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California Building Standards Code Part 4 California Mechanical Code Update Part 5 California Plumbing Code Update

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Part 4 California Mechanical Code Update

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CHAPTER 1 ADMINISTRATION

1.10.6 OSHPD 6. Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

OSHPD 6

Application—Chemical dependency recovery hospital not within an acute care hospital building or an acute psychiatric facility.

Enforcing agency — Local building department.

1.10.6.1 Applicable Administrative Standards.

(1) Title 24, Part 1, California Code of Regulations: Chapter 7.

(2) Title 24, Part 2, California Code of Regulations: Section 1.1 and 1.10, Chapter 1 Division I, and as indicated in the adoption matrix for Chapter I, Division II.

1.10.6.2 Applicable Building Standards. California Building Standards Code, Title 24, Parts 2, 3, 4, 5, 6, 9, 10 and 11.

Authority Cited — Health and Safety Code Sections 1275, 18929 and 129850.

References — Health and Safety Code Sections 1250.3 and 129675-130070.

1.10.6.3 Adopting Agency Identification. The provisions of this code applicable to buildings identified in this Subsection 1.10.6 will be identified in the Matrix Adoption Tables under the Acronym OSHPD 6.



CHAPTER 2 DEFINITIONS

203.0 – A –

Air Terminal Device. *[OSHPD 1, 2, 3, 4 and 5] Any device (e.g., grille, register, diffuser) placed in an opening to a room, through which controlled air enters or leaves. Component of the air-distribution system which has the purpose of achieving the predetermined movement of air into or from a treated space.*

CHAPTER 3 GENERAL REGULATIONS

321.0 Essential Mechanical Provisions. *[OSHPD 1, ~~1R~~, 2, 3 (Surgical Clinics only) 4 & 5] During periods of power outages essential electrical power shall be provided for the following equipment:*

321.3 *Cooling equipment necessary to maintain temperature and humidity listed in Table 4-A for a minimum of one operating room and other spaces as identified in the functional program.*

321.5-6 *All control components, ~~and~~ control systems and fire and smoke dampers necessary for the normal operation of equipment required to have essential electrical power.*

- *321.2 intended for Acute Care Facilities that are required to remain functional during a loss of normal power.

CHAPTER 3 GENERAL REGULATIONS

322.0 Sensitive Areas or Rooms. ~~[OSHPD 1, 1R, 2, 3 (Surgical Clinics) 4 & 5]~~ The following are sensitive areas or rooms:

- | | |
|---|--|
| (1) Operating room, hybrid operating room | (10) Intensive care |
| (2) Hybrid operating room | (11) Newborn intensive-care nursery unit |
| (3) Cesarean operating room | (12) Newborn nursery |
| (4) Delivery room, cesarean operating room | (13) Burn unit |
| (5) Surgical Cystoscopy | (14) Protective Environment Room |
| (6) Class 3 imaging | (15) Procedure room |
| (7) Cardiac catheterization lab | (16) Class 2 imaging |
| (8) Trauma/cardiac room | (17) Gastrointestinal endoscopy procedure room |
| (9) Post-anesthesia care unit | |

CHAPTER 4 VENTILATION AIR

402.0 Ventilation Air.

402.1 Occupiable Spaces. Occupiable spaces listed in Table 402.1 ~~[OSHPD 1, 1R, 2, 3, 4 & 5]~~ and Table 4-A shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter. ~~[DSA-SS & DSA-SS/CC]~~ Ventilation air requirements for occupancies regulated by the California Energy Commission are found in the California Energy Code.

[CEC] Ventilation air requirements for occupancies regulated by the California Energy Commission and found in the California Energy Code supersede those of the California Mechanical Code.

[\[OSHPD 1, 2, 3, 4 & 5\] Health care spaces shall meet the ventilation requirements found in Table 4-A. \(relocated from 402.1.2\) Ventilation rates for areas not specified in Table 4-A shall have minimum ventilation and air change rates per ANSI/ASHRAE Standard 62.1. Where areas with prescribed ventilation rates in both Standards 62.1 and Table 4-A exist, the higher of the two air change rates shall be used.](#)

CHAPTER 4 VENTILATION AIR

402.1.2 Ventilation in Health Care Facilities. Mechanical ventilation for health care facilities shall be designed and installed in accordance with this code and ASHRAE 170, and NFPA 99. **[OSH PD 1, 1R, 2, 3, 4 & 5]** Ventilation for health care facilities shall be designed and installed in accordance with this code and Table 4-A. ~~2013, through Addendum ae. (relocate to 402.1) Ventilation rates for areas not specified in Table 4-A shall have minimum ventilation and air change rates per ANSI/ASHRAE Standard 62.1. Where areas with prescribed ventilation rates in both Standards 62.1 and Table 4-A exist, the higher of the two air change rates shall be used. All supply-air, return air, and exhaust-air systems shall comply with this code and ASHRAE 170. When the requirements of this code conflict with ASHRAE 170, the most restrictive requirements shall prevail. The text of ASHRAE 170 shall be modified as follows:~~



CHAPTER 4 VENTILATION AIR

The text of ASHRAE 170 shall be modified as follows:

- (1) ASHRAE 170. Section 6.1.2.1 -- Not adopted Also see Section 319.0.
- (2) ASHRAE 170. Section 6.3.1.23 -- Modify as follows:
Relief air other than class 1 shall discharge ~~shall be~~ at least 10 feet (3048mm) from any outside air intake.
- (3) ASHRAE 170. Section 6.3.2 -- Not adopted Also see Section 407.1.2 and 407.2.2.
- (4) ASHRAE 170. Table 6.4 -- Not adopted.
- (5)(4) ASHRAE 170. Section 6.4-6.4.4 -- Not adopted Modify as follows:
c.: Replace Table 7-1, 8-1, 8-2, or 9-1 with Table 4-A.
d.: Replace Table 7-1, 8-1, 8-2, or 9-1 with Table 4-A.
- (6)(5) ASHRAE 170. Section 6.9 -- Not adopted See also Section 605.2 and 605.3.
- (7)(6) ASHRAE 170. Section 7.1a -- Modify as follows: Replace reference to Table ~~7-1~~ 7-1 with reference to Table 4-A.



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~~(8)~~(7) ASHRAE 170. Section 7.2.1a ~~c through e~~ – Not adopted.

~~(9)~~(8) ASHRAE 170. Section 7.2.2 ~~a through c, and e~~ – Not adopted [Also see Section 415.0.](#)

~~(10)~~(9) ASHRAE 170. Section 7.2.3 -- Not adopted.

~~(11)~~(10) ASHRAE 170. Section 7.3.1 -- Modify as follows: Replace reference to Table ~~7-1~~[7-1](#) with reference to Table 4-A.

~~(12)~~(11) ASHRAE 170. Section 7.4.1 -- Modify as follows: Delete the Exception that allows for high return grilles.

[\(12\) ASHRAE 170. Section 8.1a -- Modify as follows: Replace reference to Table 8-1 with reference to Table 4-A.](#)

[\(13\) ASHRAE 170. Section 8.2 -- Modify as follows: Replace reference to Table 8-2 with reference to Table 4-A.](#)

[\(14\) ASHRAE 170. Section 9.1a -- Modify as follows: Replace reference to Table 9-1 with reference to Table 4-A.](#)



CHAPTER 4 VENTILATION AIR

406.0 Evaporative Cooling System for Health Care Facilities. *[For OSHPD 1, ~~1R~~, 2, 3, 4 & 5] Direct evaporative cooling systems where the air directly contacts the wetted surface or spray shall be limited in health facilities to nonpatient areas such as laundry rooms, ~~food preparation areas~~, and boiler or machinery rooms. Similar rooms with high heating-producing equipment will be considered when specifically approved by the enforcing agency. The evaporative pads shall be a synthetic type. Filters shall be required in accordance with Tables 4-B and 4-C except utility rooms, i.e.: boiler or machinery rooms.*



CHAPTER 4 VENTILATION AIR

407.1 General.

407.1.1 All supply-air, return air, and exhaust-air systems shall be mechanically operated and such systems for areas listed in Table 4-A shall be operated continuously. Natural ventilation through windows or other openings such as louvers will be considered as supplemental to the required mechanical ventilation systems.

Exceptions:

- (1) Natural ventilation shall not be used in airborne infection isolation rooms and protective environment rooms.
- (2) Unoccupied turndown shall be permitted in accordance with Section 407.7. The number of air changes may be reduced to 25 percent of the indicated value in Table 4-A, when the room is unoccupied, if provisions are made to ensure the following:
 - ~~(1) The number of air changes per hour indicated is reestablished whenever the space is occupied.~~
 - ~~(2) The pressure relationship...~~



CHAPTER 4 VENTILATION AIR

407.2.2 Exhaust Outlets. Exhaust outlets shall be located a minimum of 10 feet (3048 mm) above adjoining grade and 10 feet (3048 mm) from doors, occupied areas, and operable windows.

Exception: Airborne infection isolation rooms shall comply with Section 414.1.

407.2.2.1 Hazardous Exhaust Outlets. Hazardous exhaust outlets from airborne infection isolation rooms, bronchoscopy and sputum collection exhaust, hazardous drug compounding, morgues, autopsy rooms and laboratory chemical fume hoods shall discharge a minimum of 10 feet (3048 mm) above the adjacent roof surface and a minimum of 30 feet (9144 mm) from outdoor air intakes, building openings and areas normally accessible to the public.



CHAPTER 4 VENTILATION AIR

407.3 Air Balance.

407.3.1 The ventilation systems shall be designed and balanced to provide the general air balance relationship to adjacent areas, shown in Table 4-A. The ventilation systems shall be balanced in accordance with the latest edition of standards published by the Associated Air Balance Council (AABC), the National Environmental Balancing Bureau (NEBB), or the Testing, Adjusting and Balancing Bureau (TABB). Air balance tolerancing values shall not result in noncompliance of the minimum required pressurization per Table 4-A.



CHAPTER 4 VENTILATION AIR

407.4 Air Circulation.

407.4.1 Design of the ventilation system shall provide air movement that is generally from clean to less clean areas.

407.4.1.1 (formerly 420.0) ~~420.0 Air Distribution Devices [OSHPD 1, 2, 3, 4, 5]~~ All air distribution devices and supply air outlets shall meet the requirements of ASHRAE 170-2013, Section 6.7.2 and Table 6-7.2 6-2.

407.4.1.2 (formerly 407.4.1.6) Supply outlets and return and exhaust air inlets shall be located to prevent short-circuiting.

407.4.1.3 (formerly 407.4.1.1) Air supplied to operating rooms, cesarean operating rooms, cardiac catheterization labs, surgical cystoscopy rooms, delivery rooms, and class 3 imaging shall be delivered by a primary supply diffuser array in accordance with ASHRAE 170, 7.4.1 ~~at the ceiling of the area served. In these areas and in morgues and autopsy rooms all air removed from the area shall be removed near floor level. Exhaust or recirculation inlets shall be located not less than 3 inches (76 mm) nor more than 8 inches (203 mm) above the finished floor, except in morgues and autopsy rooms where all of the exhaust air is removed through an autopsy table designed for this purpose. At least two exhaust or recirculation air inlets of equal capacity shall be used in all cardiac catheterization labs, cystoscopy rooms, operating rooms, and delivery rooms and shall be located not less than 3 inches (76 mm) nor more than 8 inches (203 mm) above the finished floor.~~



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407.4.1.4 *Air supplied to procedure rooms and Class 2 imaging shall be delivered over the patient table. Return or exhaust inlets shall be located at the perimeter of the room on a minimum of two sides to provide air movement from clean to less clean.*

407.4.1.5 *At least two exhaust or recirculation air inlets of equal capacity shall be provided on opposite corners in all operating rooms, cesarean operating rooms, cardiac catheterization labs, surgical cystoscopy rooms, delivery rooms and class 3 imaging. All air inlets in the room shall be located not less than 3 inches (76 mm) nor more than 8 inches (203 mm) above the finished floor.*

407.4.1.6 *Morgues and autopsy rooms shall exhaust air through an autopsy table designed for this purpose or through low sidewall exhaust inlets located not less than 3 inches nor more than 8 inches (203 mm) above the finished floor.*

407.4.1.7 (formerly 407.4.1.2) *Room supply air outlets and room recirculation and exhaust air inlets installed in nonsensitive areas shall be located not less than 3 inches (76 mm) above the floor.*

Exception: For airborne infection isolation rooms and protective environment rooms, see Sections 414.0 and 415.0.

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~~407.4.1.3~~ **407.4.2** *Corridors shall not be used to convey supply, return, transfer or exhaust air to or from any room if the corridor is required to be fire resistive construction per the California Building Code.*

Exceptions:

(1) ~~Mechanically exhausted toilet rooms of 50 square feet (4.7 m²) or less and small rooms of 30 square feet (2.79 m²) or less such as janitor closets, housekeeping rooms, and electrical or telephone closets opening directly onto corridor.~~ *Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors is permitted where allowed by the California Building Code. The corridor air balance shall be equal based on the total net transfer air to or from the corridor.*

(2) *Air transfer caused by pressure differentials in rooms required to have a positive or negative air balance by Table 4-A.*

~~407.4.1.4~~ **407.4.3** *No space above a ceiling may be utilized...*

~~407.4.1.5~~ **407.4.4** *Air from a patient room, exam room, treatment...*

~~407.4.1.6~~ (relocate text to 407.4.1.2)

CHAPTER 4 VENTILATION AIR

407.4.1.7 407.4.5 Recirculating Room Units. *For spaces where Table 4-A permits air to be recirculated by room units, the portion of the minimum total air changes per hour required for a space that is greater than the minimum outdoor air changes per hour required component may be provided by recirculating room HVAC units. Such recirculating room HVAC units shall Recirculating room units shall be permitted to provide a portion of the total air changes for a space in excess of the minimum outside air changes where indicated with a "yes" in the "Recirculated Room Units" column of Table 4-A. The following conditions shall be met:*

- (1) not receive nonfiltered, nonconditioned outdoor air;
- (2) shall serve only a single space; and
- (3) provide minimum MERV 8 filtration upstream of ~~per Section 408.2 and Section 408.3 for airflow passing over any surface that is designed to condense water~~ OSHPD 2 spaces shall be permitted to provide the manufacturer's recommended filter for airflow passing over any surface that is designed to condense water. ~~This filter shall be located upstream of any such cold surface, so that all of the air passing over the cold surface is filtered.~~
- (4) Coils designed not to condense water shall maintain surfaces above the dew point temperature.

CHAPTER 4 VENTILATION AIR

407.4.5.1 Recirculating Room Units for Unoccupied Spaces. *For normally unoccupied spaces not listed in Table 4-A and not directly connected to a patient care area, the minimum filtration for a recirculating room unit may be as recommended by the equipment manufacturer.*

CHAPTER 4 VENTILATION AIR

407.5 Variable Air Volume.

407.5.1 Variable Air Volume Systems (VAV). Variable air volume systems subjecting the patient to a fluctuating air movement are not acceptable for airborne infection isolation rooms, protective environment rooms or those critically sensitive areas listed in Section 322.0. For nonsensitive areas, variable air volume systems meeting the following criteria can be considered:

...

407.5.1.3 Spaces with pressure requirements per Table 4-A shall utilize an automatic modulating damper in the return or exhaust air for each space. The damper will modulate from full open to minimum position in conjunction with the supply air VAV terminal equipment to maintain space pressurization.

407.5.1.4 Sensitive areas or rooms shall be provided with controls on the return or exhaust duct system to maintain constant air flows.

407.5.1.5 Return air controls shall be provided for each system, floor or area with similar conditions.



CHAPTER 4 VENTILATION AIR

407.7 Unoccupied Turndown.

407.7.1 Where indicated with a “yes” in the Unoccupied turndown column of Table 4-A, the number of air changes shall be permitted to be reduced. The following conditions shall be met:

- (1) The number of air changes may be reduced to 25 percent of the indicated value in Table 4-A for pressurized spaces when the room is unoccupied.
- (2) The number of air changes per hour indicated is reestablished whenever the space is occupied.
- (3) The pressure relationship with surrounding rooms is maintained when the air changes per hour are reduced.
- (4) All operating, class 3 imaging and cesarean delivery rooms shall maintain a minimum of six air changes per hour of total air when not in use.



CHAPTER 4 VENTILATION AIR

407.8 Building Pressurization.

407.8.1 The outdoor air intake design for air handling systems shall be set to maintain the intake air rate to equal or exceed the building exhaust under all conditions including variable air volume and unoccupied turndown.

CHAPTER 4 VENTILATION AIR

408.1 General. ...

...

408.1.5 Filter bank No. 1 shall be located upstream of the air-conditioning equipment. Filter bank No. 2 and additional filter banks ~~No. 3~~ shall be located downstream of the supply fan and all cooling and humidification equipment with efficiencies as indicated in Table 4-B or Table 4-C.

Exception: Humidifiers for local room humidity control may be installed in the supply air duct downstream of the final filter bank where designs are specifically approved by the enforcing agency. Humidification shall be in accordance with 320.1.1.

408.1.6 Filter bank No. 2 and additional filter bank ~~No. 3~~ media shall be rigid or supported (noncollapsing type) and shall operate on the principles of impingement, straining, and diffusion. Filter bank No. 2 shall have sealing interface surfaces.

408.1.7 HEPA filtration shall be provided in the air terminal device where required by Table 4-B.

CHAPTER 4 VENTILATION AIR

408.2 Filters for Hospitals.

408.2.1 All air-ventilation systems shall comply with code requirements of this section and shall have filter bank efficiencies as listed in Table 4-B.

~~408.2.2 Noncentral recirculating air systems providing cooling to high heat producing equipment located in nonsensitive areas shall have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2.~~

~~408.2.3 Noncentral air systems serving any areas not listed in Table 4-B shall have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2.~~

~~408.2.4 Noncentral recirculating air handling systems, for example, through-the-wall units, fan coil units, and heat pumps may be utilized for single patient rooms of one or more beds. Filtration for these units shall have a filter with minimum efficiency reporting value (MERV) of 6, based on ASHRAE 52.2. The air ventilation system providing the minimum air changes of outdoor air shall comply with Table 4-B. These units may be used as recirculating units only. All outdoor air requirements shall be met by a separate central air handling system.~~

CHAPTER 4 VENTILATION AIR

408.3 Filters for Skilled Nursing Facilities, Intermediate Care Facilities, and Correctional Treatment Centers.

408.3.1 The air ventilation systems shall comply with code requirements of this section for skilled nursing facilities, intermediate care facilities and correctional treatment centers and shall have filter bank efficiencies as listed in Table 4-C.

~~408.3.2 Noncentral air systems serving single patient rooms of one or more beds shall comply with Table 4-C.~~

~~408.3.3 Noncentral recirculating air handling systems, i.e. through the wall units, may be utilized for each patient room with one or more beds. Filtration for these units shall have a filter with minimum efficiency reporting value (MERV) of 6, based on ASHRAE 52.2. The air ventilation system providing the minimum air changes of outdoor air shall comply with Table 4-C. These units may be used as recirculating units only. All outdoor air requirements shall be met by a separate central air handling system.~~

408.3.4 408.3.2 Airborne infection isolation rooms, protective environment rooms, and sensitive areas in correctional treatment centers shall comply with Section 408.2.

CHAPTER 4 VENTILATION AIR

408.4 Filters for Outpatient Facilities.

408.4.1 The air ventilation systems ~~shall comply with code requirements of this section~~ for outpatient facilities ~~and~~ shall have filter bank efficiencies as listed in Table 4-B.

~~**408.4.2** Noncentral recirculating room units shall have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2. (Strike out revised language in supplement.)~~

408.5 Filters for Recirculating Room Units.

408.5.1 Filters for recirculating room units shall comply with Section 407.4.5. Where Table 4-A does not permit air recirculated by means of room units, room units with filtration per Table 4-B are permitted.

CHAPTER 4 VENTILATION AIR

409.0 Ducts. [OSHPD 1, 1R, 2, 3, 4 & 5]

...

~~**409.3 Insulation of Ducts.** Cold air ducts shall be insulated wherever necessary or to prevent condensation.~~

409.4 **409.3** The anchorage and supporting structural elements for airducts shall be designed to withstand the lateral forces as required by the California Building Code, Title 24, Part 2

CHAPTER 4 VENTILATION AIR

414.0 Airborne Infection Isolation Rooms. [OSHPD 1, 2, 3, 4 & 5]

...

414.1 Exhaust Systems.

414.1.1 Exhaust discharge from fan shall extend at least ~~7~~¹⁰ feet (~~2134~~³⁰⁴⁸ mm) above the roof and discharge vertically upward. Self-draining stacks or equivalent shall be used for rain protection. Rain caps which divert the exhaust toward the roof shall be prohibited.

...

417.0 Testing and Balancing Airborne Infection Isolation Rooms and Protective Environment Rooms. [OSHPD 1, 2, 3, 4 & 5] Prior to acceptance of the rooms, all mechanical systems shall be tested, balanced, and operated to demonstrate to the owner or designated representative that the installation and performance of the systems conform to design intent. All testing and balancing shall be performed by a qualified independent agency certified by the Associated Air Balance Council (AABC); the National Environmental Balancing Bureau (NEBB); or the Testing, Adjusting and Balancing Bureau (TABB). Air balance testing shall include a pressure test at all doors serving the isolation, protective environment, and ante rooms to provide the directional pressure relationships in Section 416.1.

CHAPTER 4 VENTILATION AIR

TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE
HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL
TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS

FUNCTION OR SPACE	PRESSURE RELATIONSHIP TO ADJACENT AREAS (f) (n)	MINIMUM OUTDOOR ACH	MINIMUM TOTAL ACH	ALL-ROOM AIR EXHAUSTED DIRECTLY TO OUTDOORS (j)	AIR RECIRCULATED BY MEANS OF ROOM UNITS (a)	DESIGN RELATIVE HUMIDITY (k), %	DESIGN TEMPERATURE (l), °F/°C
Airborne infection isolation anteroom (u)	(e)	NR	40	Yes	No	NR	NR
Airborne infection isolation (u)	Negative	2	42	Yes	No	max-60	70-75/21-24
Airborne infection isolation treatment/exam room	Negative	2	42	Yes	No	max-60	70-75/21-24
Angiography room	Positive	3	45	NR	No	max-60	70-75/21-24

[Repeal entire TABLE 4-A, entire Table not shown]

TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS, CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
NURSING UNITS AND OTHER PATIENT CARE AREAS								
All anteroom (1224.14.3.3) (u)	(e)	NR	10	Yes	No	Yes No	NR	NR
All room (1224.14.3) (u)	Negative	2	12	Yes	No	Yes No	Max 60	70-75/21-24
All treatment/exam room (1224.4.4.1.3)	Negative	2	12	Yes	No	No	max 60	70-75/21-24
Cesarean Delivery room (1224.32.3.1.1) (m), (o)	Positive	4	20	NR	No	Yes	20-60	68-75/20-24
Combination All/PE anteroom (FGI 2-2-2-2.4.6)	(e)	NR	40	Yes	No	No	NR	NR
Combination All/PE room (FGI 2-2-2-2.4.5)	Positive	2	12	Yes	No	No	Max 60	70-75/21-24
Continued-care nursery (FGI 2-2-2-10.3.2)	NR	2	6	NR	No	Yes	30-60	72-78/22-26
Delivery room (1224.32.3.2) (m), (e)	Positive	4	20	NR	No	Yes	20-60	68-75/20-24
Emergency department exam/treatment room (1224.33.3.6) (p)	NR	2	6	NR	NR	Yes (ff)	Max 60	70-75/21-24
Emergency department human decontamination (1224.33)	Negative	2	12	Yes	No	Yes (ff) No	NR	NR
Emergency department public waiting area (1224.33.3.5)	Negative	2	12	Yes (q)	NR	Yes (ff) No	Max 65	70-75/21-24
Emergency department trauma/resuscitation room (1224.33.3.7) (c)	Positive	3	15	NR	No	Yes	20-60	70-75/21-24
Emergency service triage area (1224.33.3.3)	Negative	2	12	Yes (q)	NR	Yes (ff) No	Max 60	70-75/21-24
Fast-track area (1224.33.4.2)	NR	2	6	NR	NR	Yes	NR	70-75/21-24
Infusion room (1224.39.4.2.3)	Positive	2	6	NR	NR	Yes	NR	70-75/21-24
Critical/Intensive care patient care stations/space (1224.29.1.2) (gg)	NR	2	6	NR	No	Yes	30-60	70-75/21-24



TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS, CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
Intermediate care patient room (1224.38) (s)	NR	2	6	NR	NR	Yes	Max 60	70-75/21-24
Labor/delivery/recovery (LDR) (1224.32.3.7) (s)	NR	2	6	NR	NR	Yes	Max 60	70-75/21-24
Labor/delivery/recovery/postpartum (LDRP) (1224.32.3.7) (s)	NR	2	6	NR	NR	Yes	Max 60	70-75/21-24
Lactation (1224.32.5.1.3)	NR	2	6	NR	NR	Yes	NR	70-75/21-24
Laser eye room (1224)	Positive	3	15	NR	No	Yes	20-60	70-75/21-24
Neonatal/Newborn intensive care (1224.29.2.6)	Positive	2	6	NR	No	Yes	30-60	72-78/22-26
Newborn intensive care formula room (1224.29.2.10)	Positive	2	10	NR	No	Yes	NR	70-75/21-24
Newborn/well baby nursery (1224.32.5)	NR	2	6	NR	No	Yes	30-60	72-78/22-26
Nourishment area or room (1224.4.4.5)	NR	NR	2	NR	NR	Yes	NR	NR
Nurse station (1224.4.4.2) (aa)	(aa)	(aa)	2	(aa)	(aa)	Yes	(aa)	(aa)
Nursery workroom (1224.32.5.1.4)	NR	2	6	NR	No	Yes	Max 60	72-78/22-26
Observation (1224.33.5.1)	NR	2	6	NR	NR	Yes	NR	70-75/21-24
Operating room (1224.15.2.1) (m), (o)	Positive	4	20	NR	No	Yes	20-60	68-75/20-24
Operating/surgical cystoscopic rooms (1224.15.2.2.1) (m), (o)	Positive	4	20	NR	No	Yes	20-60	68-75/20-24
Patient care area corridor (1224.4.7)	NR	NR	2	NR	NR	Yes	NR	NR
Patient room (CBC 1224.14.1)	NR	2	4 (y)	NR	NR	Yes	Max 60	70-75/21-24



TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS, CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHPD 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
Patient bedroom, <i>behavioral</i> room (1224.30.1/1228.14.1)	NR	2	2	NR	NR	Yes	NR	NR
<i>Patient holding preparation</i> (1224.16.2)	NR	2	6	NR	No	Yes	NR	70-75/21-24
Patient toilet room (CBC 1224.4.4.8)	Negative	NR	10	Yes	No	Yes (ff)	NR	NR
PE anteroom (FGI 2.2-2.2.4.4) (t)	(e)	NR	10	NR	No	No	NR	NR
<i>Pediatric playroom</i> (1224.30.3.1)	NR	2	6	NR	NR	Yes	NR	70-75/21-24
[Phase I PACU and Phase II recovery] <i>Post-anesthesia care unit and recovery</i> (1224.16.3)	NR	2	6	NR	No	Yes	20-60	70-75/21-24
Procedure room (1224.4.4.1.4) (o), (d)	Positive	3	15	NR	No	Yes	20-60	70-75/21-24
Protective environment room (1224.14.4) (t)	Positive	2	12	NR	No	No	Max 60	70-75/21-24
<i>PE Protective Environment</i> anteroom (1224.14.4.3) (t)	(e)	NR	10	NR	No	No	NR	NR
Radiology waiting rooms (1224.18)	Negative	2	12	Yes (q)(w)	NR	Yes (ff)	Max 60	70-75/21-24
<i>Recreation/activity room</i> (1224.31.1.11/1224.35.1)	NR	2	6	NR	NR	Yes	NR	70-75/21-24
Seclusion room (1224.4.4.1.5/1228.14.5)	NR	2	4-6	NR	NR	Yes	Max 60	70-75/21-24
<i>Semi-restricted corridor</i> (1224.15.1)	NR	2	4	NR	NR	No	NR	NR
Sterile processing room (1224.15.3.3)	NR	2	6	NR	No	Yes	NR	NR
Treatment room (1224.4.4.1.2) (p)	NR	2	6	NR	NR	Yes	20-60	70-75/21-24
<i>Waiting area primary care clinic</i> (1226.4.16.1.2)	Negative	2	12	Yes (q)	No	No	Max 60	70-75/21-24
Wound intensive care (burn unit) (1224.29.1)	Positive	2	6	NR	No	Yes	40-80	70-75/21-24

TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS, CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHPD 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
DIAGNOSTIC AND TREATMENT								
Bronchoscopy, sputum collection, and pentamidine administration (1224.39.3) (n), (x)	Negative	2	12	Yes	No	Yes	NR	68-73/20-23
Cancer treatment area (1224.39.4)	NR	2	6	NR	NR	MERV-8	70-75/21-24	
Class 1 imaging room (1224.18)	NR (jj)	2	6	NR	NR	Yes	Max 60	72-78/22-26
<i>CT Scan</i> (1224.18.3)	NR	2	6	NR	NR	Yes	max 60	70-75/21-24
<i>Fluoroscopy room</i> (1224.18.1)	Negative	2	6	Yes	No	Yes	NR	70-75/21-24
<i>MRI room</i> (1224.18.4)	NR	2	6	NR	NR	Yes	NR	70-75/21-24
<i>Negative-pressure x-ray room</i>	Negative	2	12	Yes	No	Yes	max 60	72-78/22-26
Class 2 imaging room (1224.18.1/1224.28.4) (d), (p)	Positive	3	15	NR	No	Yes	Max 60	70-75/21-24
<i>Angiography room</i> (1224.18.2)	Positive	3	15	NR	No	Yes	max 60	70-75/21-24
<i>Cardiac catheterization lab</i> (1224.28.2)	Positive	3	15	NR	No	Yes	max 60	70-75/21-24
<i>ECT/Electroconvulsive therapy</i> procedure room (1224.28.6)	Positive	3	15	NR	No	Yes	20-60	70-75/21-24
<i>Interventional imaging procedure room</i> (1224.28.4)	Positive	5	15	NR	No	Yes	20-60	70-75/21-24
Class 3 imaging room (1224.28.5/1224.18.1) (m), (o)	Positive	4	20	NR	No	Yes	20-60	68-75/21-24
<i>Hybrid operating room</i> (1224.28.5) (m), (n), (o)	Positive	4	20	NR	No	Yes	20-60	68-75/20-24
Dental treatment (1226.6.1.3)	NR	2	3	NR	NR	Yes	NR	70-75/21-24
Dialysis treatment area (1224.36.2.3)	NR	2	6	NR	NR	Yes	NR	72-78/22-26
Dialyzer reprocessing room (1224.36.2.12)	Negative	NR	10(bb)	Yes	No	Yes (ff)	NR	NR
Gastrointestinal endoscopy procedure room (1224.39.3) (x)	NR	2	6	NR	No	Yes	20-60	68-73/20-23

TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES,
INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS,
CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
General examination room (1224.4.4.1.1)	NR	2	4	NR	NR	Yes	Max 60	70-75/21-24
Hydrotherapy (1224.35)	Negative	2	6	NR	NR	Yes	NR	72-80/22-27
Instrument processing room (1224.39.3.2)	Negative	2	10	Yes	No	No	NR	NR
Medication <u>preparation</u> room (1224.4.4.1)	NR	2	4	NR	NR	Yes	Max 60	70-75/21-24
<u>Nuclear medicine (Gamma, PET, SPECT)</u> (1224.34.1.2)	<u>Negative</u>	<u>2</u>	<u>6</u>	<u>Yes</u>	<u>No</u>	<u>No</u>	<u>NR</u>	<u>70-75/21-24</u>
Nuclear medicine hot lab (1224.34.1.3)	Negative	NR	6	Yes	No	Yes (ff)	NR	70-75/21-24
Speech therapy room (1224.35.4)	NR	2	2	NR	NR	Yes	NR	70-75/21-24
Physical therapy (1224.35.2)	Negative	2	6	NR	NR	Yes	Max 65	72-80/22-27
Occupational therapy (1224.35.3)	NR	2	3	NR	NR	Yes	NR	70-75/21-24
Special examination room (<u>aag</u>)	NR	2	6	NR	NR	Yes	Max 60	70-75/21-24
Treatment room	NR	2	6	NR	NR	Yes	Max 60	70-75/21-24
<u>Ultrasound</u> (1224.18.5)	<u>NR</u>	<u>2</u>	<u>6</u>	<u>NR</u>	<u>NR</u>	<u>Yes</u>	<u>Max 60</u>	<u>72-78/22/26</u>
PATIENT SUPPORT FACILITIES SERVICES								
<u>Blood bank/tissue storage</u> (1224.17.2.4)	<u>NR</u>	<u>2</u>	<u>6</u>	<u>NR</u>	<u>NR</u>	<u>Yes</u>	<u>NR</u>	<u>NR</u>
<u>Blood draw/pheribotomy</u> (1224.17.3)	<u>NR</u>	<u>2</u>	<u>6</u>	<u>NR</u>	<u>NR</u>	<u>Yes</u>	<u>NR</u>	<u>70-75/21-24</u>
Bedpan	Negative	NR	40	Yes	No	No	NR	NR
Environmental services room/ <u>Housekeeping</u> (1224.4.15)	Negative	NR	10	Yes	No	No	NR	NR
Food and supply storage (1224.20.2.3)	NR	NR	2	NR	No	No	NR	72-78/22-26

TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES,
INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS,
CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
Food preparation areas (1224.20.2.5) (i)	NR	2	10	NR	No	Yes	NR	72-78/22-26
Laboratory work area, bacteriology (1224.17.2) (f), (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, biochemistry (1224.17.2) (f), (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, cytology (1224.17.2) (f) _u (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, general (1224.17.2) (f), (v)	Negative	2	6	NR	NR	Yes	NR	70-75/21-24
Laboratory work area, <u>glasswashing</u> (1224.17.2) (f)	Negative	2	10	Yes	NR	Yes	NR	NR
Laboratory work area, histology (1224.17.2) (f) _u (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, media transfer (1224.17.2) (f) _u (v)	Positive	2	4	NR	NR	Yes	NR	70-75/21-24
Laboratory work area, microbiology (1224.17.2) (f), (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, nuclear medicine (1224.17.2) (f), (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, pathology (1224.17.2) (f), (v)	Negative	2	6	Yes	NR	No	NR	70-75/21-24
Laboratory work area, serology (1224.17.2) (f), (v)	Negative	2	6	Yes	NR	Yes	NR	70-75/21-24
Laboratory work area, sterilizing (1224.17.2) (f)	Negative	2	10	Yes	NR	Yes	NR	70-75/21-24
Pharmacy Services: Pharmacy Areas (1224.19.2) (b)	Positive	2	4	NR	NR	Yes	Max 60	70-75/21-24
<u>Drug room</u> (1224.19.1.2.1)	<u>NR</u>	<u>2</u>	<u>4</u>	<u>NR</u>	<u>NR</u>	<u>Yes</u>	<u>NR</u>	<u>70-75/21-24</u>
<u>HD ante room</u> (1224.19.3.3.3) (b)	<u>Positive</u>	<u>NR</u>	<u>30</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u><60</u>	<u>≤68/≤20</u>
<u>HD buffer room</u> (1224.19.3.3.2) (b)	<u>Negative</u>	<u>NR</u>	<u>30</u>	<u>Yes</u>	<u>No</u>	<u>NR</u>	<u><60</u>	<u>≤68/≤20</u>
<u>HD SCA</u> (1224.19.3.3.4) (cc)	<u>Negative</u>	<u>NR</u>	<u>12</u>	<u>Yes</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>	<u>NR</u>

TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES,
INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS,
CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
HD storage (1224.19.3.3) (b)	Negative	NR	12	Yes	NR	NR	NR	NR
Non-HD ante room (1224.19.3.2.3) (b)	Positive	NR	3020	NR	NR	NR	≤60	≤68/≤20
Non-HD buffer room (1224.19.3.2.2) (b)	Positive	NR	30	NR	No	NR	≤60	≤68/≤20
Non-HD SCA (1224.19.3.2.4) (dd)	NR	NR	NR	NR	NR	NR	NR	NR
Toilet room (1224.4.4.8)	Negative	NR	10	Yes	No	Yes	NR	72–78/22–26
Warewashing (1224.20.2.10) (r)	Negative	NR	10	Yes	No	Yes	NR	NR
GENERAL SUPPORT FACILITIES SERVICES:								
STERILE PROCESSING								
Clean assembly/workroom (1224.22.1) (z)	Positive	2	4	NR	No	No	Max 60	68–73/20–23
Soiled workroom/decontamination room (1224.22.1) (z)	Negative	2	6	Yes	No	No	NR	60–73/16–23
Sterile storage room (clean/sterile medical/ surgical supplies) (1224.22.1) (z)	Positive	2	4	NR	NR	No	Max 60	Max 75/24
One-room sterile processing (1224.22)	NR	2	6	NR	No	No	NR	NR
Sterilizing equipment room	Negative	NR	10	Yes	No	No	NR	NR
OTHER GENERAL SUPPORT FACILITIES SERVICES								
Morgues and Autopsy room (1224.24)	Negative	2	12	Yes	No	No	NR	68–75/20–24
Clean linen storage room (1224.27 & 1224.14.2.9)	Positive	NR	2	NR	NR	Yes	NR	72–78/22–26
Hazardous material storage (1224.4.14)	Negative	2	10	Yes	No	No	NR	NR
Laundry, processing room (1224.27)	Negative	2	10	Yes	No	No	NR	NR
Linen and refuse chute room (1224.27 & 1224.4.14)	Negative	NR	10	Yes	No	No	NR	NR



TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES,
INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS,
CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (j)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
Nonrefrigerated body holding room (1224.24) (h)	Negative	NR	10	Yes	No	No	NR	70–75/21–24
Regulated waste holding spaces (1224.4.14)	Negative	NR	10	Yes	No	No	NR	NR
Toilet	Negative	NR	10	Yes	No	Yes	NR	NR
Unsterile supply (1225.4.5.2.4)	NR	2	2	NR	NR	No	NR	NR
SUPPORT AREAS FOR NURSING UNITS AND OTHER PATIENT CARE AREAS								
Clean supply room (1224.4.4.6.1)	Positive	NR	2	NR	NR	Yes	NR	NR
Clean utility/workroom (1224.4.4.6)	Positive	2	4	NR	NR	Yes	NR	NR
Soiled utility/workroom or soiled holding (FGI 2.1–2.8.12)	Negative	2	10	Yes	No	No	NR	NR
SKILLED NURSING AND INTERMEDIATE CARE FACILITIES								
All room (1225.4.1.9) (b)	Negative	2	12	Yes	No	Yes	Max 60	70–78/21–29
All anteroom (1225.4.1.9) (b)	Negative	NR	10	Yes	No	Yes	Max 60	70–78/21–29
Nurse station (aa)	(aa)	(aa)	2	(aa)	(aa)	(aa)	(aa)	(aa)
Resident living/activity/dining (1225.5.1.4/1225.5.2.5.1)	NR	4	4	NR	NR	Yes	Max 60	70–78/21–29
Recreation/activity room (1225.5.1.4)	NR	2	6	NR	NR	Yes	NR	70–75/21–24
Resident room (1225.5.1.2.1/1225.5.2.3)	NR	2	2	NR	NR	Yes	Max 60	70–78/21–29
Resident corridor (1225)	NR	NR	4	NR	NR	Yes	NR	70–78/21–29
Special purpose room (1225.4.1.8)	NR	2	6	Yes	NR	Yes	Max 60	70–75/21–24



TABLE 4-A
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES,
INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS,
CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHDP 1, 2, 3, 4 & 5]

Function of Space (ee)	Pressure Relationship (d)(n)	Minimum Outdoor ach	Minimum Total ach	Exhausted Directly to Outdoors (i)	Recirculated Room Units (a)	Unoccupied Turndown	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
Shower room (1224.14.2.14)	Negative	NR	10	Yes	No	No	NR	70-75/21-24
Toilet/bathing room (1225.4.1.6)	Negative	NR	10	Yes	No	No	NR	70-78/21-29
SERVICE								
Clean linen storage (1225.4.5.2.1)	Positive	NR	2	NR	NR	No	NR	72-78/22-26
Dietary storage (1225.4.2.2.10)	NR	NR	2	NR	No	No	NR	72-78/22-26
Food preparation center (1225.4.2.2.3) (i)	NR	2	10	NR	No	Yes	NR	72-78/22-26
Hair salon (1225.6)	Negative	NR	10	Yes	NR	Yes	NR	70-78/21-29
Laundry, central and personal (1225.4.7/1225.5.2.5.7)	Negative	2	10	Yes	No	No	NR	NR
Linen and trash chute room (1225.4.7)	Negative	NR	10	Yes	No	No	NR	NR
Medication preparation room (1225.4.1.1.1)	NR	2	4	NR	NR	Yes	Max 60	70-75/21-24
Soiled linen sorting and storage (1225.4.7)	Negative	NR	10	Yes	No	No	NR	NR
Unsterile supply (1225.4.5.2.4)	NR	2	2	NR	NR	No	NR	NR
Warewashing (1225.4.2.2.7)	Negative	NR	10	Yes	No	Yes	NR	NR
SUPPORT SPACE								
Clean utility room (CBC 1225.4.1.3.1)	Positive	2	4	NR	NR	No	NR	NR
Hazardous waste storage (1225)	Negative	2	10	Yes	No	No	NR	NR
Environmental services Housekeeping room (1225.4.6) (j)	Negative	NR	10	Yes	NR	No	NR	NR
Soiled utility workroom or soiled holding (1225.4.1.3.2)	Negative	2	10	Yes	No	No	NR	NR

CMC Table 4-A Footnotes

- Adopt ASHRAE Table 7-1 footnotes, OSHPD amendments added

Notes for Table 4-A[Only amended notes shown]:

- e. See Section ~~7.2.1~~ [1414.0 and 416.0](#) for All ventilation requirements, including pressure relationship requirements, and Section ~~7.2.2~~ [415.0 and 416.0](#) for PE ventilation requirements, including pressure relationship requirements.
- g. ~~Not used.~~ (relocated from 'aa') [Examination rooms programmed for use by patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms.](#)
- i. ~~Not used.~~ [Minimum total air changes per hour \(ach\) shall be that required to provide proper makeup air to kitchen exhaust systems as specified in Section 511.3. Commercial cooking areas shall be designed to prevent odors from entering patient spaces.](#)

CMC Table 4-A Footnotes

- j. ~~In some areas with potential contamination and/or odor problems,~~ Where the “exhaust directly to Outdoors” column is marked yes, all exhaust air shall be discharged directly to the outdoors and not recirculated to other areas. ~~Individual circumstances may require special consideration for air exhausted to the outdoors.~~ Recirculation room units may be provided where the column is marked yes provided air is not recirculated to other areas. To satisfy exhaust needs, constant replacement air from the outdoors is necessary when the system is in operation.
- ee. **Informative Note:** Parenthetical notations following a space name are paragraph references to the relevant ~~FGI Guidelines (FGI 2018a, 2018b, 2018c) in Informative Appendix E~~ California Building Code sections from Chapter 12. These paragraph references are provided to the user to aid in the application of design requirements. Functions from 1225, 1226, 1227, or 1228 not specifically identified in the table can refer to the appropriate section from 1224.

TABLE 4-B
FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN GENERAL ACUTE CARE HOSPITALS, ACUTE PSYCHIATRIC HOSPITALS, OUTPATIENT FACILITIES, AND LICENSED CLINICS AND ACUTE PSYCHIATRIC HOSPITALS¹ [OSHPD 1, 3, & 5]

AREA DESIGNATION	MINIMUM NUMBER OF FILTER BANKS	FILTER EFFICIENCY % FILTER BANK LOCATION		
		(MINIMUM EFFICIENCY REPORTING VALUE MERV) ⁵		
		NO. 1 ¹	NO. 2 ¹	NO. 3A.T.D. ²
Orthopedic operating room, bone marrow transplant operating room, organ transplant operating room, NICU formula preparation room, NICU treatment area/room	3	30%	90%	99.97% ^{3,4}
		(8)	(14)	(47) HEPA ³
Protective environment rooms	3	30%	90%	99.97% ^{4,5}
		(8)	(14)	(47) HEPA ³
Operating room, Operating/surgical cystoscopic room, Cesarean operating Room, Glass 3 imaging, Hybrid operating room	2	30%	95%	=
		(8)	(16)	=

TABLE 4-B
FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN GENERAL ACUTE CARE HOSPITALS, ACUTE PSYCHIATRIC HOSPITALS, OUTPATIENT FACILITIES, AND LICENSED CLINICS AND ACUTE PSYCHIATRIC HOSPITALS¹ [OSHPD 1, 3, & 5]

AREA DESIGNATION	MINIMUM NUMBER OF FILTER BANKS	FILTER EFFICIENCY % FILTER BANK LOCATION (MINIMUM EFFICIENCY REPORTING VALUE MERV) ⁵⁶		
		NO. 1 ¹	NO. 2 ¹	NO. 3A.T.D. ²
Angiography; cardiac catheterization labs class 1 and 2 imaging; interventional imaging procedure rooms; delivery rooms, nurseries; patient care, treatment, exam, cystoscopy, diagnostic, and related areas; airborne infection isolation rooms; areas providing direct patient service or clean supplies such as sterile and clean processes, and patient area corridors	2	30%	90%	—
...		(8)	(14)	—
Administrative, med staff support areas, bulk storage, soiled holding areas, food preparation areas, public cafeterias, and laundries	1 ⁶²	80%	—	—
		(13)	—	—
Psychiatric hospitals intended for the care and treatment of inpatients who do not require acute medical services	1 ⁶²	80%	—	—
		(13)	—	—

TABLE 4-B
FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN GENERAL ACUTE CARE HOSPITALS, ACUTE PSYCHIATRIC HOSPITALS, OUTPATIENT FACILITIES, AND LICENSED CLINICS AND ACUTE PSYCHIATRIC HOSPITALS¹ [OSHPD 1, 3, & 5]

AREA DESIGNATION	MINIMUM NUMBER OF FILTER BANKS	FILTER EFFICIENCY % FILTER BANK LOCATION (MINIMUM EFFICIENCY REPORTING VALUE MERV) ⁵⁶		
		NO. 1 ¹	NO. 2 ¹	NO. 3A.T.D. ²

¹ Based on ASHRAE 52.2.

² ~~Based on DOP test in accordance with MIL-STD-282 or based on ASHRAE 52.2.~~ A.T.D. – Air terminal device serving the room or space.

³ ~~HEPA filters are those filters that remove at least 99.97% of 0.3 micron sized particles at the rated flow in accordance with the testing methods of IEST RP-CC001.~~

³⁴ ~~HEPA filters shall be located at in the air terminal device of the room served outlet or other locations when approved by the Authority Having Jurisdiction.~~

⁴⁵ ~~HEPA filters shall be located in the air terminal device of the room served. HEPA filters shall be permitted to be located in the air handling unit subject to the exception in ASHRAE 170, Section 7.2.2(c). supply duct which serves the positive pressure isolation room or rooms may serve more than one supply outlet and more than one positive pressure isolation room. HEPA filter or a filter with minimum efficiency reporting value (MERV) of 17 installation shall be designed and equipped to permit safe removal, disposal and replacement of filters.~~

⁵⁶ The numbers in parentheses represent MERV rating based on ASHRAE 52.2.

⁶² Additional prefilters with a minimum efficiency of MERV 8 may be used to reduce maintenance for filters.

TABLE 4-C

FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN SKILLED NURSING FACILITIES, ~~AND~~ INTERMEDIATE CARE FACILITIES AND CORRECTIONAL TREATMENT CENTERS¹ [\[OSHPD 2 & 4\]](#)

...[table not shown]

² *Filters are not required for evaporative coolers serving laundries ~~and food preparation areas~~.*

CHAPTER 6 DUCT SYSTEMS

603.4 Flexible Air Ducts. ...

603.4.1 Length Limitation. *[Not permitted for OSHPD 1, ~~1R~~, 2, 3, 4 & 5]* Flexible air ducts shall be not more than 5 feet (1524 mm) in length and shall not be used in lieu of rigid elbows or fittings. Flexible air ducts shall be permitted to be used as an elbow at a terminal device.

Exception: Residential occupancies.

603.4.1.1 Flexible Ducts. *[OSHPD 1, ~~1R~~, 2, 3, 4 & 5]* In hospital building projects and all other health-care facilities, including clinics and correctional treatment centers, flexible ducts of not more than 10 feet (3048 mm) in length may be used to connect supply, return or exhaust-air terminal devices to rigid duct systems. Where constant volume, variable volume or mixing boxes are utilized, flexible duct of not more than ~~10~~ 5 feet (~~3048~~ 1524 mm), may be used on the inlet side for alignment. An internal impervious liner shall be provided to isolate insulation material from conditioned air. Flexible duct is not permitted in corridors where fire or smoke dampers are omitted per CBC 717.5.4 and the duct is required to be constructed of steel not less than 0.019 inch (0.483 mm) in thickness.

CHAPTER 6 DUCT SYSTEMS

605.0 Insulation of Ducts.

...

605.2 [OSHPD 1, ~~1R~~, 2, 3 (Surgical Clinics), 4 & 5] Thermal acoustical lining materials shall not be installed within ducts, terminal boxes, sound traps, and other in-duct systems serving areas such as operating, cesarean operating rooms, delivery rooms, [class 3 imaging, hybrid operating rooms](#), post anesthesia care units, cystoscopy, cardiac catheterization labs, nurseries, intensive care units, newborn intensive care units, [protective environment rooms](#) and airborne infection isolation rooms unless filters with 90 percent average efficiency based on ASHRAE Standard 52.2 or minimum efficiency rating value (MERV) of 14 are installed downstream of the duct lining. [See ASHRAE 170, section 6.9 for duct lining for non-sensitive areas or rooms.](#)

605.3 [OSHPD 1, ~~1R~~, 2, 4 & 5] Thermal or acoustical lining materials shall not be installed within ducts which are downstream of the 99.97 percent high-efficiency particulate air (HEPA) filter ~~or with minimum efficiency rating value (MERV) of 17~~ required in Section 408.2.1 for protective environment rooms.

CHAPTER 11 REFRIGERATION

**TABLE 1104.1
PERMISSIBLE REFRIGERATION SYSTEMS¹**

	OCCUPANCY GROUP ²	HIGH-PROBABILITY SYSTEM	LOW PROBABILITY SYSTEM	MACHINERY ROOM
	...	...	...	...
[OSHPD 1, 1R , 2, 3, 4 & 5]	<i>I-2.1</i>	<i>Group A1 only</i>	<i>Any</i>	<i>Any</i>

CHAPTER 18 REFERENCED STANDARDS

TABLE 1801.1
STANDARDS, PUBLICATIONS, PRACTICES, AND GUIDES

STANDARD NUMBER	STANDARD TITLE	APPLICATION	REFERENCED SECTION
...	...	...	...
IAPMO PS 117-2021	Press and Nail Connections	Fittings	Table 1210.1
<u>IEST RP-CC001.7</u>	<u>HEPA and ULPA Filters</u>	<u>Filters</u>	<u>Table 4-B</u>



Part 5 California Plumbing Code Update

CHAPTER 1 ADMINISTRATION

1.10.6 OSHPD 6. *Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

OSHPD 6

Application—*Chemical dependency recovery hospital not within an acute care hospital building or an acute psychiatric facility.*

Enforcing agency — *Local building department.*

1.10.6.1 Applicable Administrative Standards.

1. *Title 24, Part 1, California Code of Regulations: Chapter 7.*

2. *Title 24, Part 2, California Code of Regulations: Section 1.1 and 1.10, Chapter 1 Division I, and as indicated in the adoption matrix for Chapter I, Division II.*

1.10.6.2 Applicable Building Standards. *California Building Standards Code, Title 24, Parts 2, 3, 4, 5, 6, 9, 10 and 11.*

The provision of Title 24, Part 2, as adopted and amended by OSHPD, shall apply to the applications listed in Section 1.10.6.

Authority Cited — *Health and Safety Code Sections 1275, 18929 and 129850.*

References — *Health and Safety Code Sections 1250.3 and 129675-130070.*

1.10.6.3 Adopting Agency Identification. *The provisions of this code applicable to buildings identified in this Subsection 1.10.6 will be identified in the Matrix Adoption Tables under the Acronym OSHPD 6.*



CHAPTER 2 DEFINITIONS

210.0 – H –

...

Handwashing Fixture [OSHPD 1, 2, 3, 4, 5 & 56]. *Handwashing fixtures consist of faucet, trim and lavatory as described:*

Faucets and Trim

...

- c. *Faucets shall not be equipped with an aerator but may be equipped with a non-aerating laminar flow device. The flow rate for handwashing fixtures shall not be less than 1.0 (3.79 L) gallons per minute.*
- d. *Faucets shall be equipped with gooseneck spouts. A gooseneck spout shall be deck or fixture-mounted so the discharge point of the spout return is at least 10 inches (25.4 mm) above the bottom of the basin. The water shall not flow directly from the spout into the drain. The gooseneck spout shall have a 180(+/-~~5~~10) degree return with a constant radius and the outlet pointing vertically down.*



CHAPTER 2 DEFINITIONS

221.0 – S –

...

Scrub Sink [OSHPD 1, 2, 3, 4 & 5]. Is a sink used to wash and scrub the hands and arms during the septic preparation for surgery and equipped with a supply spout ~~and controls~~ as required for a handwashing fixture. The scrub sink shall be trimmed with foot, knee or electronic sensor controls that do not involve contact with the upper extremities. Sensor operated fixtures shall be capable of functioning during loss of normal power. Single-lever wrist blades shall not be permitted except for the temperature pre-set valve.

CHAPTER 3 GENERAL REGULATIONS

310.0 Prohibited Fittings and Practices.

...

310.10 ABS and PVC Transition Joints. Except as provided in Section 705.9.4, PVC and ABS pipe and fittings shall not be solvent welded to dissimilar material.

310.911 [OSHPD 1, 2, 3, 4 & 5] Drainage piping over operating and delivery rooms, nurseries, food preparation ...

310.1012 [OSHPD 1, 3, 4 & 5] Floor drains, waste traps, sanitary ...

310.1113 [SFM] For applications ...

310.1214 [OSHPD 1, 2, 4 & 5] Services/Systems and Utilities. Refer to Sections 1224.4.1, 1225.2.1 and 1228.4.1.1, California Building Code.

310.1315 Telephone and Data Equipment Rooms. [OSHPD 1, 4 & 5]. Where telecommunications service...

CHAPTER 3 GENERAL REGULATIONS

319.0 ~~[Not permitted for OSHPD 1, 2, 3, 4 & 5]~~ Medical Gas and Vacuum Systems.

319.1 General. Such piping shall be in accordance with the requirements of Chapter 13. The Authority Having Jurisdiction shall require evidence of the competency of the installers and verifiers.

CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS

422.0 Minimum Number of Required Fixtures

...

422.3 Fixture Requirements for Special Occupancy. ...

422.3.1 ~~[OSHPD 1, 2, 3, 4, & 5 & 6]~~ *Separate toilet facilities shall be provided for the use of patients, staff personnel and visitors.*

Exceptions:

(1) ~~For Primary Care Clinics Only: Where a facility contains no more than three examination and/or treatment rooms, the patient toilet shall be permitted to serve waiting areas.~~

(2) *For public waiting areas with an occupant load of 10 or less, one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both sexes.*

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

604.0 Materials

604.1 Pipe, Tube, and Fittings. Pipe, tube, fittings, solvent cement, thread sealants, solders, and flux used in potable water systems intended to supply drinking water shall comply with NSF 61. Where pipe fittings and valves are made from copper alloys containing more than 15 percent zinc by weight and are used in plastic piping systems, they shall be resistant to dezincification and stress corrosion cracking in compliance with NSF 14.

Materials used in the water supply system, except valves and similar devices, shall be of a like material, except where otherwise approved by the Authority Having Jurisdiction.

Materials for building water piping and building supply piping shall comply with the applicable standards referenced in Table 604.1.

Exception: *[OSHPD 1, 2, 3, 4 & 5] Use of CPVC is not permitted for [potable water](#) applications. ~~under authority of the Office of Statewide Health Planning and Development.~~*

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

609.0 Installation, Testing, Unions, and Location.

...

609.10 Disinfection of Potable Water System. New or repaired potable water systems shall be disinfected prior to use where required by the Authority Having Jurisdiction. *[OSHPD 1, 1R, 2, 3, 4 & 5] Prior to utilization of newly constructed or altered potable water piping systems, all affected potable water piping shall be disinfected using procedures prescribed in California Plumbing Code Sections 609.10(1) through 609.10(45). The method to be followed shall be that prescribed by the Health Authority or, in case no method is prescribed by it, the following:*

(5) [\[OSHPD 1, 1R, 2, 3, 4 & 5\] Disinfection shall be completed no more than three weeks before whole or partial beneficial occupancy.](#)

(a) [Where occupancy is delayed two weeks from disinfection, flushing of all fixtures shall again be completed.](#)

(b) [Where occupancy is delayed four weeks after disinfection, disinfection and flushing shall again be completed.](#)

TABLE 613.1
[OSHPD 1, 1R, 2, 3, 4 & 5] HOT WATER USE

	CLINICAL	DIETARY¹	LAUNDRY²
Liter/Hour/Bed	11.9	7.2	7.6
Gallons/Hour/Bed	3	2	2
Temperature °C	41-49.0	49.0 ³	71.0
Temperature °F	105-120.0	120.0 ³	160.0

¹ Rinse water temperature at automatic dishwashing equipment and potsinks shall be 180°F (82°C). Rinse water temperature at warewasher or potsinks shall be 180°F (82°C) unless a chemical disinfection is provided.

Exception: The rinse water supply to pot rinse sinks may be deleted if a method of chemical disinfection using a three-compartment sink is proposed.

² The required temperature of 160°F (71°C) in the laundry is that measure in the washing machine and shall be supplied so that the temperature may be maintained over the entire wash and rinse period.

Exception: A lower water temperature of 140°F (60°C) may be utilized, provided linens are subsequently passed through a tumbler dryer at 180°F (82°C) or a flatwork ironer at 300°F (149°C).

³ Dietary hot water temperature shall meet minimum temperature requirements at the point of use per the health authority.

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

613.2 At least two pieces of hot-water-heating equipment shall be provided to supply hot water for dishwashing and minimum patient services such as handwashing and bathing. The arrangement of water-heating equipment shall be based on the capacity and capability of the equipment to provide the required hot water during periods of breakdown or maintenance of any one water heater. Booster heaters for 125°F to 180°F (52°C to 82°C) water are acceptable as a second piece of equipment for dishwashing. Where storage tanks are separate from the water heater, at least two independent storage tanks shall be provided. Storage water heaters and hot-water storage tanks shall be maintained at 140°F (60°C) or above.

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

613.6 Hot-water distribution system serving patient care areas shall be under constant mechanical recirculation to provide continuous hot water at each hot water outlet. Hot water recirculation piping shall return the recirculation loop back through the hot water source. Non-recirculated fixture branch piping shall not exceed ~~25~~10 feet (~~7.62~~3.05 meters) in length. Dead-end piping (risers with no flow, branches with no fixture) shall not be installed. In renovation projects, dead-end piping shall be removed in the area of renovation. Empty risers, mains, and branches installed for future use shall be permitted.

...

613.9 Hot water distribution shall include test ports and valved openings for flushing of portions of the system in accordance with the facilities water management program as defined in Appendix N.



CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

614.0 [OSHDP 1, 2, 3, 4 & 5] Dialysis Water-Distribution Systems.

614.1 [OSHDP 1, 2, 3, 4 & 5] Dialysis water feedlines shall be CPVC (chlorinated polyvinyl chloride), PVC (polyvinyl chloride), glass, stainless steel, PEX, PVDF (polyvinylidene fluoride), or other material deemed acceptable by ANSI/AAMI/ISO ~~RD-62~~ 23500-2 and sized to provide a minimum velocity of 1.5 feet per second (0.46 m/s). The piping shall be a singleloop system with or without recirculation. Branches to dialysis machines shall be 1/4 inch (6.4 mm) inside dimension and take off from the bottom of the main feedline. Branch lines may be PFA (perfluoroalkoxy).

...

614.7 Water treatment equipment and water used for dialysis treatment shall meet the latest edition of ANSI/American Association of Medical Instrumentations(AAMI)/ISO ~~RD-62~~ ANSI/AAMI/ISO 23500-2 and 23500-3, Preparation And Quality Management Of Fluids For Haemodialysis And Related Therapies—Part 2: Water Treatment Equipment For Haemodialysis Applications And Related Therapies and Part 3: Water For Haemodialysis And Related Therapies



CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

615.0 Identification of Potable and Nonpotable Water Lines.

...

~~615.4~~ [616.0](#) [OSHPD 1] Emergency Water Supply.

~~615.4.1~~ [616.1](#) *For new acute care hospital buildings submitted after the effective date of this code, the hospital shall have an on-site water supply sufficient to operate essential hospital utilities and equipment in the acute care hospital building, to support 72 hours of continuing operation in the event of an emergency. Any general acute care hospital in operation after January 1, 2030 shall have an on-site water supply sufficient to operate essential hospital utilities and equipment in the acute care hospital buildings on the campus with an SPC-3, SPC-4, [SPC 4D](#), or SPC-5 rating, to support 72 hours of continuing operation in the event of an emergency. See also California Building Code, Part 2, Section 1617A.1.40...*

~~615.4.2~~ [616.2](#) *The emergency supply of water shall be provided at adequate pressure using gravity, pressure tanks, or booster pumps. Pumps used for this purpose shall be provided with electrical power from the on-site emergency power supply system.*

[616.3](#) *Storage tank connections and circulation shall be designed to limit water stagnation and temperature stratification. Supplemental disinfection and circulation shall be provided where the disinfection levels of the public water supply are not adequate to maintain minimum levels of disinfectant for water quality consistent with the facility's water management program.*

CHAPTER 7 SANITARY DRAINAGE

727.0 [OSHPD 1] Emergency Sanitary Drainage.

727.1 For new acute care hospital buildings submitted after the effective date of this code, the hospital shall have an onsite holding tank[s] to store sewage and liquid waste sufficient to operate essential hospital utilities and equipment in the acute care hospital building, to support 72 hours of continuing operation in the event of an emergency. Any general acute care hospital in operation after January 1, 2030 shall have an on-site holding tank[s] to store sewage and liquid waste sufficient to operate essential hospital utilities and equipment in the acute care hospital buildings on the campus with an SPC-3, SPC-4, [SPC-4D](#), or SPC-5 rating, to support 72 hours of continuing operation in the event of an emergency. The emergency waste holding capacity shall be based on the Water Conservation/Water Rationing Plan required in Section 615.4.1. See also California Building Code, Part 2, Section 1617A.1.40.

CHAPTER 17 REFERENCED STANDARDS

TABLE 1701.1
Referenced Standards

STANDARD NUMBER	STANDARD TITLE	APPLICATION	REFERENCED SECTION
...	...	...	...
49 CFR 192.283	Plastic Pipe: Qualifying Joining Procedures	Plastic, Pipe	1208.6.7.2
ANSI/AAMI/ISO RD62 23500-2	Preparation And Quality Management Of Fluids For Haemodialysis And Related Therapies—Part 2: Water Treatment Equipment for Hemodialysis Applications	Miscellaneous	614.7
ANSI/AAMI/ISO 23500-3	Preparation And Quality Management Of Fluids For Haemodialysis And Related Therapies—Part 3: Water For Haemodialysis And Related Therapies.	Miscellaneous	614.7

Thank you!

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