



## New Ordinance Notice

**Publisher's Note:** This Chapter includes sections affected by new legislation. [Click here for a list of all new legislation affecting sections of this Code.](#)

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### SEC. 3801. SHORT TITLE.

This Article shall be entitled Enhanced Ventilation Required for Urban Infill Sensitive Use Developments.

– (Added by Ord. 281-08, File No. 080934, 12/5/2008; amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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### SEC. 3802. FINDINGS.

(a) Scientific studies show that exposure to particulate matter from air pollution leads to significant human health problems, including: aggravated asthma; chronic bronchitis; reduced lung function; irregular heartbeat; heart attack; and premature death in people with heart or lung disease. Exposure to air pollutants that are carcinogens can also have significant human health consequences. For example, exposure to diesel exhaust is an established cause of lung cancer.

(b) Heart disease and stroke are the first and fourth leading causes of death in the U.S. respectively. Air pollution affects heart health and can trigger or contribute to heart attacks and strokes. One in three Americans has heart or blood vessel disease and is at higher risk from air pollution. Impacts on the lungs may take several forms. Short-term effects include deficits in lung function that can limit breathing, especially during exercise. Irritants from air pollution may cause airway constriction or chest tightening that is uncomfortable or limiting to normal activity. These changes in lung function are sometimes accompanied by underlying lung tissue inflammation which over the long term may lead to chronic lung disease. Exposure to air pollutants may be a contributing factor to leading causes of death recorded for San Francisco's population (ischemic heart disease; lung, bronchus and tracheal cancers; cerebrovascular disease; chronic obstructive pulmonary disease; hypertensive heart disease and lower respiratory infection).

(c) Persons living in close proximity to air pollution sources, such as freeways or busy roadways, have poorer lung functions and are more susceptible to developing asthma and other respiratory problems, compared with persons living at a greater distance from such sources. The California Air Resources Board's 2005 Land Use Guidance document, "Air Quality and Land Use Handbook: A Community Health Perspective," reviewed traffic-related air pollution studies and found that particulate matter pollution levels decrease by about 70 percent at 500 feet from freeways and high-traffic roadways, defined as urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day.

(d) Proximity to sources of air pollution increases exposure, and proximity to sources is established to be more common for the poor and for certain ethnic minorities.

(e) Consequently, health vulnerability varies among neighborhoods and populations within San Francisco, as measured by population health records of air pollution-associated hospital discharges and emergency room visits, and non-accident mortality. Health vulnerable populations are likely to have more significant health consequences from air pollutant exposure compared to populations that are less vulnerable.

(f) Existing regulatory control measures, often focused on new stationary sources of emissions and average regional air pollution concentrations, are not sufficient to address all local sources of exposure or disparities in exposure.

(g) "Sensitive Use" buildings have the highest proportion of individuals who are most vulnerable to air pollutant exposures.

(h) Available technologies exist to protect sensitive uses from air pollution health effects. Available and accepted air pollution modeling technology allows for the estimation of certain air pollutant concentrations for individual land parcels. Furthermore, available building ventilation and engineering technologies provide mechanisms to protect indoor environments from the infiltration of ambient air pollutants.

— (Added by Ord. 281-08, File No. 080934, 12/5/2008; amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## SEC. 3803. PURPOSES AND GOALS.

(a) The purpose of this Article 38 is to protect the public health and welfare by establishing an Air Pollutant Exposure Zone and imposing an enhanced ventilation requirement for all urban infill sensitive use development within the Air Pollutant Exposure Zone.

(b) The goals of this Article 38 are to maintain and increase the stock of infill housing and other sensitive use development in the City while reducing the risk to human health from air pollutants among occupants of, and visitors to, buildings in the Air Pollutant Exposure Zone.

(Added by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

— (Former Sec. 3803 redesignated as Sec. 3804 and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## SEC. 3804. DEFINITIONS.

For the purposes of this Article 38, the following words shall have the following meanings:

"Air Pollutant Exposure Zone" means those areas within the City which, by virtue of their proximity to air pollution emissions sources, including Freeways, have substantially greater concentrations of air pollutants. The Air Pollutant Exposure Zone shall be modeled according to specific risk factors defined in the Rules and Regulations, and will include at a minimum, criteria for maximum allowed excess cancer risks and maximum PM<sub>2.5</sub> concentrations; these criteria shall be more stringent in Health Vulnerable Locations, as defined below.

"Building" means a building that contains a "Sensitive Use" and that is either:

- (1) a new building; or
- (2) a building undergoing a "Major Alteration to Existing Building" as defined by the San Francisco Green Building Code; or
- (3) a building undergoing a Planning Department permitted change of use.

"City" means the City and County of San Francisco.

"Department" means the San Francisco Department of Public Health.

"Director" means the Director of the San Francisco Department of Public Health or the Director's designee.

"Enhanced Ventilation" means a ventilation system capable of achieving the protection from particulate matter (PM<sub>2.5</sub>) equivalent to that associated with a Minimum Efficiency Reporting Value (MERV) 13 filtration (as defined by American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standard 52.2).

"Freeway" refers to freeways as defined in the San Francisco General Plan, Transportation Element.

"Health Vulnerable Locations" means those San Francisco zip codes, census tracts or other defined locations having the highest percentage of health vulnerable residents, based on criteria such as State discharge data from respiratory and cardiovascular related hospitalizations, non-accident mortality, or other criteria as determined by the Director and specified in the Rules and Regulations enacted under this Article.

"PM<sub>2.5</sub>" means solid particles and liquid droplets found in the air, that are less than or equal to 2.5 micrometers (µm) in diameter.

"Sensitive Use" means:

- (1) any building or facility designed for residential use, including but not limited to those defined by City, state or federal law and regulations, excluding Tourist Hotels;
- (2) any facility serving specific populations, including but not limited to California Department of Social Services (CDSS)-licensed Adult Day Care Centers, Adult Support Centers, Child Care Centers, Family Child Care Homes, Infant Care Centers, School-Aged Child Care Centers, and Community Treatment Centers;
- (3) any California Department of Education (CDE)-licensed schools;
- (4) any California Department of Public Health (CDPH)-licensed Health Care Facilities with 24-hour care, except for CDPH-licensed hospitals, which are subject to specific regulations;
- (5) any California Building Code Section 305-defined occupancies of Educational Group E;
- (6) any California Building Code Section 308-defined occupancies of Institutional Group I; and
- (7) any California Building Code Section 310-defined occupancies of Residential Group R.

"Site" means a parcel of land as defined in the San Francisco Building Code.

(Added as Sec. 3803 by Ord. 281-08, File No. 080934, 12/5/2008; redesignated and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

■ (Former Sec. 3804 redesignated as Sec. 3805 and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## SEC. 3805. APPLICABILITY OF ARTICLE.

This Article 38 shall apply to Sensitive Use buildings located on a site identified as within the Air Pollutant Exposure Zone that are either:

- (a) Newly constructed; or
- (b) Undergoing a "Major Alteration to Existing Building" as defined by the San Francisco Green Building Code; or
- (c) The subject of an application for a Planning Department-permitted Change of Use.

(Added as Sec. 3804 by Ord. 281-08, File No. 080934, 12/5/2008; redesignated and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

■ (Former Sec. 3805 redesignated as Sec. 3806 and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## SEC. 3806. AIR POLLUTANT EXPOSURE ZONE AND AIR POLLUTANT EXPOSURE ZONE MAP.

(a) The Director shall create an Air Pollutant Exposure Zone Map according to Rules and Regulations as authorized by Section 3809. The Air Pollutant Exposure Zone Map shall depict all locations in the City where the estimated cumulative PM<sub>2.5</sub> concentration is greater than 10 µg/m<sup>3</sup> or where the estimated cumulative excess risk of cancer from air pollutants resulting from lifetime (70 year) exposure is greater than 100 in a million. Additionally, the Air Pollutant Exposure Zone Map shall include all locations within 500 feet of any Freeway, if those locations were not otherwise captured by modeling estimates. Within Health Vulnerable Locations, the Air Pollutant Exposure Zone Map shall depict all locations where the estimated cumulative PM<sub>2.5</sub> concentration is greater than 9 µg/m<sup>3</sup> or where the estimated cumulative excess risk of cancer from air pollutants resulting from lifetime (70 year) exposure is greater than 90 in a million. The Director shall update the Air Pollutant Exposure Zone Map to identify new sources, updated pollutant standards, additional pollutants and standards for those pollutants, and updated methodologies in accordance with Section 3809 and the accompanying Rules and Regulations for this Article 38.

(b) The Director shall, at least once every five years, updated the Rules and Regulations governing creation of the Air Pollutant Exposure Zone Map to account for changes in information including, but not limited, to:

- (1) Information available to estimate air pollutants of health concern;
- (2) Information available to determine Health Vulnerable Locations; and
- (3) Information that may affect delineation of the Air Pollutant Exposure Zone, including, but not limited to:
  - (A) Construction, expansion or modification of major roadways;

- (B) Changes in traffic patterns in the City's roadway system;
  - (C) Changes in area sources or siting of industrial or commercial sources of air pollution; and
  - (D) Climatic factors for which there is evidence of changes to air quality.
- (c) The Director shall post the Air Pollutant Exposure Zone Map on the Department's website, and make paper copies of the map available to the public upon request.
- (d) In creating and updating the Air Pollutant Exposure Zone Map, the Director shall follow the procedures specified in Section 3809.
- (e) The Air Pollutant Exposure Zone Map that is operative as of the effective date of Ordinance No. [224-14](#) amending this Article 38, is on file with the Clerk of the Board of Supervisors in File No. 140806.

(Added as Sec. 3805 by Ord. 281-08, File No. 080934, 12/5/2008; redesignated and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

– (Former Sec. 3806 added by Ord. 281-08, File No. 080934, 12/5/2008; repealed by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## **SEC. 3807. ENHANCED VENTILATION REQUIREMENT.**

- (a) Any person or entity to whom this Article 38 applies, as defined in Section 3805, shall submit to the Director an Enhanced Ventilation Proposal, prepared by, or under the supervision of, a licensed mechanical engineer or other individual authorized by the California Business and Professions Code Sections 6700-6799 (Professional Engineers Act) to design mechanical ventilation systems that meet the requirements of this Article 38 and San Francisco Building Code Section 1203.5. An Enhanced Ventilation Proposal shall include the name, title and license number of the person submitting such proposal.
- (b) The Enhanced Ventilation Proposal shall explain how the project will achieve the standards mandated by this Article 38 and accompanying the Rules and Regulations as described and updated according to Section 3809, San Francisco Building Code Section 1203.5, and any relevant amendments or revisions thereto. The Enhanced Ventilation Proposal shall include a statement signed by the person who prepared it, in accordance with the requirements of Section 3807(a), certifying that in his or her judgment the ventilation system proposed will be capable of achieving the protection from particulate matter (PM<sub>2.5</sub>) equivalent to that associated with MERV 13 filtration (as defined by ASHRAE standard 52.2). In updates to the Rules and Regulations, the Director may specify additional or alternative protective equivalents as technology and research dictate.
- (c) The Director shall review the Enhanced Ventilation Proposal and may require additional modification or justification prior to the Director's approval. The Director shall issue a letter to the Department of Building Inspection Permit Services Energy/Mechanical Plan Review Section identifying and attaching the letter describing the approved Enhanced Ventilation Proposal.
- (d) Building permit documents submitted to the Department of Building Inspection shall incorporate all designs and details necessary for the construction of the approved Enhanced Ventilation system. The Department of Building Inspection shall review submitted plans to assure compliance with the Director-approved Enhanced Ventilation proposal and shall not issue permits for the construction, installation, or modification of the Enhanced Ventilation systems unless it is in compliance with the approved proposal.

– (Added by Ord. 281-08, File No. 080934, 12/5/2008; amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## **SEC. 3808. MAINTENANCE OF DOCUMENTS BY DEPARTMENT.**

The Enhanced Ventilation Proposal, Certification and related documents shall become part of the file maintained by the Department. Such file shall be available to the public upon request.

– (Added by Ord. 281-08, File No. 080934, 12/5/2008; amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## **SEC. 3809. RULES AND REGULATIONS.**

- (a) Within 90 days after the effective date of Ordinance No. [224-14](#), amending Article 38, the Director shall issue Rules and Regulations necessary to effectuate the purposes of this Article and to protect public health and safety. Any person or entity as defined in Section 3805 shall comply with this Article, the Rules and Regulations, and all applicable local, state, and federal laws.
- (b) The Director shall consult with the Planning Department's Environmental Review Officer at least 30 days prior to initiating any amendments or modifications to the Rules and Regulations.
- (c) The Director shall consult with the Municipal Green Building Task Force, as established in Environment Code Sec. 702, or any successor body, to coordinate and resolve any potential conflicts that may arise between the San Francisco Green Building Code and this Article 38.
- (d) Rules and Regulations shall, at a minimum, meet the following standards and criteria:

(1) The criteria used for the definition of "Health Vulnerable Locations" shall be at least as health-protective as that of the Bay Area Air Quality Management District (BAAQMD) methodology. BAAQMD methodology defines those zip codes in San Francisco in the worst quintile of Bay Area health vulnerability scores based on two years of statewide hospitalization and emergency room visit records, and estimated costs, for the following air pollution related conditions per zip code: Chronic Obstructive Pulmonary Disease (COPD) Hospital Admissions, Pneumonia Hospital Admissions, Myocardial Infarction (MI, Heart Attack) Hospital Admissions and Emergency Room Visits, Cardiovascular Hospital Admissions (less MI), Asthma Emergency Hospital Admissions and Emergency Room Visits, Asthma Hospital Admissions, Hospital Admissions for Respiratory Diseases, combined with the non-accident mortality rate per zip code. For San Francisco, based on 2009-2011 health records, the zip codes in the worst quintile of Bay Area health vulnerability scores are 94102, 94103, 94105, 94124, and 94130. In updates to the Rules and Regulations, the Director may modify the methodology to identify Health Vulnerable Locations as required to ensure the Air Pollutant Exposure Zone Map is consistent with current scientific evidence.

(2) The criteria for creating and updating the Air Pollutant Exposure Zone Map and the models underlying this map shall include, but not be limited to:

- (A) Identification of parcels with lifetime excess cancer risk due to air pollution greater than 100 cases per million population.
- (B) Identification of parcels in Health Vulnerable Locations with lifetime excess cancer risk due to air pollution greater than 90 cases per million population.
- (C) Identification of parcels where PM<sub>2.5</sub> concentrations are greater than 10 µg/m<sup>3</sup> (including ambient levels).
- (D) Identification of parcels in Health Vulnerable Locations where PM<sub>2.5</sub> concentrations are greater than 9 µg/m<sup>3</sup> (including ambient levels).
- (E) Identification of parcels within 500 feet of any Freeway, if those locations were not otherwise captured by modeling estimates.
- (F) New research findings, particularly quantification of risk, that change the Director's knowledge of how particulate matter and any other air pollutants affect public health.

(3) Required performance standards for Enhanced Ventilation Proposals must include the following minimum criteria:

- (A) Location of air intake for HVAC (Heating, Ventilation and Air Conditioning systems) away from air pollution sources;
- (B) Specification of filtration certified by the ASHRAE capable of achieving protection from particulate matter (PM<sub>2.5</sub>) equivalent to that associated with a MERV 13 filtration (as defined by ASHRAE standard 52.2).

(4) Additional criteria for Enhanced Ventilation Proposals may include the following project design information:

- (A) Number of air exchanges per hour of outside filtered air;
- (B) Building materials and/or design that limit unfiltered infiltration of outside air, such as air sealing or maintenance of positive pressure within the building interior;
- (C) Location of operable windows oriented away from air pollutant sources, to the extent feasible;
- (D) Other building design criteria that may reduce air pollution exposure to residents;
- (E) Other combinations of technologies and designs to achieve the goals of this Article.

(5) Certification and/or licensing requirements for the persons who prepare the Enhanced Ventilation Proposals pursuant to Section 3807. The Enhanced Ventilation Proposal must be prepared by, or under the responsible charge of a person who is authorized by California Business and Professions Code Sections 6700-6799 (Professional Engineers Act), or any successor provisions, to design mechanical ventilation systems that meet the requirements of this Article 38 and San Francisco Building Code Section 1203.5 and either:

- (A) a licensed mechanical engineer, or
- (B) an individual authorized by California Business and Professions Code Sections 6700-6799 to design mechanical ventilation systems that meet the requirements of this Article 38 and San Francisco Building Code Section 1203.5.

(6) Minimum criteria for maintenance and disclosure, including but not limited to:

- (A) Minimum standards for proper maintenance, and
- (B) Disclosure to buyers, lessees and renters that the building is located in an area with substantial concentrations of air pollutants, and that the building includes an enhanced ventilation system information about the proper use of the installed enhanced ventilation system.

(e) The Director may specify additional or alternative equivalents as justified by accepted research including:

- (1) addition or substitution of risk factor criteria;
- (2) inclusion of other pollutants such as Nitrogen Dioxide.

(f) Within Health Vulnerable Locations, the Director shall specify more protective requirements in the Air Pollutant Exposure Zones.

(g) The Director may grant variances to this Article 38, on a case-by-case basis.

■ (Added by Ord. 281-08, File No. 080934, 12/5/2008; amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014; Ord. [6-17](#), File No. 161081, App. 1/20/2017, Eff. 2/19/2017)

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## **SEC. 3810. MAINTENANCE AND DISCLOSURE REQUIREMENTS.**

(a) The ventilation systems installed pursuant to Section 3807 shall be properly maintained, following standard practices, and as specified by the manufacturer.

(b) Documentation of the installation and/or maintenance of the enhanced ventilation systems shall be preserved for five years after installation.

(c) Failure to properly maintain the enhanced ventilation systems is subject to enforcement and possible penalties under the Health Code Article 11, Nuisances, or other applicable sections.

(d) Disclosure to buyers, lessees and renters shall be made in accordance with Rules and Regulations as specified in Section 3809(d)(6).

■ (Added by Ord. 281-08, File No. 080934, 12/5/2008; amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## **SEC. 3812. NO CONFLICT WITH FEDERAL OR STATE LAW.**

Nothing in this Article shall be interpreted or applied so as to create any requirement, power, or duty in conflict with any federal or state law.

(Added as Sec. 3811 by Ord. 281-08, File No. 080934, 12/5/2008; redesignated by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

■ (Former Sec. 3812 added by Ord. 281-08, File No. 080934, 12/5/2008; redesignated as Sec. 3813 by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## **SEC. 3813. SEVERABILITY.**

If any section, subsection, sentence, clause, or phrase of this Article 38 is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of the Article. The Board of Supervisors hereby declares that it would have passed this Article and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of this Article would be subsequently declared invalid or unconstitutional.

(Added as Sec. 3812 by Ord. 281-08, File No. 080934, 12/5/2008; redesignated by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

■ (Former Sec. 3813 added by Ord. 281-08, File No. 080934, 12/5/2008; redesignated as Sec. 3814 and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)

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## **SEC. 3814. UNDERTAKING FOR THE GENERAL WELFARE.**

In adopting and implementing this Article 38, the City is assuming an undertaking only to promote the general welfare. It is not assuming, nor is it imposing in its officers and employees, an obligation for breach of which it is liable in money damages to any person who claims that such breach proximately caused injury.

(Added as Sec. 3813 by Ord. 281-08, File No. 080934, 12/5/2008; redesignated and amended by Ord. [224-14](#), File No. 140806, App. 11/7/2014, Eff. 12/7/2014)