FINAL EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT

REGARDING PROPOSED CHANGES TO
CALIFORNIA MECHANICAL CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4

LEGEND FOR FINAL EXPRESS TERMS (combination of 45-day and 15-day changes)

1. For 45-day and 15-Day changes, existing California amendments or code language being modified appears in italics, with modified language underlined.
2. For 45-day and 15-Day changes, repealed text appears in ~~strikeout~~.
3. Highlighted text: The highlighted text provides only clarification of proposed language.

FINAL EXPRESS TERMS

CHAPTER 1
ADMINISTRATION

DIVISION I
CALIFORNIA ADMINISTRATION

Adopt 2015 Uniform Mechanical Code (UMC) Chapter 1 and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4.

DIVISION II
ADMINISTRATION

Adopt 2015 Uniform Mechanical Code (UMC) Chapter 1 and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

Due to renumbering in the 2015 UMC the existing 2013 CMC OSHPD amendment of Section 101.3 is to be carried forward to Section 102.1.

~~**101.3**~~ **102.1 Conflicts Between Codes.** Where the requirements within the jurisdiction of this mechanical code conflict with the requirements of the plumbing code, the plumbing code shall prevail. In instances … prevail. ***[OSHPD 1, 2, 3 & 4]*** *See Chapter 1, Division I, Section 1.1.7.*

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 2
DEFINITIONS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications.

Section 221.0 - S -
~~***State Building Code. [OSHPD 1, 2, 3 & 4]*** *is the most recent edition of the California Building Code.*~~

Notation

CHAPTER 3
GENERAL REQUIREMENTS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

Due to renumbering in the 2015 UMC the existing 2013 CMC OSHPD amendments of Section 303.3 are to be carried forward to Section to 303.2.

303.~~3~~2 Closet or Alcove Installations. Central heating furnaces and boilers installed in closets or alcoves shall be listed for such installation. Central heating furnaces not listed for closet or alcove installation shall be installed in a room or space having a volume not less than 12 times the total volume of the furnace. Central heating boilers not listed for closet or alcove installation shall be installed in a room or space having a volume 16 times the volume of the boiler. ***[OSHPD 1, 2, 3 & 4]*** *The total volume of the boilers shall be based on the total number of central-heating boilers that can operate at the same time.*

> ***Exceptions~~s~~ :***
> *~~(2)~~* ***[OSHPD 1, 2, 3 & 4]*** *A 25 percent reduction in the boiler room volume is allowed with forced-draft boilers and approved ventilation of the boiler room. In no case shall boiler room volume or clearances be reduced below those required by the conditions of the boiler listing. The boiler and the boiler room ventilation system, including fans, controls, and damper motors shall be on emergency power when required by Section 326.0. The ventilation system shall either operate continuously, or, if interlocked with the boiler(s) it shall not interfere with the proper boiler operation.*

Where the ceiling height of the room or space exceeds 8 feet (2438 mm), the volume shall be calculated on the basis of an 8 foot (2438 mm) height.

The installation clearances shall be …

The following 2013 CMC OSHPD amended sections are being renumbered to align with the renumbering of 2015 UMC Chapter 3.

317.4 Excavations. Excavations shall be … filled or made ground.

~~323.0~~ 318.0 Scope*.*

~~323.1~~ 318.1 Applicability. *This part is applicable to health facilities regulated by OSHPD (See Adoption Tables for application for specific sections).*

~~323.2~~ 318.2 Services/Systems and Utilities. *Refer to Section 1224.4.1 of the California Building Code.*

~~324.0~~ 319.0 Steam and Hot-Water Systems.

~~324.1~~ 319.1 Requirements for Hospitals and Optional Services Provided in Correctional Treatment Centers. [OSHPD 1 & 4]

~~324.1.1~~ 319.1.1 *Boilers … equipment.*
~~324.1.2~~ 319.1.2 *A minimum … boiler.*
~~324.1.3~~ 319.1.3 *Boiler systems … Region X.*
~~324.1.4~~ 319.1.4 *Boiler feed pumps … requirement.*
~~324.1.5~~ 319.1.5 *At least two sources … that service.*

***~~324.2~~ 319.2* Requirements for Skilled Nursing, Intermediate Care Facilities and Basic Services Provided in Correctional Treatment Centers. [For OSHPD 2 & 4]**

~~324.2.1~~ 319.2.1 *Boilers, if provided, shall accommodate Section ~~324.1~~ 319.1*
~~324.2.2~~ 319.2.2 *Two or more interconnected water heaters are an acceptable means to provide two sources of heat for hot water (See Section ~~324.1.5~~ 319.1.5).*

***~~325.0~~ 320.0* Air Conditioning and Heating Systems.**

***~~325.1~~ 320.1* Requirements for Hospitals and Optional Services Provided in Correctional Treatment Centers. [OSHPD 1 & 4]**

~~325.1.1~~ 320.1.1 *The systems shall be designed to provide the temperatures and relative humidity for sensitive areas or rooms shown in Table ~~325.0~~.320.0 When outdoor humidity and internal moisture sources are not sufficient to meet the requirements of Table ~~325.0~~ 320.0, humidification shall be provided by means of the health-care facility air-handling systems. Temperature shall be individually controlled for each operating and delivery room. Burn unit patient rooms that require humidifiers to comply with Table ~~325.0~~ 320.0 shall be provided with individual humidity control. All humidifiers shall use dry steam. Humidifiers shall be located within air handling systems or ductwork to avoid moisture accumulation in downstream components , including filters and insulation.*

~~325.1.2~~ 320.1.2 *For occupied areas not shown in Table ~~325.0~~ 320.0, heating systems shall be designed to provide 70°F to 75°F (21.1°C to 23.9°C) based on the ~~Median of Extremes shown by the 1982 ASHRAE Climatic Data for Region X and ASHRAE 1994 Supplement to Climatic Data for Region X~~ Climatic Design Data in the most recent version of ASHRAE Handbook-Fundamentals. The systems shall be thermostatically controlled with appropriate zoning to achieve the above conditions.*

~~325.1.3~~ 320.1.3 *For occupied areas not shown in Table ~~325.0~~ 320.0, cooling systems shall be designed to provide 75°F (23.9°C) maximum based on the 0.~~5~~ .4 percent summer design dry bulb temperatures shown by the ~~1982 ASHRAE Climatic Data for Region X and ASHRAE 1994 Supplement to Climatic Data for Region X~~ Climatic Design Data in the most recent version of ASHRAE Handbook-Fundamentals The systems shall be thermostatically controlled with appropriate zoning to achieve the above conditions.*

***~~325.2~~ 320.2* Requirements for Skilled Nursing, Intermediate Care Facilities and Basic Services Provided in Correctional Treatment Centers. [For OSHPD 2 & 4]**

~~325.2.1~~ 320.2.1 *Systems shall accommodate the provisions of Section ~~325.1.2~~ 320.1.2 through ~~325.1.3~~ 320.1.3.*

~~325.2.2~~ 320.2.2 *Where air is provided, the system shall be thermostatically controlled in one or more zones.*

***~~325.3~~ 320.3* Requirements for Outpatient Facilities and Licensed Clinics. [For OSHPD 3]**

~~325.3.1~~ 320.3.1 *The system shall be designed to provide the temperature and humidity's for sensitive areas for rooms shown in Table ~~325.0.~~ 320.0*

TABLE ~~325.0~~ 320.0
HEATING, COOLING, AND RELATIVE HUMIDITY
REQUIREMENTS FOR SENSITIVE AREAS OR ROOMS

Area or Rooms Designation	***Temperature Range [1,2]***	***Relative Humidity [1,3]***
	°F	***Percent***
Operating room	*68-75*	*20-60*
Cystoscopy	*68-75*	*20-60*
Cardiac catheterization lab	*70-75*	*max 60*
Trauma/cardiac room	*70-75*	*20-60*
Delivery room, Caesarean operating room	*68-75*	*20-60*
Gastrointestinal endoscopy procedure room	*68-73*	*20-60*
Post-Anesthesia Care Unit	*70-75*	*~~30~~ 20-60*
Newborn nursery	*72-78*	*30-60*
Newborn Intensive-care nursery unit	*~~70-75~~ 72-78*	*30-60*
Intensive care[4]	*70-75*	*30-60*
Burn Unit	*70-75*	*40-60*

1 Thermostats and humidistat shall be either locally resettable and of the non-locking type or remotely resettable and of the locking type.

2 Systems shall be capable of maintaining the rooms within the range during normal operation. Lower or higher temperature shall be permitted when patients' comfort and/or medical conditions require those conditions.

3 The ranges listed are the minimum and maximum limits where control is specifically needed.

4 Types of intensive care service spaces are listed in the California Building Code.

~~326.0~~ 321.0 Essential Mechanical Provisions. [OSHPD 1, 2, 3 (Surgical Clinics only) & 4] *During periods of power outages essential electrical power shall be provided for the following equipment:*

~~326.1~~ 321.1 *(Does not apply to OSHPD 3 surgical clinic.) All heating equipment necessary to maintain a minimum temperature of 60°F (15.6°) in patient areas which are not specified in Table ~~325.0~~ 320.0.*

~~326.2~~ 321.2 *All heating equipment necessary to maintain the minimum temperatures for sensitive areas as specified in Table ~~325.0~~ 320.0.*

~~326.3~~ 321.3 *Equipment necessary for humidification of the areas listed in Table ~~325.0~~ 320.0*

~~326.4~~ 321.4 *All supply, return, and exhaust fans required to maintain the positive and negative air balances as required in Table 4-A.*

~~326.5~~ 321.5 *All control components and control systems necessary for the normal operation of equipment required to have essential electrical power.*

~~326.6~~ 321.6 *Alarms for airborne infection isolation rooms and protective environment rooms.*

CHAPTER 4
VENTILATION AIR

Adopt the 2015 Uniform Mechanical Code (UMC) and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

401.1 Applicability. This chapter contains requirements for ventilation air supply, exhaust, and makeup air requirements for occupiable spaces within a building. ***[OSHPD 1, 2, 3 & 4]*** *See Sections 404.0 through 418.0.*

402.0 Ventilation Air. *[Not permitted for OSHPD 1, 2, 3, and 4]*

403.0 Ventilation Rates. *[Not permitted for OSHPD 1, 2, 3 & 4]*
…

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 *Air supplied to operating rooms, cesarean operating rooms, cardiac catheterization labs, cystoscopy rooms, delivery rooms, and nurseries shall be delivered at or near the ceiling of the area served. In these~~s~~ 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 <u>of equal capacity</u> 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.*
…

407.4.1.4 *No space above a ceiling may be utilized as an outside-air, relief-air, supply-air, exhaust-air, or return-air plenum.*

Exceptions<u>:</u>
<u>(1)</u> Designs specifically approved by the enforcing agency.

*<u>(2) Return air plenums shall be permitted for **[OSHPD 3]** provided that applicable spaces listed in Table 4A that have required pressure relationships shall be served by fully ducted supply, return, and exhaust systems. The following additional surgery and critical-care patient-care areas that do not require a pressure relationship shall also be served by fully ducted supply, return, and exhaust systems: 1) Recovery rooms, and 2) Treatment rooms.</u>*

<u>In facilities that treat inpatients, mechanical systems shall only utilize fully ducted systems for supply, return, and exhaust air.</u>

…

408.0 Filters. [OSHPD 1, 2, 3 & 4]
…

408.1.5 *Filter bank No. 1 shall be located upstream of the air-conditioning equipment. Filter bank No. 2 and filter bank 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: *Dry steam-type 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.*
Dry steam is that which is defined in the ASHRAE HVAC Systems and Equipment Handbook.
…

408.2.2 *Noncentral recirculating air systems providing cooling to high heat producing equipment located in nonsensitive areas shall have a filter with 30 percent average efficiency based on ASHRAE 52.2~~-2007~~ or a minimum efficiency reporting value (MERV) of 8 based on ASHRAE 52.2~~-2007~~.*
…

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 minimum weight arrestance value of 50 percent, based on ASHRAE 52.2~~-2007~~ or a minimum efficiency reporting value (MERV) of 1, based on ASHRAE 52.2~~-2007~~. 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 systems.*
…

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 minimum weight arrestance value of 50 percent, based on ASHRAE 52.2~~-2007~~ or a minimum efficiency reporting value (MERV) of 1, based on ASHRAE 52.2~~-2007~~. 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.*
…

411.0 Kitchen and Dining Areas. [OSHPD 1, 2, 3 & 4]
411.1 *The air from dining areas may be used to ventilate the food preparation areas only after it has passed through a filter with at least an 80 percent average efficiency based on ASHRAE 52.2~~-2007~~ or a minimum efficiency reporting value (MERV) of 13, based on ASHRAE 52.2~~-2007~~.*

Exception: *For skilled nursing facilities, intermediate care facilities and correctional treatment centers, the air from dining area may be used to ventilate food preparation areas only after it has passed through a filter with a 50 percent average efficiency based on ASHRAE 52.2~~-2007~~ or a minimum efficiency reporting value (MERV) of 10, based on ASHRAE 52.2~~-2007~~.*
…

414.1.2 *Exhaust shall discharge above roof level and through an accessible HEPA filter. The HEPA filter shall be located upstream of the exhaust fan and have a minimum efficiency of 99.97 percent based on the DOP method in accordance with Mil-Std. 282 or a minimum efficiency reporting value (MERV) of 17, based on ASHRAE 52.2~~-2007~~. Filter gage shall be installed across the filter. For maintenance of air balance relationship, see Section 407.3.2. The 25-foot (7620 mm) dimension required by Section 414.1 may be reduced when a 99.97 percent HEPA filter or a minimum efficiency reporting value (MERV) of 17, based on ASHRAE 52.2~~-2007~~ is used and the reduced dimension is specifically approved by the enforcing agency.*
…

416.0 Alarms – Airborne Infection Isolation Rooms and Protective Environment Rooms. [OSHPD 1, 2, 3 & 4]

416.1 *An alarm system which is based on static pressure control, volumetric control or directional flow … is not being met during closed door conditions:*

(2) When a minimum pressure differential of 0.0~~0~~1 inch (0.003 kPa) of water and a minimum inward (outward for protective environment rooms) air velocity of 100 feet per minute (0.508 m/s) is not being maintained at the air transfer opening required by Table 4-A.

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

A	B	C	D	E	F
			CONDITIONED AIR NOT 100% O.S.A		
AREA DESIGNATION	AIR BALANCE RELATIONSHIP TO ADJACENT AREAS[8]	MINIMUM AIR CHANGES IF 100% O.S.A.	MINIMUM AIR CHANGES OF OUTDOOR AIR PER HOUR	MINIMUM TOTAL AIR CHANGES PER HOUR	ALL AIR EXHAUSTED DIRECTLY TO OUTDOORS
Operating room, hybrid operating room, cardiac catheterization lab and cystoscopy	P[7]	12	5	20	—
Electroconvulsive therapy procedure room	P	10	3	15	
Semi-restricted corridor	NR	2	2	4	—
Patient holding preparation[1]	NR	6	2	6	—
Delivery room, cesarean operating room	P	12	5	20	—
Newborn/well baby nursery	~~P~~ NR	6	2	6	—
Recovery/~~P~~post anesthesia care unit	NR	6	2	6	Yes
Intensive care service spaces, acute respiratory - care service spaces, burn service spaces, coronary - care service spaces, pediatric intensive - care service spaces[9]	P	6	2	6	—
Newborn intensive care	P	6	2	6	—
Emergency department[1]					
Waiting area	N	12	2	12	Yes[2]
Operating room	P	12	5	20	—
Orthopedic/cast room	P	12	5	20	—
Treatment room	NR	6	2	6	—
Trauma Room[3]	P	12	5	20	—
Observation	NR	2	2	6	—
Fast track room	NR	2	2	6	—
Triage	N	12	2	12	Yes
Pre-screening area	N	12	2	12	Yes[2]
Treatment room, ~~and~~ , examination rooms, ~~B~~bloodborne infection isolation room	NR	6	2	6	—
Radiological/Imaging~~:~~					
Angiography room	P	12	5	15	—
Interventional imaging procedure room	P	12	5	15	—

A	B	C	D	E	F

AREA DESIGNATION	AIR BALANCE RELATIONSHIP TO ADJACENT AREAS[8]	MINIMUM AIR CHANGES IF 100% O.S.A.	CONDITIONED AIR NOT 100% O.S.A		ALL AIR EXHAUSTED DIRECTLY TO OUTDOORS
			MINIMUM AIR CHANGES OF OUTDOOR AIR PER HOUR	MINIMUM TOTAL AIR CHANGES PER HOUR	
X-ray (diagnostic and treatment)	*NR*	*6*	*2*	*6*	*—*
CT Scan	*NR*	*6*	*2*	*6*	*—*
MRI room	*NR*	*6*	*2*	*6*	*—*
Fluoroscopy room	*N*	*6*	*2*	*6*	*Yes*
Dark room	*N*	*12*	*2*	*12*	*Yes*
Negative-pressure x-ray room	*N*	*12*	*2*	*12*	*Yes*
Ultra sound room	*NR*	*6*	*2*	*6*	*—*
~~*Gamma camera*~~	~~*NR*~~	~~*6*~~	~~*2*~~	~~*6*~~	~~*—*~~
Waiting area	*N*	*12*	*2*	*12*	*Yes*
Nuclear ~~M~~medicine (Gamma, PET, SPECT)	*N*	*6*	*2*	*6*	*Yes*
Laboratory ...					
~~*Nuclear medicine*~~	~~*N*~~	~~*6*~~	~~*2*~~	~~*6*~~	~~*Yes*~~
Nuclear medicine hot lab	*N*	*—*	*—*	*6*	*Yes*

…

8 For operating rooms, cardiac catheterization labs, angiography rooms, cystoscopy rooms, delivery rooms, cesarean operating rooms, newborn intensive care, intensive care units, and nurseries provide approximately 15% excess supply air to the room or a sufficient quantity of excess supply air to maintain an appropriate positive air balance based on the room tightness and number of doors. For all rooms not listed in this footnote or not listed in Table ~~325.0~~ 320.0 requiring either a positive or negative air balance, provide approximately 10% differential cfm between supply and return/exhaust airflow but not less than 25 cfm differential shall be provided regardless of room size. Room function, size, and tightness may be considered when determining the differential airflow required. Where continuous directional control is not required, variations between supply cfm and return or exhaust cfm shall be minimized.

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[1]

AREA DESIGNATION	MINIMUM NUMBER OF FILTER BANKS	FILTER EFFICIENCY % FILTER BANK (MINIMUM EFFICIENCY REPORTING VALUE MERV)[5]		
		NO. 1[1]	NO. 2[1]	NO. 3[1]
Orthopedic operating room, bone marrow transplant operating room, organ transplant operating room	*3*	*30%*	*90%*	*99.97%[3]*
		(8)	*(14)*	*(17)*
Protective environment rooms	*3*	*30%*	*90%*	*99.97%[4]*
		(8)	*(14)*	*(17)*
Angiography; cardiac catheterization labs; operating rooms; interventional imaging procedure rooms; delivery rooms nurseries; patient care, treatment, cystoscopy, cesarean operating room, 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)*	*—*
Laboratories	*2*	*30%*	*80%*	*—*
		(8)	*(13)*	*—*
Administrative, med staff support areas, bulk storage, soiled holding areas,		*30%*	*—*	*—*

food preparation areas, public cafeterias, and laundries	*1*	*(8)*	—	—

1 Based on ASHRAE 52.2~~-2007~~.
2 Based on DOP test … or based on ASHRAE 52.2 ~~–2007~~.
3 HEPA filters at air outlet …
4 HEPA filter located in the supply duct …
5 The numbers in parentheses … based on ASHRAE 52.2~~–2007~~.

TABLE 4-C
FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN SKILLED NURSING FACILITIES AND INTERMEDIATE FACILITIES AND CORRECTIONAL TREATMENT CENTERS[1]

AREA DESIGNATION	***MINIMUM NUMBER OF FILTER BANKS***	***FILTER EFFICIENCY % FILTER BANK (MINIMUM EFFICIENCY REPORTING VALUE MERV)[3]***	
		NO. 1[1]	***NO. 2[1]***
All areas for inpatient care, treatment and/or diagnosis, and those areas providing direct service or cleaning supplies	*2*	*30%*	*80%*
		(8)	*(13)*
Administrative, bulk storage, soiled holding, laundries and food prep areas	*1*	*30%[2]*	---
		(8)	---

1 Based on ASHRAE 52.2 ~~–2007~~.
2 Filters are not …
3 The numbers in parentheses … ASHRAE 52.2~~-2007~~.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 5
EXHAUST SYSTEMS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

Due to renumbering in the 2015 UMC the existing 2013 CMC OSHPD amendment of Section 504.1 is to be carried forward to Section to 504.1.1.

504.0 Environmental Air Ducts.
…
~~504.1~~ 504.1.1 Backdraft Protection. Exhaust ducts shall terminate outside the building and shall be equipped with backdraft dampers or with motorized dampers that automatically shut where the systems or spaces served are not in use. ***[OSHPD 1, 2 & 4] Exception:*** *Backdraft dampers are not required when the exhaust fan must operate continuously.*

Exceptions: Where the exhaust duct does not discharge …

Due to renumbering in the 2015 UMC the existing 2013 CMC OSHPD amendment of Section 508.1.1 is to be carried forward to Section 508.5.

508.0 Hoods.

…

~~508.1.1~~ **508.5 Supports.** Hoods shall be secured in place ***[OSHPD 1, 2 & 4]*** *to resist the lateral loads given in the California Building Code, Title 24, Part 2* by noncombustible supports. The supports shall be capable of supporting the expected weight of the hood and plus 800 pounds (362.9 kg).

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 6
DUCT SYSTEMS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

602.0 Material.

602.1 General. Supply air, return air, and outside air for heating, cooling, or evaporative cooling duct systems constructed of metal shall comply with SMACNA HVAC Duct Construction Standards–Metal and Flexible or UL 181.

Not permitted for [OSHPD 1, 2, ~~3~~ & 4] Concealed building spaces or independent construction within buildings shall be permitted to be used as ducts or plenums.

…

Due to renumbering in the 2015 UMC the existing 2013 CMC OSHPD amendment of Section 602.3.1 is to be carried forward to Section 602.6.1.

602.6 Factory-Made Air Ducts. …

~~602.3.1~~ ***<u>602.6.1</u>*** ***Flexible Ducts. [OSHPD 1, 2, 3 & 4]*** *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 feet (3048 mm), may be used on the inlet side for alignment. An internal impervious liner shall be provided to isolate insulation material from conditioned air.*

603.4 Factory-Made Air Ducts and Connectors. Factory-made air ducts and connectors shall be listed …

603.4.1 Length Limitation. *<u>[Not permitted for OSHPD 1, 2, 3, & 4].</u>* Factory-made flexible air ducts and connectors shall be not more than 5 feet (1524 mm) in length and shall not be used in lieu of rigid elbows or fittings.

Due to the formatting of 2015 UMC the existing 2013 CMC OSHPD amendments of Section 604.0 are to be carried forward and located within the Section 604.0 as follows:

604.0 Insulation of Ducts.

604.1 General. Air ducts conveying air at temperatures exceeding 140°F (60°C) shall be insulated to maintain an insulation surface temperature of not more than 140°F (60°C). Factory-made air ducts and insulations intended for installation on the exterior of ducts shall be legibly printed with the name of the manufacturer, the thermal resistance (R) value at installed thickness, flame-spread index and smoke developed index of the composite material. Internal duct liners and insulation shall be installed in accordance with SMACNA HVAC

Duct Construction Standards–Metal and Flexible. ***[OSHPD 1, 2, 3 & 4]*** *Cold air ducts shall be insulated wherever necessary or to prevent condensation.*

…

604.1.2 Duct Coverings and Linings. Insulation applied to the surface of ducts, including duct coverings, linings, tapes, and adhesives, located in buildings shall have a flame-spread index not to exceed 25 and a smoke developed index not to exceed 50, where tested in accordance with ASTM E84 or UL 723. The specimen preparation and mounting procedures of ASTM E2231 shall be used. Air duct coverings and linings shall not flame, glow, smolder, or smoke where tested in accordance with ASTM C411 at the temperature to which they are exposed in service. In no case shall the test temperature be less than 250°F (121°C). Coverings shall not penetrate a fire-resistance-rated assembly.

604.2 [OSHPD 1, 2, 3 (surgical clinics) & 4] *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, post anesthesia care units, cystoscopy, cardiac cath<u>eterization</u> labs, nurseries, intensive care units, newborn intensive care units, and airborne infection ~~I~~<u>i</u>solation rooms unless terminal 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.*

604.3 [OSHPD 1, 2 & 4] *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.*

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 7
COMBUSTION AIR

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter for OSHPD 1, 2, 3 & 4.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 8
CHIMNEYS AND VENTS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter for OSHPD 1, 2, 3 & 4.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 9

INSTALLATION OF SPECIFIC APPLIANCES

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

Due to renumbering in the 2015 UMC the existing 2013 CMC OSHPD amendment of Section 907.1 is to be carried forward to Section 911.1.

~~907.1~~ 911.1 Prohibited Installations. Decorative appliances for installation in vented fireplaces shall not be installed in bathrooms or bedrooms unless the appliance is listed and the bedroom or bathroom has the required volume in accordance with Section 701.4. [NFPA 54:10.6.1]

[OSHPD 1, 2 & 4] *A vented decorative appliance shall not be located in any hospital, skilled nursing facility, intermediate care facility, or correctional treatment center.*

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 10
BOILERS AND PRESSURE VESSELS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter for OSHPD 1, 2, 3 & 4.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 11
REFRIGERATION

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

Due to the formatting in the 2015 UMC the existing 2013 CMC OSHPD amendment of Table 1105.1 Permissible Refrigeration Systems is to be carried forward to Table 1104.1 Permissible Refrigeration Systems.

TABLE ~~1105.1~~ 1104.1
PERMISSIBLE REFRIGERATION SYSTEMS[1]
[OSHPD 1, 2, 3 & 4]

	OCCUPANCY GROUP[3]	HIGH-PROBABILITY SYSTEM	LOW PROBABLITY SYSTEM	MACHINERY ROOM
	I-2	Group A1 only	Any	Any
[OSHPD 1, 2, 3 & 4]	*I-2.1*	*Group A1 only*	*Any*	*Any*
	I-3	None	Any	Any

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 12
HYDRONICS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4 with the following modifications:

Due to the formatting in the 2015 UMC the existing 2013 CMC OSHPD amendment of Section 1201.3.7 is to be carried forward to Section 1210.2.

1210.0 Materials.

1210.1 Piping, Tubing, and Fittings. …

~~**1201.3.7**~~ **1210.2 Expansion and Contraction.** Pipe and tubing shall be so installed that it will not be subject to undue strains or stresses, and provisions shall be made for expansion, contraction, and structural settlement. ***[OSHPD 1, 2 & 4]*** *Pipe connections less than 2 ½ " to heating coils, cooling coils, humidifiers, and similar equipment shall have flexible connectors or three (3) 90-degree offsets in close proximity of the connection.*

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 13
FUEL GAS PIPING

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter for OSHPD 1, 2, 3 & 4.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 14
PROCESS PIPING

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter for OSHPD 1, 2, 3 & 4.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850

CHAPTER 15
SOLAR ENERGY SYSTEMS

Entire Chapter not adopted by OSHPD.

CHAPTER 16
STATIONARY POWER PLANTS

Entire Chapter not adopted by OSHPD.

CHAPTER 17
REFERENCED STANDARDS

Adopt entire 2015 Uniform Mechanical Code (UMC) chapter and carry forward existing amendments of the 2013 California Mechanical Code (CMC) for OSHPD 1, 2, 3, & 4.

Notation
Authority: Health and Safety Code Sections 1226, 1275, 18928, 129790 and 129850; Government 11152.5
Reference: Health and Safety Code Section 129850