

ADMINISTRATIVE BULLETIN

NO. AB-043	:	
DATE	:	September 18, 2002 (Updated 01/01/14 for code references.)
SUBJECT	:	Plan Review; Permit Process
TITLE	:	Ventilation of Public Spaces in Group R Occupancies

PURPOSE	:	To provide guidelines for determining which public spaces may require ventilation, and to describe acceptable examples of providing ventilation to these spaces.
REFERENCES	:	2013 San Francisco Building Code Section 1203.4 2013 San Francisco Housing Code Sections Section 504(d), 1001(a) and 1001(b)8 California Health and Safety Code, Division 13, Part 1.5, Section 17920.3 (State Housing Law) 2013 San Francisco Mechanical Code Sections 402 and 403.
DISCUSSION	:	The San Francisco Housing Code (SFHC) and the San Francisco Building Code (SFBC) requires a minimum level of ventilation in the public circulation spaces of Group R Occupancies. San Francisco's deep and narrow lots coupled with a tradition of property line-to-property line construction often results in multifamily residential buildings with long hallways that have limited access to exterior openings. With little or no ventilation available to these hallways and other public spaces such as stairways and lobbies, the air can become stagnant and may retain cooking or tobacco odors.

The intent of the California Building Code (CBC) Section 1203.4 is to assure adequate ventilation of Group R Occupancies. The intent of the San Francisco amendment to Section 1203.4 is to assure adequate ventilation of all public circulation spaces, particularly those which have directly-communicating openings into adjoining dwelling units or habitable spaces. This includes enclosed stairways and vestibules which also have entry doors to dwelling units or other habitable spaces. Pressurized stair enclosures need not be ventilated.

The following are acceptable means of providing ventilation:

1. Operable windows with an openable area of not less than 1/25 of the floor area of the area ventilated with a minimum of 4 square feet (0.37 m²). The windows shall open directly onto a public way or a yard or a court when permitted by Table 705.8. See SFBC Section 1206 for minimum sizes of yards and courts adjacent to exterior openings that provide natural ventilation.
2. Skylights with an openable area of not less than 1/25 of the floor area of the area ventilated with a minimum of 4 square feet (37 m²). The skylight shall be fixed open or shall be provided with an approved opening device.
3. Operable or fixed louvers with a net effective area of not less than 1/25 of the floor area of the area ventilated with a minimum of 4 square feet (0.37 m²). The operable louver shall be provided with an approved operating device.
4. Exterior openings set with screens, bars or grilles providing a net free (effective) area of not less than 1/25 of the floor area of the area ventilated with a minimum of 4 square feet (0.37 m²).

5. Wind-operated turbines may be used in lieu of natural ventilation to provide a minimum 2 complete air changes per hour throughout the public circulation space with a minimum of 15 cubic feet per minute (7L/s) of outside air per occupant during such time as the building is occupied. Provide a make-up air inlet at a location that will not result in a short-circuiting of air flow, or where it will pick up objectionable odors, fumes or flammable vapors. For calculating ventilation, the minimum average wind speed shall be 7.5 miles per hour. [Based upon information from the National Climate Data Center, the lowest average wind speed in San Francisco is 6.7 mph in May.]

6. Mechanical ventilation and exhaust designed to operate continuously and capable of providing not less than that required by San Francisco Mechanical Code Section 403 throughout the public circulation space during such time as the building is occupied. Provide a make-up air inlet at a location that will not result in a short-circuiting of air flow, or where it will pick up objectionable odors, fumes or flammable vapors.

When natural or mechanical ventilation methods as described above are not feasible, the applicant may present an alternate means of providing ventilation for consideration by the building official.

When required by SFBC Sections 713 and 716 provide smoke and/or fire dampers at penetrations of fire-rated assemblies. Comply with requirements of San Francisco Mechanical Code when locating ventilation openings near exhaust outlets, vent or chimney terminations.

Refer to the San Francisco Housing Code for maintenance of natural and mechanical ventilation systems in existing (prior to January 1, 2011) Group R, Division 1 & 2 Occupancies.

Signed by: Frank Y Chiu, October 3, 2002 Director

Department of Building Inspection

Approved by the Building Inspection Commission on September 18, 2002