant of these other documents in the development of this standard.

Revise Section 6.1.2.1 as shown. [Note that the reference to AIA (2001) was corrected to AIA (2006) and is published as an erratum posted for free on the ASHRAE Web site at www.ashrae.org/standards-research--technology/standards-errata.]

6.1.2 Reserve Heating and Cooling Sources.

6.1.2.1 Provide heat sources and essential accessories in number and arrangement sufficient to accommodate the facility needs, even when any one of the heat sources is not operating due to a breakdown or routine maintenance. The capacity of the remaining source(s) shall be sufficient to provide for sterilization and dietary purposes and to provide heating for operating, delivery, birthing, labor, recovery, emergency, intensive care, nursery, and inpatient rooms. (For further information, see ~~AIA (2006)~~ FGI (2010) in Informative Annex B—Bibliography.)

Revise Informative Annex B as shown.

~~AIA. 2006. The American Institute of Architects and The Facilities Guidelines Institute. *Guidelines for Design and Construction of Hospital and Health Care Facilities*. American Institute of Architects Press, Washington, DC 2006.~~

FGI. 2010. Facilities Guidelines Institute. *Guidelines for Design and Construction of Health Care Facilities*. American Society for Healthcare Engineering. Chicago, IL.

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the standards and guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive technical committee structure, continue to generate up-to-date standards and guidelines where appropriate and adopt, recommend, and promote those new and revised standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating standards and guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

