

Introduction
to
2018
20
2019 California Building Standards Code
as applied to
Buildings Regulated by OSHPD

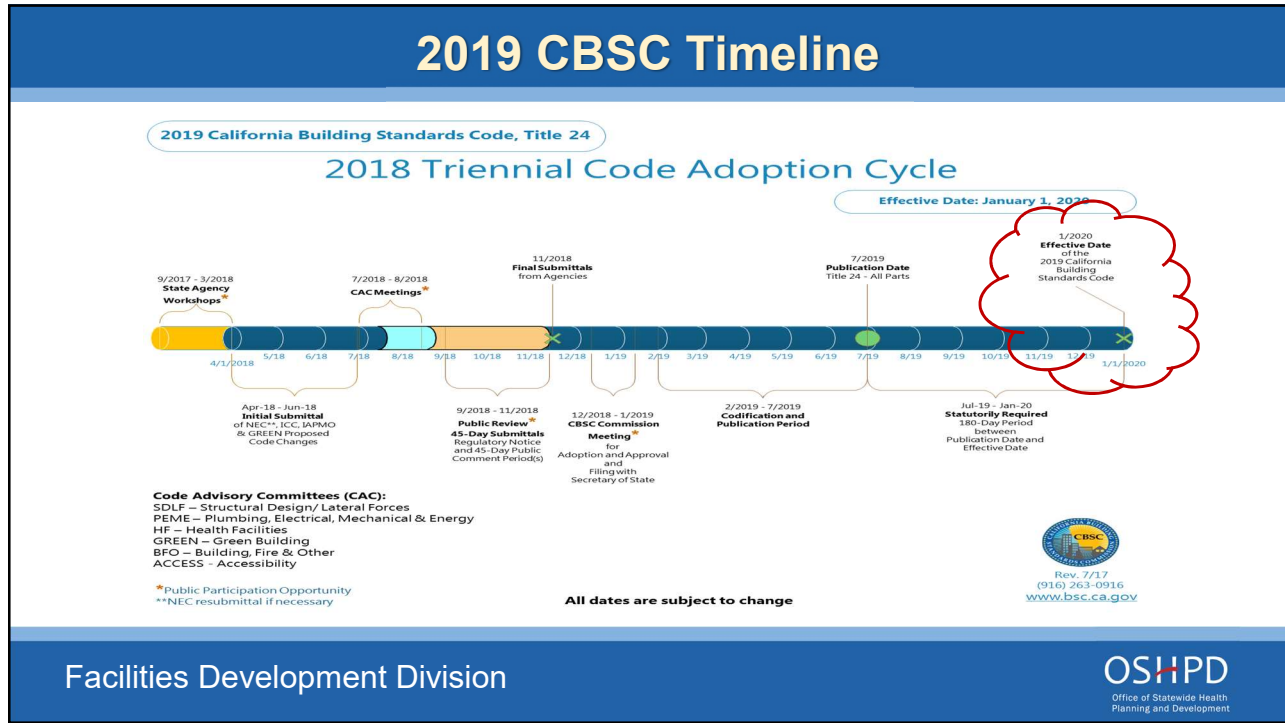
OSHPD
Office of Statewide Health
Planning and Development

1

OSHPD Update

OSHPD
Office of Statewide Health
Planning and Development

2




3



4

Learning Objectives




Major Highlights:

- ❖ Part 3 – Electrical Code
- ❖ Part 4 – Mechanical Code
- ❖ Part 5 – Plumbing Code
- ❖ Part 6 – Energy Code

Other Items:

- ❖ Intro to “OSHPD 1R”
- ❖ Part 10 – Existing Building Code
- ❖ Part 1 – Administrative Code (NPC-4D)
- ❖ Part 2 – Building Code
- ❖ Part 9 – Fire and Life Safety

Facilities Development Division



5

2019 Code Update Webinar Series

<h3>Session 1:</h3> <ul style="list-style-type: none">• Intro• OSHPD 1R• Part 10 (CEBC)• Part 1 – Administrative Code <p>March 24, 2020</p>	<h3>Session 2:</h3> <ul style="list-style-type: none">• Fire/Life Safety <p>April 7, 2020</p>	<h3>Session 3:</h3> <ul style="list-style-type: none">• Building Code <p>April 21, 2020</p>	<h3>Session 4:</h3> <ul style="list-style-type: none">• Part 3 – Electrical Code• Part 4 – Mechanical Code• Part 5 – Plumbing Code• Part 6 – Energy Code• How to Remove from Acute Care• New Remodel CAN 2-102.6• New Accessibility CAN 2-11B• What’s coming up <p>May 7, 2020</p>
---	--	--	--



Facilities Development Division



6

SESSION 4: CA Electrical, Mechanical, Plumbing, Energy Codes, How to Remove Acute Care Services from the Building, What's Coming Up

Questions
at end

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

This slide features a white background with a blue header and footer. The text "Questions at end" is centered in a large, blue, sans-serif font. The footer contains the text "Facilities Development Division" on the left and the OSHPD logo on the right.

7

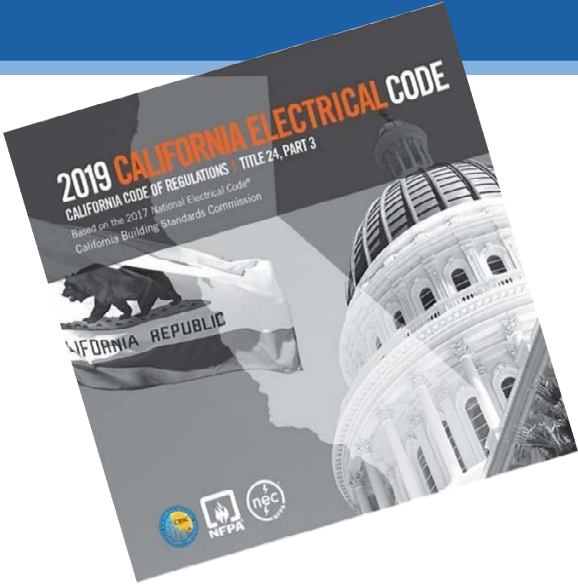
Session 4

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

This slide features a white background with a blue header and footer. The text "Session 4" is centered in a large, blue, sans-serif font. The footer contains the text "Facilities Development Division" on the left and the OSHPD logo on the right.

8



The image shows the cover of the 2019 California Electrical Code. The cover features the text "2019 CALIFORNIA ELECTRICAL CODE" in large, bold letters. Below this, it says "CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 3" and "Based on the 2017 National Electrical Code California Building Standards Commission". The cover also includes the California state seal with the word "CALIFORNIA" and "REPUBLIC" below it, and the California State Capitol building. At the bottom left, there are logos for the International Brotherhood of Electrical Workers (IBEW), the National Fire Protection Association (NFPA), and the National Electrical Contractors Association (NECA).

Part 3 California Electrical Code

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

9


LEARNING OBJECTIVES for Part 3 CEC

- **General Items**
- **Essential Electrical System Updates**
- **Call Systems Restructuring**

OSHPD
Office of Statewide Health
Planning and Development

10


Part 3 – General Items



517.2 Definitions.


- **Critical Care (Category 1) Space.** Space in which failure of equipment or a system is likely to cause major injury or death of patients, staff, or visitors. [99: 3.3.127.1]

[OSHPD 1, 2, 3, 4 & 5] Includes special care units, intensive care units, coronary care units, sub-acute units, angiography laboratories, cardiac catheterization laboratories, delivery rooms, operating rooms, portions of emergency departments, electroconvulsive therapy procedure rooms, postoperative recovery rooms and similar areas in which patients are intended to be subjected to invasive procedures and are connected to line-operated electromedical devices

Facilities Development Division 

11


Part 3 – General Items



517.18 General Care (Category 2) Spaces

(B) Patient Bed Location Receptacles. Each patient bed location shall be provided with a minimum of eight receptacles. They shall be permitted to be of the single, duplex, or quadruplex type or any combination of the three. All receptacles shall be listed “hospital grade” and shall be so identified. The grounding terminal of each receptacle shall be connected to an insulated copper equipment grounding conductor sized in accordance with Table 250.122.

Exception No.5: [OSHPD 1] Outpatient Observation bed and gurney locations shall be provided with a minimum of four receptacles.

Facilities Development Division 

12

Part 3 – General Items



517.19 Critical Care (Category 1) Spaces.

(B) Patient Bed Location Receptacles.

(1) Minimum Number and Supply. Each patient bed location shall be provided with a minimum of 14 receptacles, at least one of which shall be connected to either of the following:

- 1) The normal system branch circuit required in 517.19(A)
- 2) A critical branch circuit supplied by a different transfer switch than the other receptacles at the same patient bed location

*[OSHPD 1, 2, 4 & 5] Exception: Beds subject to the requirements of 517.40(B) shall be provided with a **minimum of eight receptacles.***

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

13

Part 3 – Essential Electrical System



517.29 Essential Electrical Systems for Hospitals and Other Health Care Facilities.

(A.1) [OSHPD 1, 2, 3, 4 & 5] Applicability. The requirements of Part III, 517.29 through 517.30, shall apply to hospitals, facilities subject to the requirements of CEC 517.40(B), clinics subject to the requirements of CEC 517.45(B) or (C), correctional treatment centers and acute psychiatric hospitals providing critical care (Category 1) and/or general care (Category 2) services.

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

14

Part 3 – Essential Electrical System



517.30 Sources of Power.

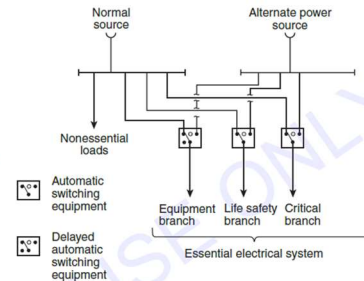
(B) Types of Power Sources.

(1) Generating Units. Where the normal source consists of generating units on the premises, the alternate source shall be either another generating set or an external utility service. [99:6.4.1.1.5]

(1.1) [OSHPD 1, 3, 4 and 5] Generating Units. The alternate source of power shall be one of the following:

(A) Generator(s) driven by some form of prime mover(s) and located on the premises.

(B) Another generating unit(s) where the normal source consists of a generating unit(s) located on the premises.



INFORMATIONAL NOTE FIGURE 517.31(A) Hospital—Minimum Requirement (greater than 150 kVA) for Transfer Switch Arrangement.

Facilities Development Division



15

Part 3 – Essential Electrical System



(C) As provided in paragraph (B)(2) below.

All on-premises sources of power shall meet the on-premises fuel requirements specified in Article 700.12.

(2) Fuel Cell Systems. Fuel cell systems shall be permitted to serve as the alternate source for all or part of an essential electrical system, provided the following conditions apply:

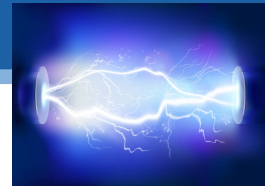
- Comply with the requirements of Article 692
- N + 1 units shall be provided where N units have sufficient capacity to supply the demand loads of the portion of the system served
- System shall be able to assume loads within 10 seconds of loss of normal power source
- Sufficient on-site fuel storage for the essential system type
- Portable diesel generator connection to supply life safety and critical portions of the distribution system
- Listed for emergency system use

Facilities Development Division



16

Part 3 – Essential Electrical System



517.34 Critical Branch.

(A) Task Illumination and Selected Receptacles. The critical branch of the essential electrical system shall supply power for task illumination, fixed equipment, selected receptacles, and special power circuits serving the following areas and functions related to patient care:

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

17

Part 3 – Essential Electrical System



(10)[OSHPD 1, 2, 3, 4 & 5] The following equipment:

- a. Electric clocks required by California Building Code, where direct wired.**
- b. Sensor-operated fixtures required by California Plumbing Code, where direct wired.**
- c. Alarm systems for monitoring negative pressure isolation rooms and positive pressure isolation rooms.**
- d. Medication dispensing units.**
- e. Medication refrigerators and freezers.**
- f. Patient food refrigeration (single phase only)**
- g. Pharmacy compounding engineering controls such as hoods, laminar airflow workbenches, biological safety cabinets and barrier isolators.**

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

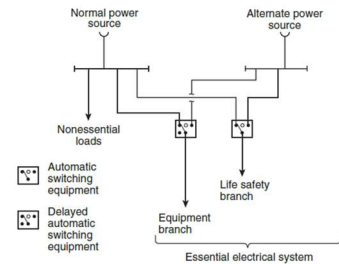
18

Part 3 – Essential Electrical System



517.40 Type 2 Essential Electrical Systems for Nursing Homes and Limited Care Facilities [OSHPD 2], Correctional Treatment Centers and Acute Psychiatric Hospitals [OSHPD 4 & 5]

(A.1) [OSHPD 2, 4 & 5] Applicability. The requirements of Part III, 517.40(C) through 517.44, shall apply to nursing homes, intermediate and skilled nursing facilities, and correctional treatment centers and acute psychiatric hospitals not subject to 517.29(A.1).



INFORMATIONAL NOTE FIGURE 517.42(A) Nursing Home and Limited Health Care Facilities — Minimum Requirement (greater than 150 kVA) for Transfer Switch Arrangement.

Facilities Development Division



19

Part 3 – Call Systems

517.123 [OSHPD 1, 2, 3, 4 & 5] Call Systems

(A) General.

(1) Nurse call devices shall be installed in the locations required in Table 1224.4.6.5, of the California Building Code. One device shall be permitted to accommodate any combination of patient station, staff emergency, and code call, provided the individual functions and requirements listed below are met.

TABLE 1224.4.6.5 [OSHPD 1, 1R, 2, 3, 4 & 5] LOCATION OF NURSE CALL DEVICES
• = Required

AREA DESIGNATION	STATION TYPE	1224	1225	1226	1227	1228
Nursing Units						
Patient toilet room	B	*	*		*	
Patient bathing	B	*	*		*	
Special bathing	E	*				
Patient bed (nursing service)	P,E,C	*			*	
Patient bed (intensive care)	P,E,C	*			*	
Patient bed (LDR/LDRP)	P,E,C	*			*	
Patient bed (Dementia Unit)	P	*	*		*	
Patient bed (SNF/ICF)	P	*	*		*	
NICU	E,C	*			*	
Nursery	E,C	*			*	
Support Areas						
Nurse/control station	M	*	*	*	*	*
Medication preparation room	D	*			*	
Soiled workroom/utility/holding	D	*			*	
Clean workroom/utility/holding	D	*			*	
Diagnostic and Treatment Areas						
Isolation room or vestibule	E	*				*
Emergency exam, treatment, triage rooms	P,E	*			*	
Operating room/Caesarean	E,C	*		*	*	
Delivery room/Birthing room	E,C	*		*	*	
Observation unit bed/gurney	P,E,C	*		*	*	
Pre-op patient care	P,E,C	*		*	*	
Post-op patient care/PACU	P,E,C	*		*	*	
Imaging exam/procedure room	E,C	*		*	*	
Procedure Room, including Endoscopy	E,C	*		*	*	
Patient toilet room	B	*		*	*	
Electroconvulsive therapy	E,C	*		*	*	*

Station Types: P = Patient Station, B = Bath Station, E = Staff Emergency, C = Code Call, M = Master, D = Duty

Facilities Development Division



20

Emergency Power Considerations

Fuel Requirements

GACH Services

- CEC 700.12(b)(2) Ex 1 - 24 hours
- NPC-5 – 72 hours


Non-GACH Services

- CEC Ambulatory Surgery – 4 hours
- CEC Skilled Nursing – 6 hours
- CEC Acute Psych – 6 hours

➔

Segregation of Electrical Systems


- Retroactive Segregation – CAN 2-102.6 Remodel
- Required Branches
 - SNF Subacute – CAN 3-517.40(B)



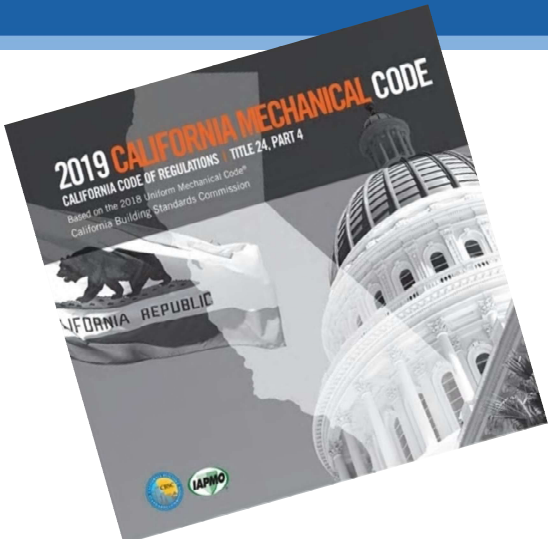
Electrical Service Source

- CEC 517.31(B)(1) – Optional Loads Supplied by a Separate Transfer Switch
- Part 10 Section 307A - Utilities supplying the OSHPD 1R building
- CEC 225.30 - Disconnecting means for each branch of the electrical system
where conductors enter the building

Facilities Development Division




21



Part 4

California Mechanical Code

Facilities Development Division



22

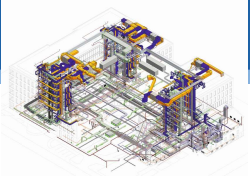
LEARNING OBJECTIVES
for
Part 4 CMC

- **General Items**
- **Table 4-A & 4-B Updates**
- **OSHPD 1R Considerations**

OSHPD
Office of Statewide Health Planning and Development

23

Part 4 – General




402.1 Occupiable Spaces. ~~*[Not permitted for OSHPD 1, 2, 3, and 4]*~~
Occupiable spaces listed in Table 402.1 shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter.

Facilities Development Division

OSHPD
Office of Statewide Health Planning and Development

24


Part 4 – Table 4-A



Nuclear medicine hot lab	Negative	NR	6	6	Yes	No	NR	70-72
Nurse station (aa)	(aa)	(aa)	2	2	(aa)	(aa)	(aa)	(aa)
Observation	NR	2	6	2	NR	NR	NR	70-75/21-24
Observation/seclusion room	NR	2	6	2	NR	NR	NR	NR
Patient corridor	NR	NR	2	2	NR	NR	NR	NR
Pharmacy (b)	Positive	2	4	2	NR	NR	NR	NR
Drug room	NR	NR	4	2	NR	NR	NR	NR
HD ante room (b)	Positive	NR	NR	NR	NR	NR	<60	≤68/≤20
HD buffer room (b)	Negative	NR	30	30	Yes	No	<60	≤68/≤20
HD segregate compounding area (b)	Negative	NR	12	12	Yes	NR	NR	NR

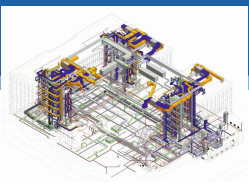
VARIOUS CHANGES

Facilities Development Division



27

Part 4 – Table 4-A




Notes for Table 4-A:

Footnote (b):


*Additional air change, ISO class, differential pressure, continuous pressure monitoring and filtering requirements for compounding areas shall comply with **California Board of Pharmacy regulations Title 16 §1735 & §1751, and USP <797> & <800>**. Air supplied to the cleanroom suite must be introduced through 99.97% minimum HEPA filters located in the ceiling. At least 15 air changes per hour (ACPH) shall be provided to nonhazardous drug (non-HD) compounding buffer rooms through the ceiling. The HEPA filtered air from the PEC in the non-HD buffer room, when added to the HVAC-supplied HEPA-filtered air, shall increase the total HEPA-filtered ACPH to at least 30. If the PEC is used to meet the minimum total ACPH requirements, the PEC must not be turned off except for maintenance. All hazardous drug (HD) compounding areas and PECs shall be exhausted externally...*

Facilities Development Division



28


Part 4 – Table 4-A



Notes for Table 4-A:

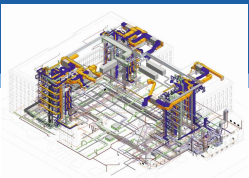
Footnote (ab):

Air change per hour and ventilation rates for spaces not listed in Table 4-A may be per ASHRAE 62.1.

Facilities Development Division



29

Part 4 – Table 4-B



**TABLE 4-B
FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN
GENERAL ACUTE CARE HOSPITALS, ACUTE PSYCHIATRIC HOSPITALS, OUTPATIENT
FACILITIES, AND LICENSED CLINICS¹**

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, NICU formula preparation room, NICU treatment area/room	3	30%
		(8)	(14)	(17)

Facilities Development Division


30

OSHPD 1R - MEP Considerations

Utility Isolation from OSHPD 1

➤ Bulk Oxygen	➤ Essential Power
➤ Med Gasses	➤ Nurse Call
➤ Chilled Water	➤ Fire Alarm
➤ Steam	➤ Fire Suppression
➤ Domestic Water	➤ Communications
➤ Sewer/Sanitary	➤ Data Systems

*Services from a conforming building shall be permitted to serve a nonconforming building with prior approval of the Office. The services/systems and utilities in the nonconforming building **shall be equipped with fail safe valves, switches, or other equivalent devices that allow the nonconforming building to be isolated from the conforming building.***

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

31

OSHPD 1R - MEP Opportunities

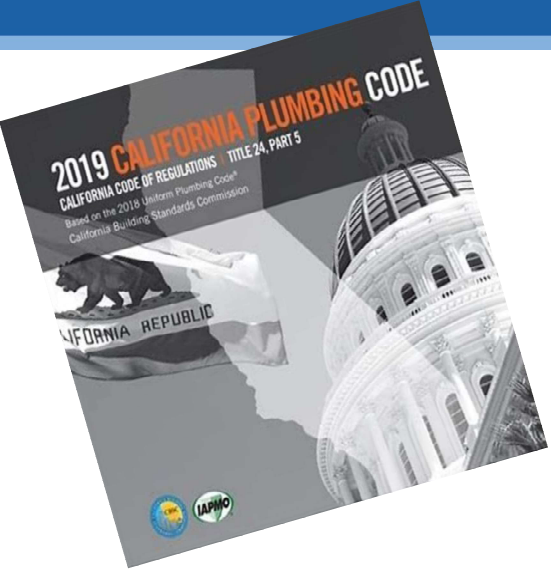
Opportunity to remove loads from compliant OSHPD 1 infrastructures:

- Chilled Water
- Steam / Heating Hot Water
- Emergency Power
- Medical Gasses

Facilities Development Division


OSHPD
Office of Statewide Health
Planning and Development

32



Part 5
California
Plumbing
Code


Facilities Development Division



33

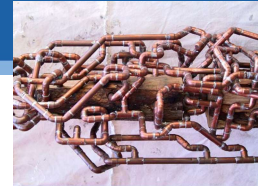
LEARNING OBJECTIVES
for
Part 5 CPC

- **General Items**
- **Table 4-2 Updates**



34

Part 5 – General



310.10 [OSHPD 1, 1R, 3, & 4 & 5] Floor drains, waste traps and handwashing fixtures shall not be installed in operating and delivery rooms. Floor drains with self-priming traps may be installed in cystoscopic rooms. Floor drains shall not be installed in compounding buffer or ante rooms.

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

35

Part 5 – Table 4-2



TABLE 4-2
[OSHPD 1, 1R, 3, 4, & 5]²⁴ MINIMUM PLUMBING FACILITIES

SPACE	HANDWASHING FIXTURE	SCRUB SINKS ³	TOILETS	BATHTUB OR SHOWERS	SERVICE SINKS ¹	CLINIC SINKS
...
Emergency Service Treatment room						
Open plan	1:4 cubicles		1			
Observation unit(s)	1:4 cubicles		1:6 beds			
...
Newborn Intensive Care Unit (NICU)	1:4 bassinets ^{17,33}					
Treatment area/room	1					
...
Central bathing facility ¹⁶	1			1		
Special bathing facility ¹⁸	1			1		
Administration Center or Nurse Stations ²⁷			1 ¹²			
...
Outpatient procedure room	1		1			
...

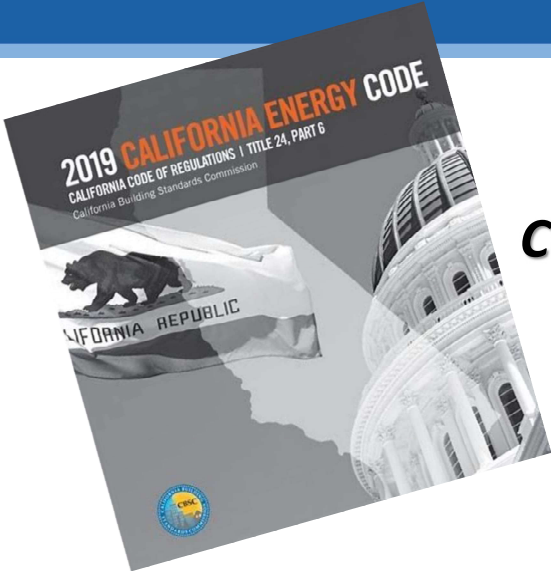
VARIOUS CHANGES

³⁵ A minimum of one separate accessible toilet room shall be provided for the use of patients. Patient toilet room(s) shall be equipped with a handwashing fixture and shall be accessible to the observation unit(s) from the corridor. Reference CBC, Part 2, Section 1224.39.6.


Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development


36



Part 6
California Energy Code



Facilities Development Division



OSHPD
Office of Statewide Health Planning and Development

37

Part 1 – Reference to Part 6


Chapter 7, Article 1 General

7-103. Jurisdiction. The following are within the jurisdiction of Office of Statewide Health Planning and Development:

...

(c) For hospital buildings, skilled nursing facilities and intermediate care facilities, the Office shall also enforce the regulations of the California Building Standards Code as adopted by **the California Energy Commission**, the Office of the State Fire Marshal and the Division of the State Architect/Access Compliance Section, for **Energy Conservation**, fire and life safety and accessibility compliance for persons with disabilities, respectively.

Facilities Development Division



OSHPD
Office of Statewide Health Planning and Development

38

Part 1 - Building Energy Efficiency Program

7-118. Building Energy Efficiency Program.

Projects that consist of any new elements related to A thru D shall include a Building Energy Efficiency Program with the submittal. The Program shall describe how the design of the building systems meets the owner's project requirements and include the associated Basis of Design (BOD) document required under Title 24, Part 6. The BOD shall describe the building systems to be commissioned, outline design assumptions, describe how the building systems design meets the owner's project requirements, and why the systems were selected. The BOD shall cover the following systems and components as described in the Building Energy Efficiency Standards, Nonresidential Compliance Manual:

- A. HVAC systems efficiencies
- B. Indoor lighting systems efficiencies
- C. Water heating systems efficiencies
- D. Building envelope considerations



Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

39

Part 6 – California Energy Code (CEC)

SUBCHAPTER 6

NONRESIDENTIAL, HIGH-RISE RESIDENTIAL AND HOTEL/MOTEL OCCUPANCIES—ADDITIONS, ALTERATIONS AND REPAIRS

Section 141.0: Additions, alterations, and repairs to existing nonresidential, high-rise residential, and hotel/motel buildings, existing outdoor lighting for these occupancies, and internally and externally illuminated signs, shall meet the requirements specified in Sections 100.0 through 110.10, and 120.0 through 130.5

Exception to Section 141.0: Alterations to healthcare facilities are not required to comply with this Section.

HEALTHCARE FACILITY is any building or portion thereof licensed pursuant to California Health and Safety Code Division 2, Chapter 1, §1204 or Chapter 2, §1250.

Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

40

LEARNING OBJECTIVES
for
PART 6 CEC
(Energy)

- **CEC versus OSHPD “Addition”**
- **What’s Regulated**
- **Enforcement**
- **Resources, Training & Software**
- **Application to Existing Buildings**

OSHPD
Office of Statewide Health Planning and Development

41

Part 6 – California Energy Code (CEC)

Applications to Building Envelope and Other Features

OSHPD versus CEC Definition of “Addition”

What’s the Difference?

OSHPD:

[A] ADDITION. An extension or increase in floor area or height of a building or structure. *[DSA-AC] An expansion, extension or increase in the gross floor area or height of a building or facility.*

Facilities Development Division

OSHPD
Office of Statewide Health Planning and Development

42

Part 6 – Applications to Building Envelope

CEC:

ADDITION is any change to a building **that increases conditioned floor area and conditioned volume**. See also, **“newly conditioned space.”** Addition is also any change that increases the floor area and volume of an unconditioned building of an occupancy group or type regulated by Part 6. Addition is also any change that increases the illuminated area of an outdoor lighting application regulated by Part 6.

NEWLY CONDITIONED SPACE is **any space being converted from unconditioned to directly conditioned or indirectly conditioned space**. Newly conditioned space must comply with the requirements for an addition. See Section 141.0 for nonresidential occupancies and Section 150.2 for residential occupancies.

Facilities Development Division



43

What's Regulated?

- Envelope, including walls, windows, roof, floors and other elements of the enclosure of a healthcare building
- Mechanical Systems, limited mostly to the minimum efficiency requirements of equipment, most controls do not apply
- Lighting systems with exceptions for specialty lighting like surgery and exam lighting among others, most controls do not apply
- Domestic hot water systems regulating efficiency of equipment and controls



44

Part 6 – Enforcement

Required Verifications

- ❑ LED Lighting
- ❑ Equipment Efficiency Ratings
- ❑ Building Envelope
 - Insulation/Leakage
 - Fenestration
 - ✓ Glazing Type
 - ✓ % Fenestration
 - ✓ Orientation

2019 Nonresidential Appendices Appendix NA7-1

Nonresidential Appendix NA7


Appendix NA7 – Installation and Acceptance Requirements for Nonresidential Buildings and Covered Processes

Appendix NA7 – Installation and Acceptance Requirements for Nonresidential Buildings and Covered Processes

NA7.1 Purpose and Scope	4
NA7.2 Introduction	5
NA7.3 Roles and Responsibilities	5
NA7.3.1 Responsible Person	5
NA7.3.2 Field Technician	5
NA7.3.3 Documentation Author	5
NA7.3.4 Enforcement Agency	5
NA7.4 Building Envelope Acceptance Tests	6
NA7.4.1 Fenestration	6
NA7.4.2 Window Films	7
NA7.4.3 Domestic Glazing	8
NA7.4.4 Closets/Doors for PAF	9
NA7.4.5 Interior and Exterior Horizontal Slats for PAF	10
NA7.4.6 Interior and Exterior Light Shades for PAF	12
NA7.5 Mechanical Systems Acceptance Tests	14
NA7.5.1 Outdoor Air	14
NA7.5.2 Constant Volume, Single-Zone, Air Conditioners and Heat Pumps	15
NA7.5.3 Air Distribution Systems	16
NA7.5.4 Air Economizer Controls	17
NA7.5.5 Demand Control Ventilation (DCV) Systems	18
NA7.5.6 Supply Fan Variable Flow Controls	19
NA7.5.7 Valve Leakage Test	19
NA7.5.8 Supply Water Temperature Reset Controls	19
NA7.5.9 Hydraulic System Variable Flow Controls	20
NA7.5.10 Automatic Demand Shed Control Acceptance	20
NA7.5.11 Fault Detection and Diagnostics (FDD) for Packaged Direct Expansion Units	21
NA7.5.12 Automatic Fault Detection and Diagnostics (FDD) for Air Handling Units and Zone Terminal Units	21
NA7.5.13 Distributed Energy (Storage, DX, AC) Systems Acceptance Tests	22

Appendix NA7 – Installation and Acceptance Requirements for Nonresidential Buildings and Covered Processes

Facilities Development Division



Office of Statewide Health Planning and Development

45

Part 6 – Enforcement

OSHPD Systems

Plan Review:

- ✓ Exterior Assemblies & Detailing
- ✓ Electrical Lighting Design & Specifications
- ✓ Mechanical Systems Design & Specifications
- ✓ Energy Code Modeling

Construction:

- ✓ Continuous Inspection & Observation
- ✓ Verified Reports
- ✓ Commissioning & Occupancy

CHAPTER 10
ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC)

**ARTICLE 1
ENERGY BUILDING REGULATIONS**

10-101. Scope. (a) This article contains administrative regulations relating to the energy building regulations in Title 24, Part 6. This article applies to all residential and nonresidential buildings.

(b) Nothing in this article lessens any necessary qualifications or responsibilities of licensed or registered building professionals or other designers or builders, or the duties of enforcement agencies, that exist under state or local law.

(c) If any provision of the regulations in this article or the Building Energy Efficiency Standards, Title 24, Part 6, of the California Code of Regulations is found invalid by a court of competent jurisdiction, the remainder of those regulations shall remain in effect.

Authority: Sections 25462 and 25463, Public Resources Code.

Reference: Sections 25462 and 25463, Public Resources Code.

1. New Article 1 (Section 1001) filed 5-3-76; effective through one year after Chapter 76, 1976.

2. Amendment filed 8-17-77; designated effective 3-1-78 (designated 11-19-78).

3. Rescission of Article 1 (Section 1001) and new Article 1 (Section 1001) filed 10-1-78; designated effective 12-31-78; designated effective 1-1-81 (designated 11-19-78).

4. Amendment filed 12-27-84; designated effective 1-1-85 pursuant to Commission Code Section 13063.2 (designated 11-19-78).

10-102. Definitions. In this article the following definitions apply:

ACCEPTANCE REQUIREMENTS TEST TECHNICIAN is "acceptance requirements for code compliance" as defined in Section 1001.0(b) of Part 6.

ACCEPTANCE TEST TECHNICIAN is a Field Technician as defined in Section 10-102 who is certified by an authorized Acceptance Test Technician Certification Provider pursuant to the requirements of Sections 10-103.1 or 10-103.2.

LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN is a professional certified by an authorized Lighting Controls Acceptance Test Technician Certification Provider to perform nonresidential lighting controls acceptance tests and complete the documentation required for nonresidential lighting controls acceptance tests as required by the Building Energy Efficiency Standards.

MECHANICAL ACCEPTANCE TEST TECHNICIAN is a professional certified by an authorized Mechanical Acceptance Test Technician Certification Provider to perform nonresidential mechanical acceptance tests and complete the documentation required for nonresidential mechanical acceptance tests as required by the Building Energy Efficiency Standards.

MECHANICAL ACCEPTANCE TEST EMPLOYER is a person or entity who employs an Acceptance Test Technician and is certified by an authorized Acceptance Test Technician Certification Provider.

LIGHTING CONTROLS ACCEPTANCE TEST EMPLOYER is a person or entity who is the employer of a Mechanical Acceptance Test Technician and is certified by an authorized Lighting Controls Acceptance Test Technician Certification Provider.

MECHANICAL ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER is an agency, organization or entity approved by the Energy Commission to issue and certify Mechanical Acceptance Test Technicians and Mechanical Acceptance Test Employers according to the requirements of Sections 10-103.1 or 10-103.2.

LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER is an agency, organization or entity approved by the Energy Commission to issue and certify Lighting Controls Acceptance Test Technicians and Lighting Controls Acceptance Test Employers according to the requirements of Section 10-103.1.


MECHANICAL ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER is an agency, organization or entity approved by the Energy Commission to issue and certify Mechanical Acceptance Test Technicians and Mechanical Acceptance Test Employers according to the requirements of Sections 10-103.1 or 10-103.2.

NOTE: Authority cited: Sections 25462, 25463, 1, and 25111, Public Resources Code. Reference: Sections 25007, 25402(a)(3), 25402.1, 25402.4, 25402.5, 25402.8 and 25010, Public Resources Code.

ACM APPROVAL MANUALS are the documents establishing the requirements for Energy Commission approval of Compliance Software used to demonstrate compliance with the Building Energy Efficiency Standards for Residential and Nonresidential Buildings currently adopted by the Energy Commission.

2019 CALIFORNIA ADMINISTRATIVE CODE 187

Facilities Development Division



Office of Statewide Health Planning and Development

46

Part 6 - Enforcement

2019 TIO:

- **Tab E added to address Energy Certificates of Installation (NRCI)**

SECTION E		REQUIRED COMPLIANCE FORMS		
Facility #	Facility Name	Project #	Sub #	
DURING CONSTRUCTION DOCUMENT SUBMITTAL		DURING CONSTRUCTION		
FORMS REQUIRED (Select)	DOCUMENT NAME	RESPONSIBLE DESIGNER OR INSTALLING CONTRACTOR	COMPLIANCE VERIFICATION BY OR (Initials/Date)	OSHPD USE (Initials/Date)
CALIFORNIA ENERGY CODE				
NON-RESIDENTIAL CERTIFICATE OF INSTALLATION (NRCI)				
NRCI ENVELOPE	ENVELOPE			
NRCI MECHANICAL	MECHANICAL			
NRCI PLUMBING	PLUMBING			
NRCI LIGHTING	INDOOR LIGHTING (conditioned, process/use spaces)			

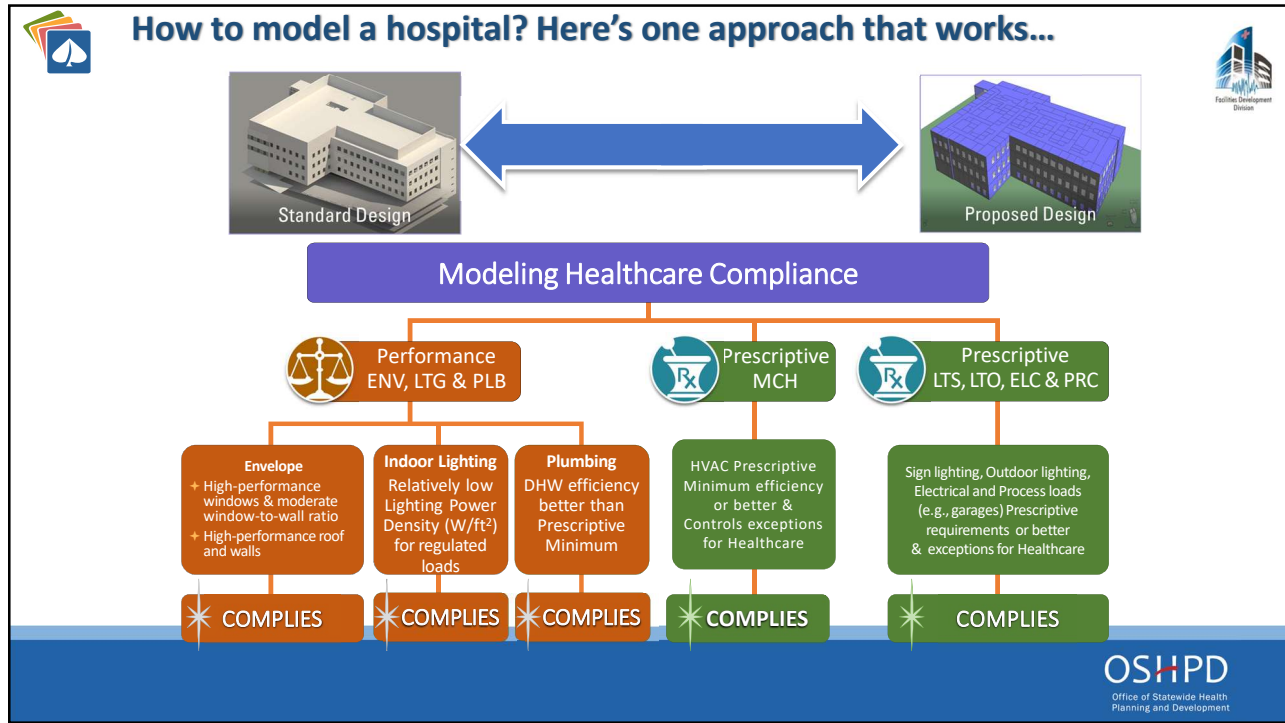
Facilities Development Division

47

LEARNING OBJECTIVES
for
PART 6 CEC
(Energy)

- **CEC versus OSHPD “Addition”**
- **What’s Regulated**
- **Enforcement**
- **Resources, Training & Software**
- **Application to Existing Buildings**

48



49

A "real world" example: Large Acute Care Tower construction completed 2017

- 250,000 SF, 9 Stories, Patient Rooms, Surgery Suites, Imaging
- 25% Window-to-Wall Ratio (WWR)
- Window Performance: 0.51 U-Factor, 0.27–0.29 SHGC (2019 U = 0.36-0.41)
- R-30 Total Thermal Performance Roof
- R-16 Total Thermal Performance Walls
- 0.65 Watts/ft² of regulated lighting load

Exempt Lighting Loads :

- Surgical Lighting
- Exam Lighting
- Low Ambient Night-Lights
- Lighting Integral to Medical Equipment

OSHPD Office of Statewide Health Planning and Development

50

2019 NRCC (Nonresidential Certificates of Compliance)

 LTI Indoor Lighting	 ENV Envelope	 MCH Mechanical	 PLB Plumbing	 PRF Performance	 PRC Process
 LTS Sign Lighting	 LTO Outdoor Lighting	 ETC Electrical	 SR Solar Ready	 CR Commissioning	

★ You'll **always** use this form for any project that includes these measures
✗ You'll **never** use this form; it does not apply to Healthcare projects
★ You'll likely use this form a lot
★ You might use this form for some projects

OSHPD
Office of Statewide Health Planning and Development

51

Help is here: *Energy Code Ace*

Comply With Me
EnergyCodeAce.com

Receive emails when new offerings are available:

1. Create an account on EnergyCodeAce.com
2. Select one or more Business Categories in your profile

Free Tools, Training & Resources via EnergyCodeAce.com

All approved by CA Energy Commission




Available Now:

- **Fact Sheet:** What's Changed in 2019 —
 - [Healthcare Facilities](#), Nonresidential, High-rise Residential, Hotel/Motel
 - Residential
- **Training:** Decoding What's New: Let's Talk 2019 Title 24, Part 6 – Nonresidential and Residential
 - On-demand webinar
- **Training:** 2019 Title 24, Part 6: Where We're Headed with the Nonresidential and Residential Standards
 - Traditional classroom and on-demand webinar
- **Tool:** 2019 Title 24, Part 6 Reference Ace
 - Navigate Standards documents with keyword searches and hyperlinks

OSHPD
Office of Statewide Health Planning and Development

52

Help is here: *Energy Code Ace*



- **Training:** Decoding 2019 Title 24, Part 6: Let's Talk Healthcare Facilities
- <https://energycodeace.com/decoding-talks>
- **Fact Sheet:** 2019 Title 24, Part 6 for Healthcare Facilities (working title "COMING SOON")
- **Fact Sheet:** What's New in 2019 —
 - Nonresidential, High-rise Residential, Hotel/Motel
 - Residential
- **Training:** Traditional and virtual classes on 2019 Title 24, Part 6 for:
 - Architects
 - Energy consultants
 - Plans examiners & building inspectors
- *Updates for 2019 Code of All Tools, Training & Resources*

Receive emails when new offerings are available:

1. Create an account on EnergyCodeAce.com
2. Select one or more Business Categories in your profile

OSHPD
Office of Statewide Health Planning and Development

53

LEARNING OBJECTIVES for PART 6 CEC (Energy)

- CEC *versus* OSHPD "Addition"
- What's Regulated
- Enforcement
- Resources, Training & Software
- **Application to Existing Buildings**

OSHPD
Office of Statewide Health Planning and Development

54

Energy Practices for Remodels

- **New Lighting & Controls**
 - Meets Part 6
- **New HVAC Equipment (units, chillers, etc.)**
 - Meets Part 6 (SEER)
- **New Ventilation Shaft (for future build-out)**
 - Meets Part 6 (duct testing)

Note:
Apply Part 6 requirements for new elements at time of construction.

Facilities Development Division OSHPD
Office of Statewide Health Planning and Development

55

Energy Opportunities for Remodels

Energy Savings Opportunities:

- **Revisit HVAC loads based on new occupancy:**
 - Air Changes per Hour vs Actual Loads
 - Ventilation Rates
- **Review Filtration Requirements**
- **Consider converting to Variable Volume**
- **Determine Lighting Levels**

Evaluate overall impact of Part 6 compliance for new occupancy.

Facilities Development Division OSHPD
Office of Statewide Health Planning and Development

56

Almost There...




Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

57

This Is Important

How to Remove Acute Care Services From an SPC-1 or SPC-2 Building



Facilities Development Division

OSHPD
Office of Statewide Health
Planning and Development

58

2019 Intervening Code Cycle

- CAC, Chapter 6 § 1.5.1.1 – NPC-1 Buildings - **141 buildings at 28 facilities are NPC-1**
- CBC 309.1.1 - SPC-1 Buildings without an extension and no Remove From Acute Care Services project approved, permitted, and closed in compliance


Only Three kinds of Projects Permitted:

SEISMIC COMPLIANCE WORK/REMOVE FROM ACUTE CARE SERVICES

MAINTENANCE. The routinely recurring work required to keep a facility (plant, building, structure, utility system, etc.) in such condition that it may be continuously utilized, at its original or designed capacity and efficiency, for its intended purpose. Actions necessary for retaining or restoring an existing piece of equipment, machine, or system to the specified operable condition to achieve its maximum useful life, including corrective maintenance and preventive maintenance.

EMERGENCY WORK/REPAIR. The least amount of immediate work, replacement, or repair of a failed or damaged element of a building, structure, utility system, or equipment that is essential to the continued safe occupation and operation of a facility.

Facilities Development Division




59

Determine the Repurposed Use

Some Items to Consider

<ul style="list-style-type: none"> • Ingress • Egress – required exits • Utilities – shutoffs/disconnects, rerouting • Smoke Compartments • Functional Uses – SNF, Acute Psych, etc. • Fire Alarm – panel, zones, etc. • Fire Sprinklers – non-sprinklered, main riser, branches/zones, etc. • Fire Wall/Fire Barrier Separations – occupancy(ies), jurisdiction, etc. 	<ul style="list-style-type: none"> • As-built/condition assessment • Accessibility – based on function, construction. etc. • Is Use or Occupancy Less Restrictive • Jurisdiction – OSHPD or Local • Licensing under hospital license – new license (Hospital Within a Hospital, etc.) • Local zoning requirements/restrictions • Time/Cost
--	--

Facilities Development Division



60

Trust the Process



Steps to a Successful Repurposing Project:

- ❑ **Do your homework**
 - Determine the repurposed use by considering the impacts/items to consider
- ❑ **Do a “Remove From Acute Care Services” project**
 - Required to reclassify SPC-1 or SPC-2 building to OSHPD 1R
- ❑ **Follow the remodel C.A.N. 2-102.6**
 - Schedule Pre-design Meeting with OSHPD Repurposing Task Force
 - Documented decisions to become “Conditions of Approval”
 - Plan reviews to be conducted in the appropriate region in accordance with the Conditions of Approval

Facilities Development Division OSHPD
Office of Statewide Health Planning and Development

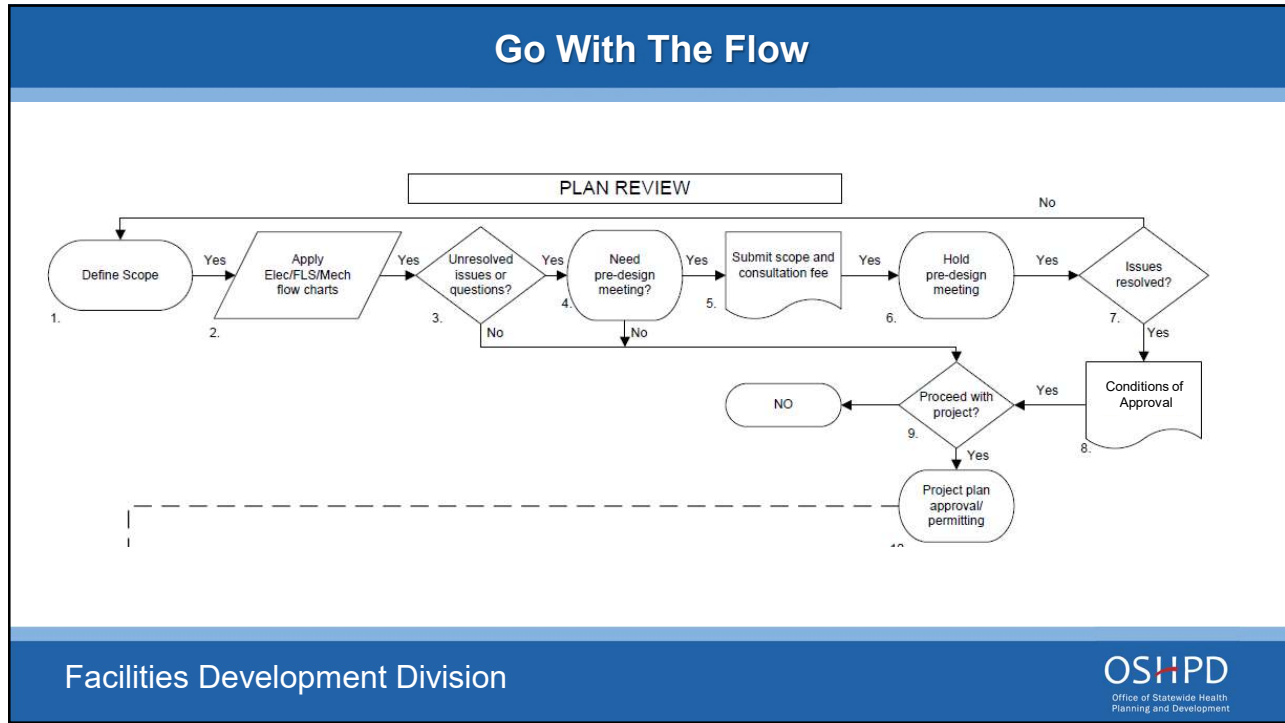
61

REMODEL CAN 2-102.6

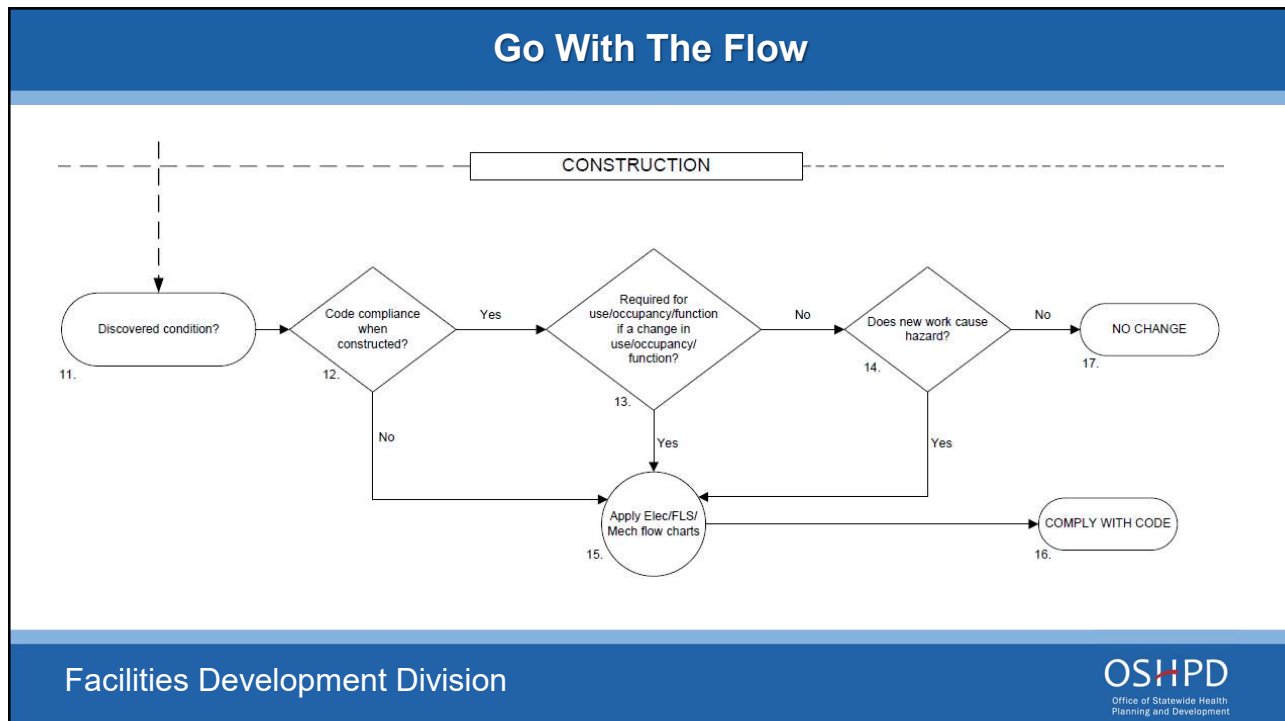
 <p>Facilities Development Division Office of Statewide Health Planning and Development 2020 West El Camino Avenue, Suite 800 • Sacramento, CA 95833 (916) 440-8300 355 South Grand Avenue, 19th Floor • Los Angeles, CA 90071 (213) 897-0166</p>	<p>CODE APPLICATION NOTICE (CAN) H&S Code §129851</p>
<p>SUBJECT Remodel (Renovations, Alterations, Repairs) <i>(2019 CBCS Edition)</i></p>	<p>CAN: 2-102.6 Effective: 11/08/2019</p> 
<p>CODE SECTIONS</p> <p>Section 102.6 California Building Code (CBC)</p> <p>Sections 102.4 and 102.6 California Mechanical Code (CMC)</p> <p>Sections 102.4 and 102.6 California Plumbing Code (CPC)</p>	

Facilities Development Division OSHPD
Office of Statewide Health Planning and Development

62



63



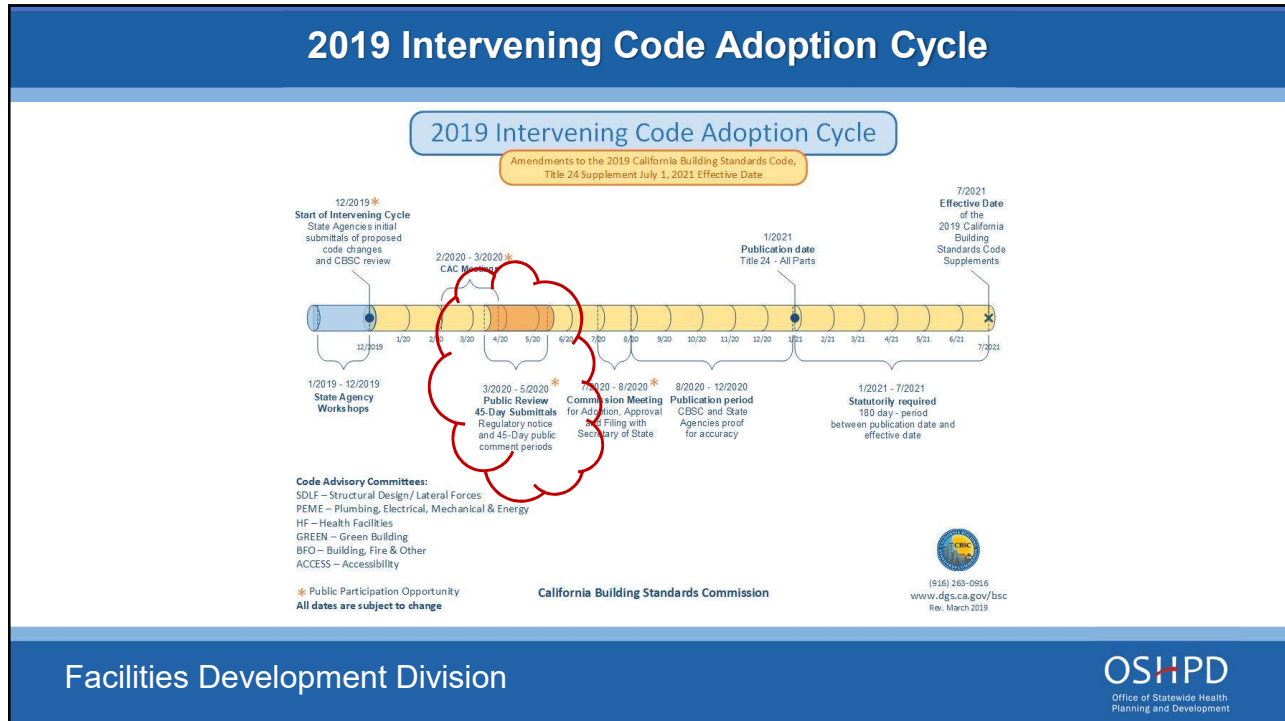
64



65



66



67

2019 Intervening Code Cycle

- We are currently working on code change proposals for the 2019 Interim Code Cycle and beyond:
 - Special seismic certification of servers, routers and switches
 - Special seismic certification for Fluoroscopy and X-ray
 - PIN 68 and code updates for anchorage and bracing of Fixed, Movable and Mobile equipment
 - Changes to the material chapters (Steel, Masonry)
 - Modifications to SPC-4D requirements (Pounding Analysis)
 - OSHPD 1R Clarifications
 - CBC Section 1224 – coordination with new technologies

Facilities Development Division

OSHPD
Office of Statewide Health Planning and Development

68

Major Research Initiatives

California Building Standards Code alignment with CDPH & CMS

Anti-Ligature enhancements per CMS

Emergency Department Revisions

- Environments based upon classification of Patient Care Needs
- Enhanced Trauma Room standards and Urgent Care

Energy, Energy, Energy...

Emergency Operations impacts to Building Standards

- Surge Tents
- Infrastructure Availability

Facilities Development Division



69

Major Research Initiatives

(New) Chemical Dependency Recovery Hospitals

(New) Sub-Categories of OSHPD 3 Clinics


(New) Protective Environment Standards

- High – Unit (i.e. Bone Marrow Transplant)
- Med – Unit (i.e. Oncology)
- Low – Room Only

Interventional Imaging revisions per collaboration with CDPH (IP/OP)

Ongoing CDPH collaboration re: Title 22 updates for Licensing Standards

Facilities Development Division




70

Coming in the 2022 CBC

Unified Imaging & Procedure Room Classification System

<u>Imaging Room</u>	<u>Procedure Room</u>	<u>Type of Space</u>
• Class 1 Imaging	= Exam/Treatment Room	= Unrestricted Space
• Class 2 Imaging	= Procedure Room	= Semi-restricted Space
• Class 3 Imaging	= Operating Room	= Restricted Space

Modeled on 2018 FGI *Guidelines for Design & Construction of Hospitals*

Facilities Development Division 

71


Coming in the 2022 CBC

Only electronic plan submittals will be accepted

Statutory authority:
HEALTH AND SAFETY CODE - HSC
DIVISION 107. STATEWIDE HEALTH PLANNING AND DEVELOPMENT [127000 - 130070]
(Division 107 added by Stats. 1995, Ch. 415, Sec. 9.)
PART 7. FACILITIES DESIGN REVIEW AND CONSTRUCTION [129675 - 130070]
(Part 7 added by Stats. 1995, Ch. 415, Sec. 9.)
CHAPTER 1. Health Facilities [129675 - 130070]
(Chapter 1 added by Stats. 1995, Ch. 415, Sec. 9.)

ARTICLE 3. General Requirements and Administration [129750 - 129856]
(Article 3 added by Stats. 1995, Ch. 415, Sec. 9.)

129761.
The office shall use, to the extent possible, information technology to facilitate the timely performance of its duties and responsibilities under this chapter.

Facilities Development Division 

72

Only You Can Prevent Bad Codes



Get Involved With the Process

Facilities Development Division



73



- Any Questions?
- Any Answers?
- Any Additional Thoughts or Discussion?

RegsUnit@oshpd.ca.gov
FDDWebinar@oshpd.ca.gov

Facilities Development Division



74

2019 Code Update Webinar Series

Thank You!

<p>Session 1:</p> <ul style="list-style-type: none">• Intro• OSHPD 1R• Part 10 (CEBC)• Part 1 – Administrative Code	<p>Session 2:</p> <ul style="list-style-type: none">• Fire/Life Safety <p>April 7, 2020</p>	<p>Session 3:</p> <ul style="list-style-type: none">• Building Code <p>April 21, 2020</p>	<p>Session 4:</p> <ul style="list-style-type: none">• Part 3 – Electrical Code• Part 4 – Mechanical Code• Part 5 – Plumbing Code• Part 6 – Energy Code• How to Remove from Acute Care• New Remodel CAN 2-102.6• New Accessibility CAN 2-11B• What’s coming up <p>May 7, 2020</p>
---	---	---	---

Facilities Development Division

OSHPD
Office of Statewide Health Planning and Development

75