

ANSI/ASHRAE Addendum y to
ANSI/ASHRAE Standard 62-2001



ASHRAE[®] STANDARD

Ventilation for Acceptable Indoor Air Quality

Approved by the ASHRAE Standards Committee on June 26, 2004;
by the ASHRAE Board of Directors on July 1, 2004; and by the
American National Standards Institute on August 5, 2004.

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ISSN 1041-2336



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FOREWORD

This addendum classifies air with respect to contaminant and odor intensity and limits the recirculation of lower-quality air into spaces that contain air of higher quality. It adds two tables and an additional column in the existing Table 2. These tables classify air from a variety of space types and in some specific airstreams. The classifications are based on contaminant concentration and odor intensity. For locations that are not listed in the tables, the air classification of the listed space or airstream that is most similar in terms of occupant activities and building construction must be used. To aid this determination, the classification criteria that were used by the committee are provided in a note (to Section 5.x.1) in the addendum.

Details of the classifications and recirculation criteria are summarized below:

Class 1: Air with low contaminant concentration and inoffensive odor and sensory-irritation intensity, suitable for recirculation or transfer to any space.

Class 2: Air with moderate contaminant concentration, mildly offensive odors or sensory-irritation intensity, suitable for recirculation or transfer to any space with Class 2 or Class 3 air that is utilized for the same or similar purpose and involves the same or similar pollutant sources. Class 2 air is not suitable for recirculation or transfer to spaces with Class 1 air or dissimilar spaces with Class 2 or Class 3 air.

Class 3: Air with significant contaminant concentration or significant offensive odor or sensory-irritation intensity that is suitable for recirculation within the same space. Class 3 air is not suitable for recirculation or transfer to any other spaces.

Class 4: Air with highly objectionable fumes or gases or potentially containing dangerous particles, bioaerosols, or gases at a concentration high enough to be considered harmful. Class 4 air is not suitable for recirculation or transfer within the space or to any other space.

This addendum does not address recirculation or transfer of air from smoking areas to no-smoking areas. Other addenda address ETS.

In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the instructions indicate that an entirely new section is being added.

Add a new subsection 5.x and renumber existing sections accordingly:

5.x Air Classification and Recirculation. Air shall be classified, and its recirculation shall be limited in accordance with the following sections.

5.x.1 Classification. Air (return, transfer, or exhaust air) leaving each space or location shall be designated at an expected air-quality classification not less than that shown in Table 2 or Table A or as approved by the authority having jurisdiction. The classification for air from spaces or locations that are not listed in Table 2, Table A, or Table B shall be the same as the classification for air from the listed space type that is most similar in terms of occupant activities and building construction. **Exception:** Classification of air from smoking spaces is not addressed. (Spaces that are expected to include smoking do not have a classification listed in Table 2.)

Note: Classifications in Table 2, Table A, and Table B are based on relative contaminant concentration using the following subjective criteria:

- Class 1: Air with low contaminant concentration, low sensory-irritation intensity, and inoffensive odor.
- Class 2: Air with moderate contaminant concentration, mild sensory-irritation intensity, or mildly offensive odors. Class 2 air also includes air that is not necessarily harmful or objectionable but that is inappropriate for transfer or recirculation to spaces used for different purposes.
- Class 3: Air with significant contaminant concentration, significant sensory-irritation intensity, or offensive odor.
- Class 4: Air with highly objectionable fumes or gases or with potentially dangerous particles, bioaerosols, or gases, at concentrations high enough to be considered harmful.

5.x.2 Re-designation.

5.x.2.1 Air Cleaning. If air leaving a space or location passes through an air-cleaning system, the cleaned air may be reclassified to a cleaner classification, using the subjective criteria noted above, with the approval of the authority having jurisdiction.

5.x.2.2 Energy Recovery. Class 2 air may be re-designated as Class 1 air in the process of recovering energy when it is diluted with outdoor air such that no more than 10% of the resulting airstream is Class 2 air. Class 3 air may be re-designated as Class 1 air in the process of recovering energy when it is diluted with outdoor air such that no more than 5% of the resulting airstream is Class 3 air.

5.x.2.3 Transfer. A mixture of air that has been transferred through or returned from more than one classification of space must be re-designated with the classification appropriate for the part of the mixture that has the highest contaminant concentration. For example, air returned from both a Class 1 and a Class 2 space served by a common system must be designated as Class 2 air.

5.x.3 Recirculation Limitations. When the Ventilation Rate Procedure of Section 6 is used to determine ventilation airflow values, recirculation of air shall be limited in accordance with the requirements of this section.

5.x.3.1 Class 1 Air. Class 1 air may be recirculated or transferred to any space.

5.x.3.2 Class 2 Air. Class 2 air may be recirculated within the space of origin. Class 2 air may be transferred or recirculated to other Class 2 or Class 3 spaces utilized for the same or similar purpose or task and involving the same or similar pollutant sources. Class 2 air may be recirculated or transferred to Class 4 spaces. Class 2 air shall not be recirculated or transferred to Class 1 spaces. **Note:** Spaces that are normally class 1 may be identified as “Spaces ancillary to class 2 spaces” and as such classified as Class 2 spaces as permitted in Table A.

5.x.3.3 Class 3 Air. Class 3 air may be recirculated within the space of origin. Class 3 air shall not be recirculated or transferred to any other space.

5.x.3.4 Class 4 Air. Class 4 air shall not be recirculated or transferred to any space nor recirculated within the space of origin.

5.x.4 Documentation. Design documentation shall indicate the justification for classification of air from any location not listed in Table 2, Table A, or Table B.

Add a new column, Classification of Air, to the existing Table 2 with the entries indicated below. In addition, add two new residential space types to the table and revise several existing space-type descriptions as indicated.

Space Type	Classification of Air
Dry Cleaners, Laundries	
Commercial laundry	<u>2</u>
Commercial dry cleaner	<u>2</u>
Storage, pick up	<u>2</u>
Dry cleaning processing	<u>2</u>
Coin-operated laundries	<u>2</u>
Coin-operated dry cleaner	<u>2</u>
Food and Beverage Service	
Dining rooms	<u>2</u>
Cafeteria, fast food	<u>2</u>
Bars, cocktail lounges	<u>2</u>
Kitchens (cooking)	<u>2</u>
Garages, Repair, Service Stations	
Enclosed parking garage	<u>2</u>
Auto repair rooms	<u>2</u>
Hotels, Motels, Resorts, Dormitories	
Bedrooms	<u>1</u>
Living rooms	<u>1</u>
Baths	<u>2</u>
Lobbies	<u>1</u>
Conference rooms	<u>1</u>
Assembly rooms	<u>1</u>
Dormitory sleeping areas	<u>1</u>
Gambling casinos	<u>1</u>
Offices	
Office space	<u>1</u>
Reception areas	<u>1</u>
Telecommunication centers and data entry	<u>1</u>
Conference rooms	<u>1</u>
Public Spaces	
Corridors and utilities	<u>1</u>
Public restrooms	<u>2</u>
Locker and dressing rooms	<u>2</u>
Smoking lounge	<u>***</u>
Elevators	<u>1</u>
Retail Stores, Sales Floors, and Show Room Floors	
Basement and street	<u>2</u>
Upper floors	<u>2</u>
Storage rooms	<u>2</u>
Dressing rooms	<u>1</u>
Malls and arcades	<u>1</u>
Shipping and receiving	<u>1</u>
Warehouses	<u>2</u>
Smoking lounge	<u>***</u>
Specialty Shops	

Barber	2
Beauty	2
Reducing salons	2
Florists	2
Clothiers, furniture	2
Hardware, drugs, fabric	2
Supermarkets	1
Pet shops	2
Sports and Amusement	
Spectator areas	1
Game rooms	1
Ice arenas (playing areas)	1
Swimming pools (pool and deck area)	2
Playing floor (gymnasium)	2
Ballrooms and discos	1
Bowling alleys (seating areas)	1
Theaters	
Ticket booths	1
Lobbies	1
Auditorium	1
Stages, studios	1
Transportation	
Waiting rooms	1
Platforms	2
Workrooms	
Meat processing	2
Photo studios	1
Darkrooms	2
Pharmacy	2
Bank vaults	2
Duplicating, printing	2
Education	
Classroom	1
<u>University/college laboratories</u>	2
Training shop	2
Music rooms	1
Libraries	1
Locker rooms	2
Corridors	1
Auditoriums	1
Smoking lounges	***
Hospitals, Nursing and Convalescent Homes	
Patient rooms	1
Medical procedure	1
Operating rooms	1
Recovery and ICU	1
Autopsy rooms	3
Physical therapy	1
Correctional Facilities	
Cells – <u>without toilet</u>	2
<u>Cells – with toilet</u>	2
Dining halls	2
Guard stations	1
Residential	
<u>Residential living areas</u>	1
<u>Residential kitchens</u>	1

Add a new note below Table 2 as follows:

*** Classification of air from these spaces is not addressed.

Add the following two new tables to Section 5.x to address spaces and airstreams not found in Table 2 (tables to be given sequential numbering when standard is next republished):

TABLE A
Other Space Types

Description	Classification of Air
Spaces ancillary to Class 2 spaces	2
Kitchenettes	2
Break rooms	1
Coffee stations	1
Private toilet/bath	2
Employee locker rooms	2
Storage rooms, general	1
Storage rooms, chemical	4
Equipment rooms	1
Electrical/telephone closets	1
Elevator machine rooms	1
Refrigerating machinery rooms	3
Laundry rooms, central	2
Laundry rooms within dwelling units	1
Soiled laundry storage	3
Janitors closet, trash room	3
General chemical/biological laboratories	3
Paint spray booths	4
Meeting rooms	1
Multi-purpose assembly	1
Churches, temples	1
Legislative chambers	1
Courtrooms	1
Children's museums	1

TABLE A (continued)
Other Space Types

Museums/Galleries	1
Health club/aerobics room	2
Health club/weight rooms	2
Computer room (exc. printing area)	1
Day care (through age 4)	2
Day care sickroom	3
Classroom, K-3	1
General classroom	1
Lecture classroom	1
Lecture hall (fixed seats)	1
Art classroom	2
Media center	1
Computer lab	1
Multi-use assembly	1
Prison dayroom	1
Booking/waiting	2

TABLE B
Airstreams

Description	Classification of Air
Diazo printing equipment discharge	4
Commercial kitchen grease hoods	4
Commercial kitchen hoods other than grease hoods	3
Laboratory hoods	4
Residential kitchen vented hoods	3

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.